

DOMINION PIPELINE MONITORING COALITION



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April 28, 2015

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

RE: Scoping Notice; Docket Nos. PF15-6-000

Ms. Bose:

The following comments are provided on behalf of the Dominion Pipeline Monitoring Coalition (DPMC) in response to the public notice published by the Federal Energy Regulatory Commission (FERC), dated 2/27/15, and titled:

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL IMPACT STATEMENT FOR THE PLANNED SUPPLY HEADER PROJECT AND ATLANTIC COAST PIPELINE PROJECT, REQUEST FOR COMMENTS ON ENVIRONMENTAL ISSUES, AND NOTICE OF PUBLIC SCOPING MEETINGS

The Dominion Pipeline Monitoring Coalition is an organization of citizen volunteers, conservation groups, and environmental scientists convened in response to Dominion's proposed Atlantic Coast Pipeline (ACP) across the George Washington and Monongahela National Forests and the adjacent mountains and valleys.¹

These comments concern the proposed ACP.

General Concerns

1. The ACP is one of three 42-inch pipelines proposed for transmission of natural gas from western West Virginia, across the central Appalachian Mountains, to Virginia and the southeastern U.S. These pipelines would be the largest ever built in this region and the

¹ Dominion Pipeline Monitoring Coalition, 2015. <http://pipelineupdate.org/about/>

largest ever built in this type of forested mountain environment. The pipeline developers request governmental authority to cross public conservation lands and private property, with resultant effects on and risk to water and other natural resources. An informed and rational approach to this extraordinary request can only be achieved through preparation of an Environmental Impact Statement (EIS) that, in addition to site-specific analysis, involves regional-scale analysis accounting for natural gas needs, cumulative impacts, and appropriate siting. Siting considerations should include use of existing pipeline corridors and co-location of proposed new pipelines.² This type of comprehensive regional or programmatic EIS is necessary for the informed approach to federal decision making that is required by the National Environmental Policy Act (NEPA).

2. The ability of the public and interested stakeholders to provide informed comments to FERC during the scoping period for the EIS is limited by incomplete and inconsistent information concerning the alternate routes under consideration. Substantially different information concerning the alternate routes has been made available to the public by FERC and Dominion. Meaningful implementation of NEPA depends on informed input from concerned stakeholders, which in turn is dependent on timely access to fundamental project information. FERC should require detailed identification and GIS data files for the specific proposed alternative routes before accepting a final application for the ACP project. This information should be made available to the public for the purpose of informing project review during the preparation of the EIS.

Concerns Related to Water Resources and Ecosystem Protection

1. The effectiveness of standard measures for mitigation of water resource impacts associated with pipeline construction is a significant issue that needs to be systematically examined during EIS preparation.

The EIS should analyze the provisions, implementation, and effectiveness of water-related environmental laws, regulations, and best management practices that apply to pipeline construction. This analysis should specifically address the effectiveness of standard measures for mitigation of water resources impacts associated with large-scale pipeline construction in the difficult, complex, and hydrologically sensitive terrain of the central Appalachian region mountains and valleys.

The Dominion Pipeline Monitoring Coalition has initiated a Case Study Project to investigate the implementation of regulatory programs for erosion and sediment control and stormwater management at current and recent pipeline projects in the ACP project region. Although the projects available for study are very small in comparison with the proposed ACP, our initial investigation of these projects shows that the regulatory system cannot be relied on to ensure water resource protection.

² Dominion Pipeline Monitoring Coalition, Pipelines Across the Central Appalachian Mountains, Consideration of Alternatives, 2015. <http://pipelineupdate.org/alternative-evaluation/>

For example, we have examined a recent project on National Forest land in Virginia, where regulatory oversight was absent and fundamental regulatory requirements were waived or ignored.³ We are also studying a series of problems at Dominion pipeline construction sites in WV. A Consent Order issued by the WV Department of Environmental Protection in October 2014 describes continuing water quality violations related to slope failures in pipeline corridors at 18 separate locations.⁴ Our investigations indicate that these pipeline projects and regulatory system failures represent the rule rather than the exception.

We argue therefore that the EIS should include an analysis of the applicable water-related regulatory programs and mitigation requirements administered by state and federal agencies, including FERC, the WV Department of Environmental Protection, the VA Department of Environmental Quality, the U.S. Army Corps of Engineers, and the U.S. Forest Service.

The analysis provided in the EIS should focus on recent and current pipeline construction projects in mountainous terrain similar to that of the proposed ACP route, and it should include:

- a. A review of records related to water quality and erosion and sediment control performance and violations
- b. A review of available evidence concerning the effectiveness of standard and required mitigation measures for protection of water resources
- c. Analysis of factors contributing to water resource protection failure, including:
 - 1) non-adherence to regulatory requirements, standards, and guidelines
 - 2) issuance of waivers or authorization of variance from requirements, standards, and guidelines
 - 3) inadequacy of regulatory requirements, standards, and guidelines

Some of the specific issues related to regulatory requirements and implementation are addressed in more detail in following comments.

2. FERC has adopted Plans⁵ and Procedures⁶ documents that identify baseline mitigation measures for minimizing construction-related project impacts, including erosion and impacts to wetlands and waterbodies. These documents are general and applicable to a broad range of environmental conditions. Large pipeline construction across the Appalachian mountain region presents difficulties that are not present elsewhere, including steep, rugged, and unstable slopes, narrow valleys, karst terrain, high-runoff conditions, etc. The adequacy of

³ Dominion Pipeline Monitoring Coalition, Regulatory System Investigation, National Forest Pipeline, 2015. <http://pipelineupdate.org/case-study-no-1/>

⁴ West Virginia Department of Environmental Protection, October 1, 2014, [Consent Order No. 8078](#).

⁵ Upland Erosion Control, Vegetation, and Maintenance Plan, 2013. <http://www.ferc.gov/industries/gas/enviro/plan.pdf>

⁶ Wetland and Waterbody Construction and Mitigation Procedures, 2013. <http://www.ferc.gov/industries/gas/enviro/procedures.pdf>

the measures described in the Plans and Procedures documents needs to be evaluated and additional or more-stringent measures should be considered. This evaluation should be conducted in the context of EIS development.

3. State erosion and sediment control handbooks have been developed for local conditions. For example, the Virginia Erosion and Sediment Control Handbook⁷ identifies best management practices that are suitable for Virginia conditions in general. Adherence to the requirements of this handbook is required by both the Virginia Department of Environmental Quality and the Forest Management Plan⁸ for the George Washington National Forest. The EIS analysis and conclusions should be predicated on adherence to the practices described in this handbook. The topography and other environmental conditions in the mountainous part of the proposed pipeline route are extreme, and anything less than strict adherence should not be considered.
4. Virginia has established minimum standards for erosion and sediment control for construction projects, including pipelines.⁹ The EIS should address the need for strict adherence to these minimum standards. Two examples:
 - a. MS-16a limits the length of open trench to no more than 500 linear feet at one time. This is a critical requirement for construction of large pipelines on steep mountainsides. Dominion, however, has indicated that it intends to apply for a variance to this standard.¹⁰ The need for this restriction is nowhere more important than on steep mountainsides, especially given the width and depth of the trenching that will be required.
 - b. MS-19 requires management of runoff during construction to ensure that downstream properties and waterways are protected from sediment deposition, erosion and damage due to increases in volume, velocity, and peak flow rate of stormwater runoff. This requirement is intended to preserve watershed hydrologic function and prevent damage to channel structure and aquatic habitat in receiving streams. This is a critical requirement for construction of large pipelines on steep mountainsides.
5. The Virginia Stormwater Management Act extends requirements for maintenance of watershed hydrologic function to the post-construction period.¹¹ The Act specifically requires maintenance of after-development runoff rate and flow characteristics that replicate,

⁷ Virginia Erosion and Sediment Control Handbook, 3rd Edition, 1992.

<http://www.deq.state.va.us/Programs/Water/StormwaterManagement/Publications/ESCHandbook.aspx>

⁸ Revised Land & Resource Management Plan for the George Washington National Forest, 2014.

<http://www.fs.usda.gov/detail/gwj/landmanagement/planning/?cid=stelprd3799959>

⁹ Virginia Erosion and Sediment Control Regulations (9VAC25-840-40, Minimum standards), 2013.

<http://law.lis.virginia.gov/admincode/title9/agency25/chapter840/section40/>

¹⁰ Atlantic Coast Pipeline, LLC and Dominion Transmission, Inc. Supply Header Project; [Resource Report 1 - General Project Description](#), 2014.

¹¹ Virginia Stormwater Management Act (§ 62.1-44.15:28, Development of regulations),

<http://law.lis.virginia.gov/vacode/title62.1/chapter3.1/section62.1-44.15:28/>

as nearly as practicable, the existing predevelopment runoff characteristics and site hydrology. The Act effectively requires that post-construction peak flow rates be maintained at a level corresponding to the flow rates associated with the site when it was in “good forested condition.” This will prove critical for watershed-scale water resource protection given the scale, geographic scope, and extreme topographic setting of the proposed ACP. The EIS should address this requirement for long-term maintenance of watershed hydrologic function.

6. The requirements of FERC’s Plans and Procedures documents and the above-cited state regulations and law that apply to pipeline construction cannot be satisfied without preparation of site-specific erosion and sediment control and stormwater management plans, including the site-specific calculations necessary for design of erosion control structures and determination of post-construction runoff properties. These plans and calculations are fundamental for protection of water resources given the magnitude and extreme topographic setting of the proposed ACP project. Provisions for timely public access to these plans for review, verification, and comment should be provided prior to EIS completion and final project approval and initiation of construction.
7. Site-specific plans for stream and wetlands crossing and restoration methods should be provided and made available for public review and comment prior to EIS completion and final project approval and initiation of construction. Delay of critical analysis and planning for water resource protection until after EIS completion and project approval would circumvent requirements for meaningful public involvement in NEPA review.
8. The EIS should address the need for and identify the protocols and documentation requirements for water-resource-related inspections conducted by FERC contracted inspectors, construction company inspectors, and regulatory and resource management agency inspectors.
9. The EIS should address means whereby the public can be provided timely access to water-resource-related inspection reports prepared by FERC contracted inspectors, construction company inspectors, and government agency inspectors. Inspection reports for pipeline construction projects are typically unavailable to the public or only available on a delayed basis. This is unacceptable given the risk associated with the ACP project and the need for strict compliance with regulatory requirements.
10. Due to a series of water quality violations associated with slope failures at Dominion-owned pipelines in West Virginia, Dominion is subject to a Consent Order issued by the WV Department of Environmental Protection (WVDEP). The WVDEP has required that Dominion prepare a geotechnical analysis and preparation of a report that describes the causes of historic pipeline right-of-way failures.¹² The order also requires that Dominion develop a company policy for avoiding such problems at future pipeline projects. The EIS for

¹² West Virginia Department of Environmental Protection, October 1, 2014, [Consent Order No. 8078](#).

the ACP project should address the issue of slope failure, by taking the analysis and policy development required by the WVDEP into account and by conducting further analysis of historic slope failures and factors that may contribute to slope failure in the ACP corridor in the broader mountain region.

11. The EIS should address details and provisions for assessment, baseline data collection, and monitoring of the physical and biological condition of streams, wetlands, and groundwater that will be crossed or potentially subject to impact from pipeline right-of-way clearing, construction activity, access roads, and staging areas. The EIS should specifically address and establish sampling and analysis protocols, schedules for sampling and analysis, locations of sampling and data collection, and provisions for timely public access to data. Baseline data should be required and made available for analysis during the preparation of the EIS and prior to project approval. A primary consideration is determination of natural variation. Change cannot be assessed or attributed to cause without reliable information on background variation. Critical data include:
 - a. Water quality parameters. Dominion has indicated that it will measure water quality but has not identified the parameters. The specific water quality parameters to be measured need to be established.
 - b. Water quantity and discharge. A primary threat is loss of water associated with springs, wells, streams, wetlands, and karst systems. The methods for measuring water quantity and discharge and determination of seasonal and other temporal variation need to be established.
 - c. Biological parameters. Stream, wetland, spring, and karst-system biota need to be inventoried within the spatial extent of possible impact. Particular emphasis should be placed on rare species, threatened and endangered species, species of special conservation concern, and species that are restricted to particular, limited, and sensitive habitats. (The native brook trout, for example, requires cold, well-oxygenated, silt-free, non-acidic water.) Methods for determining baselines and monitoring aquatic biota need to be established.
12. Dominion has indicated that it will “monitor” wells and springs within some particular distance, variously specified, but less than 200 feet, from the pipeline or pipeline corridor. This is inadequate, especially in karst terrain where groundwater and surface water connectivity is determined by the karst structure and not by distance. Surface water typically enters the subsurface karst system through sink holes, fractures, and sinking streams and often resurges miles away. Surface disturbance and alteration and introduction of sediment can alter or contaminate flow in the karst system resulting in impacts that are miles away from the causal activity. Recharge areas and resurgence locations must be determined prior to approval of the project in karst areas. The methodologies and results of the necessary investigations should be made available during the preparation of the EIS and prior to project approval.

13. The EIS should evaluate the risk of pipeline construction to public and private water supplies. This evaluation should involve identification of recharge areas and the complexities associated with karst hydrology. This evaluation should also involve identification and characterization of hydrologic characteristics and sensitivities of water supply aquifers associated with other lithologies and surficial materials in the proposed pipeline route, including water sources associated with fractured bedrock, permeable bedrock and saprolite, perched aquifers, and riparian zone aquifers. The feasibility and costs associated with replacement of public and private water supplies should be determined.
14. The EIS should identify specific thresholds or objective changes in water quality, quantity, physical habitat structure, and biological community status that will trigger corrective or remedial response. The options and criteria for corrective and remedial response should be identified during the preparation of the EIS and prior to project approval. The EIS should identify a process, involving independent and qualified experts, for determination of threshold exceedance, liability, and supervision of corrective and remedial response. FERC should incorporate these criteria and provisions as conditions of project approval.
15. The EIS should evaluate the potential hydrologic impacts of pipeline installation in riparian corridors. These potential impacts include:
 - a. Alteration or diversion of hyporheic zone and riparian water table flow with resultant changes to stream morphology and flow characteristics.
 - b. Alteration of stream water temperature regimes. Stream water temperatures in the Appalachian Mountain region are determined in part by the upwelling or emergence of riparian and hyporheic zone water.¹³ Changes to flow and emergence patterns may reduce habitat for cool-water-dependent species, as well as general aquatic ecosystem resilience to climate change.
 - c. Loss of riparian forest and alteration of forest-floor characteristics, with resultant change in water retention properties and temperature regimes.
16. The EIS should evaluate the potential impact of pipeline installation on water resource restoration efforts. Many of the downstream surface waters that will receive runoff from the pipeline corridor and related infrastructure during and after construction are designated by state water resource management agencies as impaired and are currently the focus of remediation efforts, including through the implementation of TMDL plans. Many of the streams below the proposed pipeline corridor are designated as impaired due to sedimentation. Even temporary introduction of additional sediment into these streams is not acceptable.
17. The EIS should evaluate potential impacts of the proposed ACP on high-integrity watersheds. Restoration, protection, and maintenance of watersheds has been a long-standing

¹³ Snyder, C.D., N.P. Hitt, and J.A. Young, Preprint. Accounting for groundwater in stream fish thermal habitat responses to climate change, Ecological Applications, Ecological Society of America.

priority of resources management agencies in the central Appalachian Mountain region.¹⁴ The proposed ACP will expose multiple high-integrity watersheds in the region to risk associated with erosion and sediment control, stormwater runoff, slope stability, and stream, riparian area, wetlands, and karst-terrain crossing. One measure of watershed quality is provided by Trout Unlimited's Conservation Success Index (CSI).¹⁵ Examination of CSI scores for central Appalachian watersheds indicates that the proposed ACP would cross the greatest concentration of high-scoring watersheds in both Virginia and West Virginia.

18. The EIS should evaluate potential impacts of the proposed ACP on high-integrity forests and ecological core areas. The central Appalachian mountain forest region, including the area that would be crossed by the ACP, is notably rich in biological diversity. This is due in large part to the extent of continuous interior-forest habitat. Construction of roads and utility corridors fragments forest habitat and threatens this biodiversity.

Interior forest provides critical habitat for a number of species.

It is well known, for example, that many forest nesting birds are dependent on interior forests, and that they do not thrive near forest edges due to nest parasitism and increased predation. Among these are species whose populations are currently in decline due in part to habitat fragmentation, including the Cerulean Warbler, Canada Warbler, Wood Thrush, and others.¹⁶

Many amphibians are also dependent on interior forest conditions. Many salamanders, for example, are unable to cross roads or other open areas, and thus, fragmentation of forests effectively divides and isolates populations making them less viable. Among the species of concern that occur in the route of the proposed ACP are the Cheat Mountain salamander, which is protected by the Endangered Species Act.¹⁷ Another species of concern that occurs in the proposed route is the Cow Knob Salamander, which is protected by a special Conservation Agreement developed to avoid listing it as an endangered species.¹⁸

Examination of available landscape classification maps indicates that the proposed ACP would cross the greatest concentration of high-integrity forest and ecological core high-scoring areas in both Virginia and West Virginia.^{19, 20}

¹⁴ For example, first among the listed benefits associated with the selected management alternative in the 2006 Monongahela National Forest Management Plan is maintenance or restoration of watershed conditions to help provide for water quality, soil productivity, and functioning riparian and aquatic habitat.

¹⁵ K. Fesenmyer. 2014. Central Appalachians Conservation Success Index. Trout Unlimited, Arlington, VA.

¹⁶ American Bird Conservancy. The United States Watch List of Birds of Conservation Concern (<http://www.abcbirds.org/abcprograms/science/watchlist/index.html>)

¹⁷ T.K. Pauley. 1991. Cheat Mountain Salamander (*Plethodon nettingi*) Recovery Plan. Northeast Region, U.S. Fish and Wildlife Service, Newton Corner, MA.

¹⁸ U.S. Forest Service and U.S. Fish and Wildlife Service, 1994. [Cow Knob Salamander Conservation Agreement](#).

¹⁹ M. Dougherty and E. Byers. 2008. Preliminary Calculation of Landscape Integrity in West Virginia Based on Distance from Weighted Disturbances, Technical Support and Wildlife Diversity Units, Wildlife Resources Section, West Virginia Division of Natural Resources, Elkins, WV.

²⁰ Natural Heritage Program, Virginia Department of Conservation and Recreation, 2007. [Virginia Natural Landscape Assessment](#).

19. The EIS should evaluate potential impacts of the proposed ACP on the Red Spruce Ecosystem Restoration efforts. The largest contiguous Red Spruce Restoration Area is the Cheat Mountain-Shavers Fork watershed area in the Monongahela National Forest. The proposed ACP would bisect this area, increase and maintain fragmentation of the remaining red spruce ecosystem, diminish the prospects for recovery, and impact multiple plant and animal species of conservation concern associated with the red spruce ecosystem. The significance of the remnant red spruce ecosystem is widely recognized. It contains some of the highest concentrations of globally rare plant and animal species within the northeastern states.²¹ Pipeline construction through this area would severely damage a remarkably successful ecosystem restoration initiative undertaken in recent years by state and federal resource management agencies, conservation organizations, and citizen volunteers.²²
20. The EIS should evaluate the potential impact of the proposed ACP on the value of the central Appalachian Mountain region as a repository for natural biodiversity. The ecological significance of this region can only increase in the future, given projected changes in climate. Many species and biological communities are dependent on the relatively cool and moist environment associated with the region's high-elevation forested mountains. As temperatures increase and precipitation patterns change, the range of suitable conditions for many species will diminish or disappear altogether. Red spruce, eastern hemlock, the endemic mountain salamanders, and brook trout are among the plant and animal species at greatest risk.

Analysis of species distribution changes under a range of future climate change scenarios shows dramatically diminished distributions of many species, with remaining distributions concentrated in the higher mountains of the central Appalachian region.²³ The reduced range for many species (for example, native brook trout), will be bisected by the proposed ACP. Construction of the ACP would increase the potential for regional species extirpation associated with climate change by further fragmenting and degrading the remaining refugia.

The above descriptions of environmental issues are provided as initial scoping comments in support of EIS planning and preparation. The level of detail provided is limited by time constraints and by the lack of complete or consistent information on the route alternatives under consideration.

Additional material will be developed and submitted as more information becomes available and ongoing case study analysis is completed.

²¹ E.A. Byers, J.P. Vanderhorst, and B.P. Streets. 2010. Classification and Conservation Assessment of Upland Red Spruce Communities in West Virginia. West Virginia Natural Heritage Program, West Virginia Division of Natural Resources, Elkins, WV.

²² The Central Appalachian Spruce Restoration Initiative is a partnership of diverse interest with a common goal of restoring historic red spruce-northern hardwood ecosystems across the high elevation landscapes of the central Appalachian region. See www.restoreredspruce.org.

²³ Kane, A., T.C. Burkett, S. Klopfer, and J. Sewall, 2013. Virginia's Climate Modeling and Species Vulnerability Assessment: How Climate Data Can Inform Management and Conservation. National Wildlife Federation, Reston, Virginia.

A number of conservation groups, legal groups, individuals, and resource management agencies have prepared comments that provide additional information about environmental concerns and NEPA process issues. In particular we cite and endorse the scoping comments submitted by the Appalachian Mountain Advocates, Southern Environmental Law Center, and the Center for Biological Diversity.

Thank you for the opportunity to comment on significant and critical environmental issues that need to be addressed in the preparation of an EIS for the proposed ACP

Sincerely,

A handwritten signature in black ink that reads "Rick Webb". The signature is written in a cursive, slightly slanted style.

Rick Webb, Program Coordinator
Dominion Pipeline Monitoring Coalition