April 6, 2017

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

RE: Trout Unlimited comments regarding Draft Environmental Impact Statement on the Atlantic Coast Pipeline and Supply Header Project (FERC Docket Nos. CP15-554-000, CP15-554-001, and CP15-555-000)

Secretary Bose:

On behalf of Trout Unlimited and the West Virginia and Virginia councils of Trout Unlimited ("Trout Unlimited"), we offer these comments regarding the draft Environmental Impact Statement on the Atlantic Coast Pipeline and Supply Header Project, issued by the Federal Energy Regulatory Commission on December 30, 2016.

Trout Unlimited, representing 150,000 anglers nationally and more than 6,000 in West Virginia and Virginia, works to conserve, protect, and restore North America's trout and salmon habitat, with a goal of rebuilding naturally sustainable fisheries. We protect high-quality headwater spawning habitat, reconnect tributaries with healthy rivers downstream, and restore stretches damaged by development so that they can once again harbor thriving trout and salmon populations. Ours is a comprehensive, science-based approach that involves identifying the most promising opportunities to conserve important coldwater resources.

TU supports responsible energy development that meets the needs of the public while eliminating, minimizing, or mitigating impacts on coldwater fisheries. Since the Atlantic Coast Pipeline project was announced in 2014, TU staffers and our West Virginia and Virginia councils have worked to see that concrete steps be taken to avoid or limit impacts on native and wild trout populations in the path of construction. We appreciate the opportunities we've had to voice our concerns, and we look forward to continuing, productive conversations.

These comments will focus on the potential effects of the ACP on a number of West Virginia and Virginia trout streams, and recommend measures to minimize these impacts.

As the Commission notes in this draft EIS, construction of the pipeline could have a significant impact on streams, wetlands and the fisheries they support in an area of the Appalachians that is home to robust, intact populations of native brook and wild trout. We are especially concerned about severe erosion and sedimentation impacts that could result from building a pipeline on steep terrain in the mountains of West Virginia and Virginia. In-stream work, clearing of vegetation, regrading, and soil compaction near streams increase the potential for sedimentation from stormwater runoff. Sedimentation can reduce levels of dissolved oxygen, smother prime trout spawning habitat with silt, and hamper fish egg development. High turbidity can cloud the water, and cause stress and reduced feeding in trout. Stream crossing construction can damage riparian habitat, strip away protective buffers, destabilize streambanks, and alter streambeds. In addition, water withdrawals and discharges can harm aquatic species by reducing stream flows or degrading water quality.

Given this list of potential harms, we ask the Commission to pay special attention to the effects of the Applicant's proposal on coldwater resources.

High Concern Trout Habitat

The eastern brook trout is native to the region, and the streams in the Appalachians are strongholds for a species whose range has been steadily diminished by a century of development. The brook trout is also a sensitive fish, requiring the cleanest and coolest water to thrive. Intact canopies are an essential component of healthy habitat for these fish.

TU scientists have studied the trout habitat that would be crossed by the proposed project, relying on our recently completed Conservation Portfolio Analysis of brook trout populations. Researchers identified stronghold populations ("resilient"), sizable populations that are well-suited to survive environmental changes ("redundant"), and populations that are geographically unique or have distinctive life histories ("representative"). The research was grounded in the idea that, just as a diversified stock portfolio is a hedge against financial risk, an array of biologically diverse, intact brook trout communities spread across a variety of habitats is the key to a stable species. To help TU develop strategic priorities for areas to conserve, protect, and restore, researchers assessed habitat stability and potential threats in each of these resilient, redundant, and representative patches.

By our count, streams harboring brook, brown, and rainbow trout in West Virginia and Virginia would be crossed 248 times by the Atlantic Coast Pipeline or by the access roads that would be used to construct and operate it.

Our analysis has identified at least 138 high-concern crossings in patches of land with "resilient," stronghold brook trout populations or sizable "redundant populations." Of these, 69 are crossings by the pipeline right-of-way—28 involve perennial streams, while 41 involve intermittent streams and tributaries. The other stream crossings in these patches are by existing or proposed new access roads.

These high-concern crossings are in Upshur, Randolph, and Pocahontas counties in West Virginia, and Highland, Bath, and Augusta counties in Virginia. The affected watersheds include the Middle Fork River, Buckhannon River, Upper Elk River, Knapp Creek, Back Creek, Middle Jackson River, Upper Jackson River, Middle Cowpasture River, Calfpasture River, and South River.

Outside these "resilient" and "redundant" patches, building the ACP would require another 110 wild trout streams crossings in these six counties; 26 of these are also perennial waters.

West Virginia

In Randolph County, the ACP would cross high-value perennial trout water like Phillips Camp Run, Beech Run, and Long Run—all of which are in a stronghold brook trout patch. Valley Fork, a 50-foot wide stream with runs, deep pools, and riffles, is in the path of the pipeline, as are its nearby tributaries. A quarter of a mile away, what appears to be a new access road makes a number of crossings of a Valley Fork tributary as it runs up a slope.

In Pocahontas County, perennial trout streams like Big Spring Fork and Clover Creek would be crossed. Big Spring Fork is a headwater of the Elk River system, where wild populations of brook, brown, and rainbow trout support a thriving sport fishing economy. As West Virginia officials have pointed out, this particular stream already faces multiple stressors, including home development, new roads, and farms. (Draft EIS, p. 4-176).

Virginia

In Highland County, just outside the boundaries of the George Washington National Forest, the pipeline would cross Jackson River and nearby perennial and intermittent tributaries seven times over the course of two miles.

In Bath and Augusta counties, where the project runs through a sliver of land between parcels of land held by the Forest Service, the construction corridor would cross Mill Creek, Hamilton Branch, Calfpasture River, and their tributaries—among them Tizzle Branch, Hodges Draft, Ramseys Draft—42 times over a span of 13 miles.

The impact would be much the same further east in Augusta County, where the line would cross Orebank Creek and Back Creek and their tributaries 14 times.

Forest Service Mitigation Measures

Some of these high-concern streams run through sections of the Monongahela and George Washington National Forests. We are encouraged that the Applicant is working with the Forest Service on a *Construction, Operations, and Maintenance Plan* ("COM Plan") for the portion of the project that crosses public lands. These plans include enhanced best management practices that go beyond FERC's *Upland Erosion Control, Revegetation, and Maintenance Plan* and *Wetland and Waterbody Construction and Mitigation Procedures*, and state erosion and sedimentation guidelines.

Among these "additional mitigation measures" for Forest Service lands are requirements that:

(1) stream channels be restored to their near-natural morphology;
(2) additional temporary work spaces be located at least 100 feet from the edge of a perennial stream;
(3) minimum buffers of 100 feet be protected where pipeline construction parallels a stream, increasing with the gradient of the slope;
(4) additional erosion controls be in place when construction work is within 100 feet of a trout stream during time-of-year restrictions;
(5) hydrostatic testing water not be withdrawn from National Forest waters;
(6) new or reconstructed road-stream crossings allow for fish and aquatic organism passage.

Trout Unlimited welcomes these steps that would help protect trout habitat from damage, but we strongly believe that these best management practices should also apply to high-quality trout waters that are not on land held by the Forest Service. In numerous cases, the ACP passes just outside the boundaries of these forests, and it is in these stretches that construction would have the most substantial potential impact on coldwater resources. It makes little sense for one set of construction standards to apply to the trout streams in the National Forests, and another set on private lands.

Given the fragmented nature of the land held by the National Forests and the interconnectedness of these watersheds, we strongly recommend that the Commission require the Applicant to apply a standard set of conditions to these high-value waters before granting permission to the project.

TU Recommendations

(1) Stream crossings

TU recommends that the Commission request and review site-specific stream crossing, reconstruction, and monitoring plans for the proposed crossings of perennial trout waters by the pipeline right-of-way, especially the 28 high-concern crossings in resilient and redundant brook trout habitat.

Site-Specific Construction Plans: The Applicant should produce site-specific plans for each of these proposed crossings. Before issuing an EIS, the Commission should study these plans to ensure the suitability of the crossings, and release them so the public can do the same. At a minimum, these plans would describe what type of open-cut dry-ditch method would be used at which locations; demonstrate that the alignment of the crossing is at a right angle to the channel; and identify the location of temporary bridges, water discharge stations, pumps, and temporary work spaces.

The Commission should also request that the Applicant produce an analysis of peak flows at these crossings, and ensure that it has taken steps to prepare for them.

The Applicant has surveyed each of the waterbodies proposed to be crossed by the pipeline for physical and qualitative attributes, but certain information is still lacking. The company proposes to bury the pipeline a minimum of four feet at waterbody crossings, except where there is consolidated bedrock, in which case the pipe would be buried a minimum of two feet. It is unclear whether the Applicant has conducted hydrologic analyses of the potential for channel degradation and scour during peak flooding events to determine whether this is deep enough in all cases to prevent the pipe from being exposed. The Commission should see that these studies are done.

Restoration Plans: We recommend the Commission seek site-specific restoration plans for these crossings to ensure that the Applicant has a plan for returning each stream to its pre-construction hydrology. In its planning for stream crossings, the company should study and account for each stream's channel stability, scour depth, gradient, pool depth, and other unique characteristics. Without this information, the Applicant cannot ensure that it has restored each stream channel to its pre-construction condition.

After completion of construction, stream morphology should be unchanged. The stream bed should have the same contours and slope, the width and depth of the channel should be unchanged, and the stream bottom should be reconstructed using native materials similar to those upstream and downstream. The trench should be filled with two feet of native substrate, not just one, to further limit scour. Pools and riffles should be recreated. Cobbles should be used in place of riprap.

We are pleased that the Applicant has agreed to restore streams to "near natural morphology" when working on Forest Service lands (COM Plan, p. 122); it should apply the same standard to the high-concern trout waters outside the boundaries of the National Forests. This is important not just for the larger, perennial streams crossed by the pipeline, but also for the smaller, intermittent tributaries that are part of the same network. Even if these streams are dry part of the year, they often serve as nurseries and spawning grounds for naturally reproducing trout in connected waterways.

We appreciate that the Applicant has agreed that large woody materials removed from the stream and the riparian area during construction be replaced to add shade and habitat, and that fast-growing native trees be planted near the waterways to encourage a speedy recovery of stream canopy. (Draft EIS, p. 2-37).

Monitoring Plans: We recommend that the Commission seek post-construction monitoring plans that would help detect any long-term impacts on these trout streams. On Forest Service lands, the Applicant has collected data on water chemistry, stream discharge, and benthic macroinvertebrates for streams within the George Washington National Forest. (Draft EIS, p. 4-197). This data should also be collected for high-priority trout streams outside Forest Service lands in order to provide baseline water-quality data. The Applicant has also committed to turbidity monitoring during construction, and for four days following restoration activities. (COM Plan, p. 194). The same monitoring should be in place on the perennial trout streams we have identified.

(2) 100-foot setbacks for additional temporary work spaces

We strongly recommend the Commission require that additional temporary work spaces be set back at least 100 feet from perennial trout waters. This would match the setbacks the Applicant has agreed to provide for perennial waters within the National Forests (COM Plan, p. 127). These setbacks should increase when crews are working in areas of greater slope.

(3) 100-foot setbacks when construction parallels high-concern trout streams

The Applicant has proposed a 15-foot buffer of undisturbed vegetation in those areas where the pipeline right-of-way runs parallel to a waterbody. This narrow a stream buffer is not protective of water quality and aquatic life. We recommend that the Commission require 100-foot buffers between the pipeline and affected perennial trout streams, with larger buffers on steep slopes. Again, this would be in keeping with what the Applicant has agreed to do within the National Forests (COM Plan, p. 127).

(4) Erosion & sedimentation controls

Sensitive waterbodies: In correspondence with the U.S. Forest Service and the Fish and Wildlife Service, the Applicant has stated that "additional erosion and sedimentation control measures will be used around sensitive waterbodies" within the National Forests. These techniques should be described, and applied to the perennial trout streams we have identified, as well as the flowing intermittent trout streams in resilient and redundant patches.

Time-of-Year Restrictions: Brook trout spawn in the fall, usually from early October to mid-November; hatchlings emerge in January. The Applicant has stated that it will not construct crossings on trout streams between September 15 and March 31 in West Virginia, nor between October 1 and March 31 in Virginia, as required by state regulations. We recommend that the Commission extend these seasonal restrictions to include work on the stretches of the pipeline that run parallel to these streams, as research shows that disturbances during spawning season can have a detrimental effect on trout reproduction.

The Applicant reports that it may request waivers of this restriction. TU opposes waivers for work in the perennial and flowing intermittent trout streams at issue. At the very least, the Applicant should detail what additional measures it would take if it receives a TOYR waiver. TU recommends that the Commission require the Applicant to set back additional temporary work spaces 100 feet from perennial and flowing intermittent streams; use enhanced erosion and sedimentation controls around these waters, such as compost filter socks or heavy-duty Belted Silt Retention Fences, especially where construction occurs on slopes; and limit in-stream blasting, as it has agreed to do around trout streams in West Virginia. This would be in keeping with construction practices planned for National Forest lands, where the Applicant has agreed to use additional erosion control measures when conducting any sediment-producing construction activities within 100 feet of a perennial trout stream during the TOYR period. (Draft EIS, p. 1-114).

(5) Test water withdrawals and discharges

The Applicant proposed to withdraw from and discharge into Big Spring Fork (MP 69.2), Jackson River (MP 91.5), and Calfpasture River (MP 111.4) a total of 7.7 million gallons of hydrostatic testing water. Each of these are high-concern brook trout streams. As noted above, Jackson and Calfpasture rivers are in stronghold brook trout habitat patches. Given the sensitivity of these waters, we strongly recommend that the Commission not permit these withdrawals and discharges, and the Applicant should locate alternative sources for hydrostatic testing water. This, too, would match restrictions the Applicant has agreed to follow within the National Forests (COM Plan, p. 137).

If such discharges are allowed in these waters, however, the Commission should not permit the practice from September 15 through March 31 to protect spawning trout, and the Applicant should use dewatering structures and filtration barriers to ensure that discharges do not cause undue sedimentation, turbidity, and rapid water temperature changes.

(6) Access roads and aquatic organism passage

The Applicant proposes to expand 387 existing access roads, construct 66 new ones, and add new sections to another 19 roads (Draft EIS, p. 2-25).

Aquatic Organism Passage: The draft EIS does not address aquatic organism passage (AOP). Many road stream crossings built over the years were installed without consideration for stream hydrology and fish passage. On stretches of water with impassible substandard culverts, trout may not be able to escape high water temperatures or reach spawning habitat. Replacing poorly designed culverts with improved road stream crossings provides for interconnected habitat and enhanced flood resiliency. Trout Unlimited strongly recommends that the Applicant incorporate current assessment, design, and construction tools into its planning for access road construction and improvement. We recommend that the Commission require any new or reconstructed culverts be designed to span at least 120 percent of bankfull width and feature streambeds that match upstream and downstream stretches, as described in the Forest Service's Stream Simulation Design procedures. We note again the Applicant has agreed to do so on National Forest lands (COM Plan, p. 128).

We thank the Commission for taking these remarks into consideration, and respectfully request that before issuing a final EIS, it seek additional protections to ensure that construction would not degrade water quality and habitat in the high-value trout streams of West Virginia and Virginia. We look forward to discussing these concerns further. Questions may be directed to David Kinney, Trout Unlimited Mid-Atlantic Policy Director, at 856-834-6591 or dkinney@tu.org.

Sincerely,

David Kinney
TU Mid-Atlantic Policy Director

Kevin Daniels
Chair, Virginia Council of TU

Lee Orr
Chair, West Virginia Council of TU

Tom Benzing
Conservation Chair,
Virginia Council of TU

Randy Kesling
Conservation Chair,
West Virginia Council of TU

*Perennial trout streams crossed by the Atlantic Coast Pipeline right-of-way. Streams in **bold** are in Trout Unlimited-identified resilient or redundant eastern brook trout habitat patches. Some are crossed multiple times.*

Tenmile Creek
Right Fork Middle Fork River
Dry Run
Beech Run
Phillips Camp Run
Back Fork Elk River
Hewett Fork
Valley Fork
Big Spring Fork
UNT Clover Creek
Clover Creek
UNT Shock Run
UNT Warwick Run
UNT Lick Draft
Lick Draft
Back Creek
Stony Run
Morris Run
Jackson River
Laurel Run
Mill Creek
UNT Hamilton Branch
Hamilton Branch
Tizzle Run
Benson Run
Tim's Run
Calfpasture River
UNT Calfpasture River
White Rock Branch
Hodges Draft
Ramseys Draft
Broad Draft
UNT Broad Draft
Dowell's Draft
White Oak Draft
Camp Ridge Draft
Stoutameyer Draft
UNT Jennings Branch
Jennings Branch
Middle River
Folly Mills
UNT Folly Mills
Mills Creek
Orebank Creek
UNT Back Creek
Back Creek
Spruce Creek
South Fork Rockfish River

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