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April 28, 2015

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

**RE: Trout Unlimited Comments on the Scope of Environmental Impact Statement for the Supply Header Project and Atlantic Coast Pipeline Project, Docket No. PF15-6-000**

Dear Ms. Bose:

Trout Unlimited, and the Virginia and West Virginia Councils of Trout Unlimited (collectively "Trout Unlimited") hereby submit these comments, in response to the *Notice of Intent to Prepare an Environmental Impact Statement for the Supply Header Project and Atlantic Coast Pipeline Project, Request for Comments on Environmental Issues, and Notice of Public Scoping Meetings*, published in the Federal Register by the Federal Energy Regulatory Commission on March 6, 2015. 80 FR 12163. Trout Unlimited has reviewed the following documents associated with the proposed Atlantic Coast Pipeline project (Docket No. PF15-6-000): primary pipeline route, alternate pipeline routes, Resource Report 1, Resource Report 10, and related correspondence between the Federal Energy Regulatory Commission (Commission) or other agencies and Atlantic Coast Pipeline, LLC (Applicant).

Trout Unlimited's mission is to conserve, protect, and restore North America's trout and salmon fisheries and their watersheds. To accomplish its mission, Trout Unlimited employs a comprehensive strategy to protect the highest quality trout and salmon habitat, reconnect high quality habitats with restored areas downstream through the augmentation of instream flows and barrier removals, and restore degraded habitats so that they again support healthy trout and salmon populations. Trout Unlimited has more than 6,500 members in Virginia and West Virginia who are committed to protecting, restoring and reconnecting native and wild trout habitat. Thus, Trout Unlimited's comments on the scoping document for the draft Environmental Impact Statement (EIS) for the planned Atlantic Coast Pipeline project will focus on identifying the impacts of the project on coldwater resources and identifying mitigation measures to limit or eliminate those impacts.

The proposed project involves the construction and operation of 554 miles of variable diameter natural gas pipeline in West Virginia, Virginia, and North Carolina, affecting 12,972 acres of land for the pipeline and aboveground facilities, including:

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- approximately 295.6 miles of 42-inch-diameter pipeline in Harrison, Lewis, Upshur, Randolph, and Pocahontas Counties, West Virginia; Highland, Augusta, Nelson, Buckingham, Cumberland, Prince Edward, Nottoway, Dinwiddie, Brunswick, and Greenville Counties, Virginia; and Northampton County, North Carolina;
- approximately 179.9 miles of 36-inch-diameter pipeline in Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties, North Carolina;
- approximately 75.7 miles of 20-inch-diameter lateral pipeline in Northampton County, North Carolina; and Greenville, Southampton, Suffolk, and Chesapeake Counties, Virginia; and
- approximately 3.1 miles of 16-inch-diameter natural gas lateral pipeline in Brunswick County, Virginia.

The typical construction right-of-way for pipeline facilities would vary between 125 feet wide for the 42-inch-diameter pipeline and 75 feet wide for the 16-inch-diameter lateral pipeline, with additional workspace needed in some locations due to site-specific conditions. Following construction, approximately 4,370 acres of land would be retained for permanent operation of the facilities.

Pursuant to the National Environmental Policy Act, the Commission is required to consider the following actions and impacts, in determining the scope of the draft EIS: (1) connected actions, cumulative actions and similar actions; (2) the no action alternative, other reasonable alternatives and mitigation measures not proposed in the action; and (3) direct, indirect and cumulative impacts. NEPA §102(2)(C); 40 C.F.R. §1508.25.

Given that the proposed preferred route for the Atlantic Coast Pipeline project will cross, or is located near, a significant number of streams in Virginia and West Virginia that are designated as native or wild trout streams, have eastern brook trout presence, or have high brook trout habitat potential, Trout Unlimited strongly urges the Commission to specifically identify the potential impacts to coldwater fisheries and their habitats in the draft EIS, and to propose avoidance measures where possible and mitigation measures where avoidance is not feasible.

#### **ALTERNATIVES ANALYSIS/CONSTRUCTION TECHNIQUES**

Trout Unlimited urges the Commission to require a thorough and comprehensive analysis of potential pipeline routes that are co-located with existing infrastructure, including existing roads, pipelines, power/transmission lines, and other already disturbed areas. Additionally, where the Atlantic Coast Pipeline is proposed to be routed in close proximity to other proposed major natural gas pipelines, such as the Mountain Valley Pipeline, Trout Unlimited strongly recommends that the Commission require an alternatives analysis to determine if co-location is feasible.

Trout Unlimited recommends that the draft EIS contain a comprehensive analysis of smaller right-of-ways—at a minimum, a 50 foot right of way—for the entire length of the pipeline, based upon the use of alternative techniques for pipeline construction and placement such as stove-piping, dragging or other currently available methods that require less acreage for temporary and permanent workspace.

## **STREAM CROSSINGS**

### *Pipeline Route*

Depending on the size, timing, duration and methods employed, stream crossings can have significant impacts on aquatic ecosystems by altering stream morphology, process and function including in-stream habitat both upstream and downstream of the crossing location, as well as at the crossing location itself. Trout Unlimited recommends that the pipeline route avoid alteration of stream hydrology, sediment transport, and morphology by eliminating crossing streams of any size, including ephemeral streams, where possible. Where avoidance is not feasible, measures to reduce impacts should include site specific evaluations of construction activities. For example, stream crossings should be located downstream from all confluences to reduce the total number of stream crossings and the impacts on stream morphology at these convergent locations. Trout Unlimited recommends that the Commission include in the draft EIS appropriate measures to reduce both short-term and long-term impacts to stream morphology and hydrology. This is particularly important given the importance of small headwater streams that serve as spawning reaches and thermal refuges for coldwater fish, including native and wild trout.

### *Stream Crossing Methods*

Resource Report 1, section 1.5.2.1, describes the proposed methods that will be used for stream crossings, including: open cut, flume, dam-and-pump, conventional bore and horizontal directional drilling (HDD). While each of these methods is explained, the report fails to explain under what circumstances each method will be used, what information will be gathered during surveys and related analysis to inform which stream crossing method should be used, what criteria and type of evaluation process will be used by the Applicant to determine which crossing method is appropriate, and when, during the planning process, a decision will be made on which method is appropriate. Trout Unlimited recommends that the draft EIS identify each stream crossing, by mile post, as well as the proposed method for each stream crossing. Trout Unlimited recommends that the open cut crossing method not be used in any circumstances on any streams within watersheds that support native and wild trout.

Trout Unlimited strongly recommends that the Applicant use HDD, direct bore or Direct Pipe™ methods to cross sensitive streams, where feasible. HDD, direct bore and Direct Pipe™ methods are preferred for stream crossings because they have the advantages of minimizing land disturbance, avoiding the need for dewatering the stream, leaving the immediate stream bed and banks intact, and reducing erosion, sedimentation and project-induced watercourse instabilities. Further, the Direct Pipe™ method is favorable for stream crossings over other methods, including HDD and open trench, because it is suitable for unconsolidated sand, gravel, and cobbles (such as river bottoms), virtually eliminates the risk of blowouts associated with HDD, and does not disturb the channel bed as compared to dry crossing methods. Because the Direct Pipe™ method presents the least amount of risk to stream systems, it should be evaluated for proposed crossings of native and wild trout streams.

The draft EIS should evaluate whether the use of HDD, direct bore and Direct Pipe™ methods for each stream crossing is feasible, and where these methods are determined not to be feasible, provide a justification. Where HDD, direct bore or Direct Pipe™ methods are proposed, the draft

EIS should describe the typical work area required and protective measures that will be used to limit runoff of sediment and other fluids into streams, as well as describe a contingency plan if the HDD, direct bore or Direct Pipe™ method fails and results in sediment and/or drilling fluid entering a stream.

If the dry crossing method is proposed, the Applicant should identify which type of dry crossing—whether dam and pump, flume, cofferdam, or dry open cut—will be used. Each type of dry crossing method has unique and individual impacts. In order for the Commission to identify the impacts of each stream crossing on stream hydrology and aquatic habitat and to propose appropriate mitigation measures, the specific type of dry crossing method proposed for each stream crossing must be identified in the draft EIS.

Field reconnaissance by pipeline personnel is necessary for the identification of stream crossings since many ephemeral and some perennial streams are not visible on topographical maps. Information that must be gathered during surveys and included in a draft EIS, in order to determine which type of crossing method should be used for each stream, what impacts may result, and what mitigation measures are needed, includes at a minimum:

- Geotechnical feasibility studies to determine if HDD, Direct Pipe™ or other conventional bore method is appropriate and feasible for each stream crossing;
- Proximity to the nearest confluence up and downstream;
- Stream discharge, channel gradient, channel sinuosity, stream substrate, cross-sectional surveys, channel debris and sediment storage, and stream order;
- Geomorphological data, including complete fluvial geomorphic characterization of the stream's hydraulic geometry, plan form, and profile, and information about bed and bank stability, scour depth and depth of pools; and
- A scour depth analysis either based upon measured pool depth or calculated scour for observed bed materials and design discharge, to determine the potential for vertical or lateral adjustment of each stream.

This information is necessary for a site-specific review of the proposed method and will provide an opportunity for Trout Unlimited and other interested parties to provide specific recommendations on mitigation measures appropriate for each specific stream crossing.

As part of the stream crossing method assessment, Trout Unlimited recommends that a hydraulic analysis be completed at each crossing to ensure that the pipeline is buried deep enough to remain undisturbed by scour and fill processes typically associated with peak flows that have the potential to negatively impact trout habitat. Regardless of crossing method, the pipeline should be located at sufficient depth in and distance from the stream bed to accommodate any reasonably anticipated horizontal or vertical channel adjustment during the design life of the pipeline materials.

### **CONSTRUCTION ACTIVITIES, EROSION AND SEDIMENTATION CONTROLS**

As part of the planning process, the draft EIS should evaluate opportunities for sediment reduction at each phase of construction, giving specific attention to locations where the pipeline parallels a stream, and making sure that there is an adequate buffer between the excavation and the stream.

The proposed pipeline project has the potential to impact many miles of headwater systems in steep terrain, even if the pipeline itself is not crossing the stream. Trout Unlimited urges the Commission to include in the draft EIS appropriate site-specific erosion control mitigation measures in these headwater areas. Further, Trout Unlimited urges the Commission to clarify that any slope that exceeds a 15% (or 8.5°) grade is considered “steep” and therefore construction activities on these slopes should be limited, and at a minimum, additional erosion and sediment control measures should be required.

Stream bank and soil disturbance occurring on or near streams during critical trout spawning and rearing stages can negatively impact coldwater species. At least 15 different direct negative effects from sedimentation have been demonstrated to impact trout, ranging from stress, altered behavior, reductions in growth and direct mortality.<sup>1</sup> The draft EIS should describe each proposed construction activity—in addition to the stream crossing itself—and identify acceptable time frames for when the proposed construction near trout streams may take place, with the goal of limiting the impact on critical life stages of coldwater species.

A preliminary stormwater pollution prevention plan (SWPPP) must be included as an appendix to the draft EIS, describing the proposed erosion and sediment control practices and post-construction stormwater management practices that will be used and constructed to reduce the pollutants in stormwater discharges. The draft EIS should include methods for isolating work areas from flowing waters to ensure that the work is accomplished such that no visible contrast to waters outside and downstream of the work site is apparent. Additionally, the draft EIS should discuss and evaluate how the various erosion control techniques described in the SWPPP will be coordinated within the construction schedule to avoid the potential for catastrophic sedimentation events. Extensive time delays between vegetation clearing/grubbing, initial grading of the right-of-way and actual installation of the pipe must be avoided and only a limited length of the project development area should be opened at any one time. Further, the presence of karst topography along the proposed preferred route is of particular concern and warrants additional consideration in preparation of the SWPPP to ensure that by-products from the construction process do not enter karst inlets, including exposed soil, fuel, oil, hydrologic fluids and other construction-related chemicals. Best management practices must be employed and strict attention to proper installation and maintenance of erosion and sediment controls in areas with karst topography is critical to minimizing impacts to water resources.

#### **SITE SPECIFIC DETERMINATION OF RIPARIAN BUFFERS AND SITE RESTORATION**

Due to the serious potential for erosion and sedimentation from construction activities occurring near streams to impact trout populations, Trout Unlimited recommends that the draft EIS include general minimal buffer setbacks for construction activities occurring on various slope grades, with a site-specific determination for each construction activity occurring near any stream supporting trout or trout reproduction, to determine if the buffer width for each stream should be greater than the general minimal buffer distance.

Regardless of the type of crossing method, the Commission should require the Applicant—with input from appropriate agencies and groups such as Trout Unlimited—to develop a stream

restoration plan for each stream crossing as part of the EIS process. At a minimum, the restored stream channel should be comparable in width, depth, slope, and substrate to upstream and downstream reaches, and should be constructed of native materials similar in condition, appearance, type, composition and species to those in the vicinity of the crossing including, but not limited to, wood, rock, and vegetation. Stream restoration activities should resemble pre-construction conditions. Stream restoration plans should also ensure that the resulting reconstruction does not impede natural channel processes, such as lateral channel migration, vertical adjustment (bed aggradation/degradation), or the transport of sediment, wood and ice.

Trout Unlimited recommends that the Commission require the Applicant to explain how pre-construction conditions will be restored at each stream crossing location, the methods for documenting existing conditions and how that information will be used to guide stream reconstruction activities, prior to the Commission's preparation of the draft EIS. Without this information, the Commission cannot reasonably identify the potential impacts of this project, nor can the Commission identify which mitigation measure will limit or eliminate impacts on stream form, process, and function and its dependent aquatic life.

Additional information that must be included in the draft EIS includes: methods proposed for clearing vegetation on the right-of-way; whether herbicides will be used; plans for long term-maintenance of the right-of-way; anticipated need to disturb earth along the right-of-way post-construction of the pipeline; and other information necessary to determine if restoration activities on steep slopes above streams will impact water quality.

### **HYDROSTATIC TESTING**

Prior to performing hydrostatic testing, the impacts of such testing on aquatic life (both fish and invertebrates) must be determined for all streams that support native or wild trout populations. If large quantities of water are to be removed from the stream, there may be an adverse impact on stream temperature and water levels, which are critical for fish health and habitat. In-stream passby flows must be required and strictly adhered to, in order to ensure that adequate stream flows are maintained to support aquatic life. Discharge of hydrostatic testing water must be through barriers that permit filtration of sediments contained in the discharge, and also to allow the water temperature to cool to its pre-withdrawal temperature. In order to determine the potential impacts from hydrostatic testing, the Commission must include the above-identified information in the draft EIS so that appropriate mitigation measures are thoroughly developed, publicly-vetted and included in the final EIS.

### **MONITORING**

A monitoring plan should be developed for each stream crossing and tailored to evaluate potential biological and morphological impacts to the aquatic system. Pre-construction monitoring will provide baseline data to evaluate potential impacts. Post-construction monitoring should consider immediate and long term impacts to the stream system. Trout Unlimited recommends that the Commission require the Applicant to complete both pre-construction and post-construction long term monitoring.

## CUMULATIVE IMPACTS

To comply with the National Environmental Policy Act, the Commission must conduct a comprehensive analysis of the incremental impacts of the project when considered in addition to other past, present, and reasonably foreseeable future actions. Trout Unlimited strongly urges the Commission to conduct a thorough and comprehensive analysis of the cumulative impacts of constructing the pipeline on native and wild trout populations and the water resources they rely upon, including among other aspects: crossing and disturbing significant acreage in watersheds that support native and wild trout populations; constructing the pipeline on steep slopes in excess of 15%; multiple crossings of streams in watersheds that support native and wild trout populations; and water withdrawals for hydrostatic testing.

In conclusion, Trout Unlimited strongly urges the Commission to fully evaluate the direct, indirect and cumulative impacts of the proposed Atlantic Coast Pipeline project on coldwater resources. In order to do so, and to identify necessary mitigation measures, the Commission must require the Applicant to provide the information described herein. Thank you for your consideration of Trout Unlimited's comments. Please do not hesitate to contact Katy Dunlap, [kdunlap@tu.org](mailto:kdunlap@tu.org) or 607-703-0256, if you require additional information or clarification.

Sincerely,



Katy Dunlap  
Eastern Water Project Director for Trout Unlimited



Graham Simmerman  
Chair, Virginia Council of Trout Unlimited



Lee Orr  
Chair, West Virginia Council of Trout Unlimited

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<sup>1</sup> Lloyd, D.S. 1987. Turbidity as a water quality standard for salmonid habitats in Alaska. Pages 34-35. *North American Journal of Fisheries Management*. American Fisheries Society. Bethesda, MD.