

To: DEQ and the State Water Control Board

May 23, 2018

Re: ACP crossings of Falls Run and Dutch Creek, Nelson County, VA

Dutch Creek and Falls Run in Nelson County are slated to be crossed and impacted by the Atlantic Coast Pipeline (ACP). These creeks define life for all who live in their watersheds. Water in these creeks rushes past boulders, spills into numerous small water falls, and makes its way eventually to the Chesapeake. Underwater grasses and crabs in the Bay are among the ultimate recipients of this pure mountain water.

Nelson County is the most mountainous of all the counties east of the Blue Ridge in Virginia. Sugarloaf Mountain, at 2200' high, is one of the tallest mountains in Virginia's Piedmont. It is a reminder that the Blue Ridge once extended farther east than what we see today. Dutch Creek starts high on the western flank of Sugarloaf, turns south near the bottom of the mountain, and then east through a small, somewhat level valley rich in wetlands, before plunging into a deep gorge 200 feet below steep cliffs on both sides. The appropriately named Falls Run starts on the eastern flank of Sugarloaf Mountain and flows southward before contributing its water to the larger Dutch Creek.

According to ACP's submission to FERC, of 36 counties in the entire proposed pipeline route (WV, VA, and NC), Nelson ranks first in acreage with slopes greater than 30%, and third for having major revegetation concerns. (Resource Report 7, Soils, Tables 7.4.1-1 and 1-2 originally submitted to FERC by Dominion/ACP in September 2015, and updated in Appendix I of their July 18, 2016 Supplemental Filing)

Trees are paramount to preventing soil erosion on steep slopes, and forest cover has been recognized as one of the most important factors in mountain slope stability. Studies have suggested that up to 78% of the landslides and debris flows in the central and southern Appalachian region have been a result of human activity and clearing of forest. <https://www.fs.usda.gov/treesearch/pubs/52372>

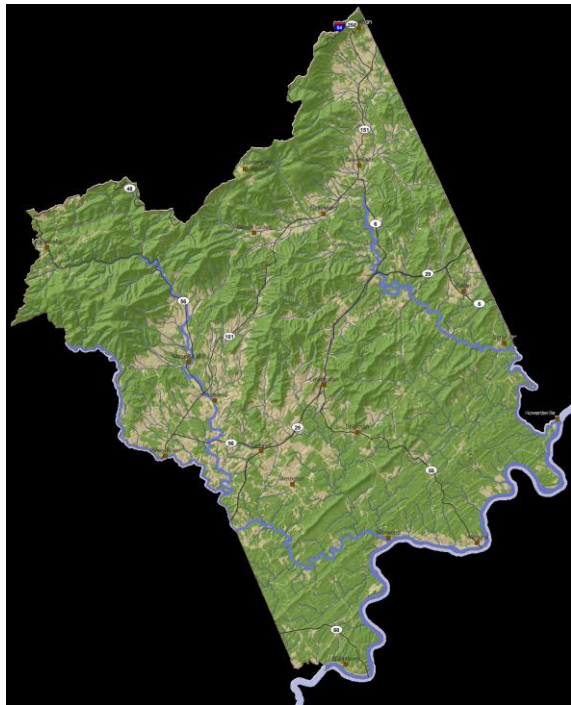
The Right-of-Way (ROW) for the ACP will be revegetated, but with grass, not trees. Dominion's own reports to FERC raised serious concerns about the ability to adequately revegetate areas with steep slopes and thin soil. Not only will trees that are cut down within the ROW be affected, but roots of trees on the periphery will be destroyed, causing mortality among these damaged trees for many years into the future.

A 2017 Natural Resources Defense Council report https://www.nrdc.org/sites/default/files/threats-to-water-quality-from-mountain-valley-pipeline-and-atlantic-coast-pipeline-water-crossings-in-virginia_2018-02-26.pdf estimated the sedimentation impact expected from ACP crossings in mountainous watersheds in Virginia and West Virginia that were expected to have the highest risk of sedimentation from pipeline construction. Highlighted in the report were Falls Run (tributary of Dutch Creek) in Nelson County, Virginia, and Turkeypen Creek (tributary of Kincheloe Creek) in Harrison and Lewis counties, West Virginia. Sedimentation loads were estimated during pre-construction, construction, and post-construction phases. During construction, sedimentation in these watersheds was estimated to increase by 9,051 percent in Virginia and 805 percent in West Virginia. Post-construction sedimentation was estimated to increase by 319 percent and 31 percent, respectively.

Contributing to this huge increase in sedimentation will be the destruction of forest to build access roads to the pipeline. Roads intercept rainfall directly on the surface and affect subsurface water

moving down grade. Water flow is concentrated and rerouted from paths it otherwise would take. Effects of roads range from chronic and long-term contributions of fine sediment into streams to catastrophic mass failures of road cuts and fills during heavy rainfall.

The percentage increase of sedimentation will naturally be most noticeable in counties with the highest amount of existing forest cover. Of the 95 counties in VA, Nelson is seventh in the amount of forest cover, at 77%. <http://dendro.cnre.vt.edu/forsite/forestcommunity/countymap/> It is chilling to note that two of the counties with more forest cover than Nelson – Highland and Buckingham – are also on the ACP route. Forest cover in Nelson is indicated in green in the map below.



Included at the end of this letter are details for nine crossings of Dutch Creek and Falls Run and their tributaries, as identified by DEQ. However, due to the nature of the area, it is important to also consider the locations of access roads as well as actual stream crossings. As already noted above, although this area is east of the Blue Ridge, it has slopes that are as steep as any found elsewhere along the ACP route. Access roads as well as the main crossings of Dutch Creek and Falls Run can be viewed at: dpmc-gis.maps.arcgis.com/apps/webappviewer/index.html?id=3b05d36340794aa7995587a1bb6ca424 (Click the “layers” button – third from the right – at the top. Select ACP MilePosts. Click on Basemap Gallery, first button on right, and select USGS National Map. Zoom to Mile Post 172 to Mile Post 176.)

The ACP is to be built on top of the adjacent mountains, with several slopes exceeding 70% grade. The ridgetops are quite narrow, so a huge amount of mountain top will have to be removed in order to bury the pipe. Any of this excess soil that is packed down on site will be subject to erosion and end up in the nearest creek. This website https://pubs.usgs.gov/of/1999/ofr-99-0518/map/nel_map.pdf shows a debris flow in the area of ACP crossings on Dutch Creek from the 1969 Camille storm, and the USGS identifies this area as 100% landslide prone. A hike to the top of the steep, narrow ridge where the

pipeline is to be buried is through an impressive boulder field that was created by Hurricane Camille in 1969. Mountain top removal will greatly increase the risk for additional debris avalanches above both Dutch Creek and Falls Run. <https://pubs.usgs.gov/pp/0804/report.pdf>

When the new access roads are built, topsoil will be displaced. Increased fine-sediment composition in stream gravel – a common consequence of road-derived sediments entering streams – has been linked to decreased fry emergence, decreased juvenile densities, loss of winter carrying capacity, fewer benthic organism populations, and increased algal production. Both the pipeline ROW and access roads will act as barriers to migration of small animals, and forest will be removed in wide swaths up to the very edge of streams, altering streamflow regimes and water temperature.

<https://rosap.nrl.bts.gov/view/dot/15005>

I guarantee that no one from DEQ has visited the stream crossings or mountains in this area. This is but one example why applying the US Army Corps of Engineers (USACE) Nation-wide Permit 12 (NWP 12) for all of the crossings for the entire ACP is totally inadequate. By allowing NWP 12 to dictate water crossings, DEQ is shirking its duty to protect Virginia's surface and ground waters, and, in my opinion, it is an illegal use of the permit.

According to the USACE website, the NWP 12 is used about 8,000 times a year on projects in deserts, alpine forests, and everywhere in between. It is defined as a “general permit designed to authorize activities that have minimal individual and cumulative adverse effects on the aquatic environment. Activities that result in more than minimal individual and cumulative adverse effects on the aquatic environment cannot be authorized.”

The expected 9,051 percent increase in sediment in Falls Run and Dutch Creek referenced in the NRDC study above is not “minimal.”

The USACE website further explains that, “Since NWPs authorize activities across the nation, projects eligible for NWP authorization may be constructed in a wide variety of environmental settings. Therefore, it is difficult to predict all of the indirect impacts that may be associated with each activity authorized by an NWP.”

According to my understanding of DEQ's responsibilities, water crossings cannot be approved if the impacts on water quality cannot be determined. DEQ should not accept at face value assertions by ACP that environmental effects will be minimal. The NWP 12 will be used by the financial backers of the ACP as a shortcut to save costs.

As a gubernatorial candidate, Lt. Governor Northam had such concern about the inadequacy of applying a “blanket permit” (his words, not mine) to the entire ACP project, that he wrote a letter to DEQ on Feb. 14, 2017, to request individual permits for each stream crossing along the route. In a candidate forum in May, 2017, he reconfirmed this position. It is tragic and perplexing that both Mr. Northam and DEQ reversed this position after he won the race. <https://edforvirginia.com/2017/06/01/mcauliffe-northam-administration-conceal-information-atlantic-coast-pipeline-mountain-valley-pipeline/> Use of the NWP 12 sends a message to the public that due diligence will not be performed.

The NWP 12 can be abused by regulatory agencies and the builders of large infrastructure projects as a convenient way to avoid oversight. "Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP."

A further explanation of the use of NWP 12 continues, "The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects within the scope of the NWP rather than request individual permits for projects which could result in greater adverse impacts to the aquatic environment."

That is a true statement. I don't think that ACP will request additional surveillance!

In an effort to understand the effects that use of the NWP 12 could have, I researched a number of documents that describe and review the parameters of the permit, paying special attention to its application to utility corridors.

<https://search.usa.gov/search?affiliate=u.s.armycorpsofengineersheadquart&query=nationwide%20permit%2012>

Reviews included remarks such as:

- Authorizing the [use of NWP] for each crossing results in more than minimal adverse environmental effects.
- The cumulative effects of the utility line must be considered.
- The issuance of a NWP is based on a general assessment of the effects on public interest and environmental factors that are likely to occur. As such, this assessment must be speculative or predictive in general terms.
- Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.
- In a specific watershed, division or district engineers may determine that the cumulative adverse effects of activities authorized by this NWP are more than minimal. Division and district engineers will conduct more detailed assessments for geographic areas that are determined to be potentially subject to more than minimal cumulative adverse effects.
- The authorized activity cannot have more than minimal adverse effects on breeding areas for migratory birds.
- Activities authorized by this NWP will have minimal adverse effects on riffle and pool complexes.
- The issuance of this NWP will not have a significant impact on the quality of the human environment.

The watersheds for Dutch Creek and Falls Run lie within the Central Piedmont Important Birding Area (IBA), the largest of 21 such areas designated in VA by the National Audubon Society.

<https://www.audubon.org/important-bird-areas/central-piedmont> IBAs are ranked according to their significance on a global, continental, or state basis. The Central Piedmont IBA is an area of continental importance, and harbors one species of global concern. More than 80% of the Central Piedmont IBA is forested, and creeks in this area provide habitat for birds such as the Louisiana Waterthrush, a species that is in serious decline due to increasing forest fragmentation. This species nests along the banks of both Dutch Creek and Falls Run.

I have been unable to find any mention in documents submitted by the ACP of Louisiana Waterthrushes nesting along Dutch Creek. Kentucky Warblers, another species of concern that nests throughout the Dutch Creek watershed, are also not mentioned. I don't think the ACP can be built through this area without a determination of the effect the pipeline would have on these two species.

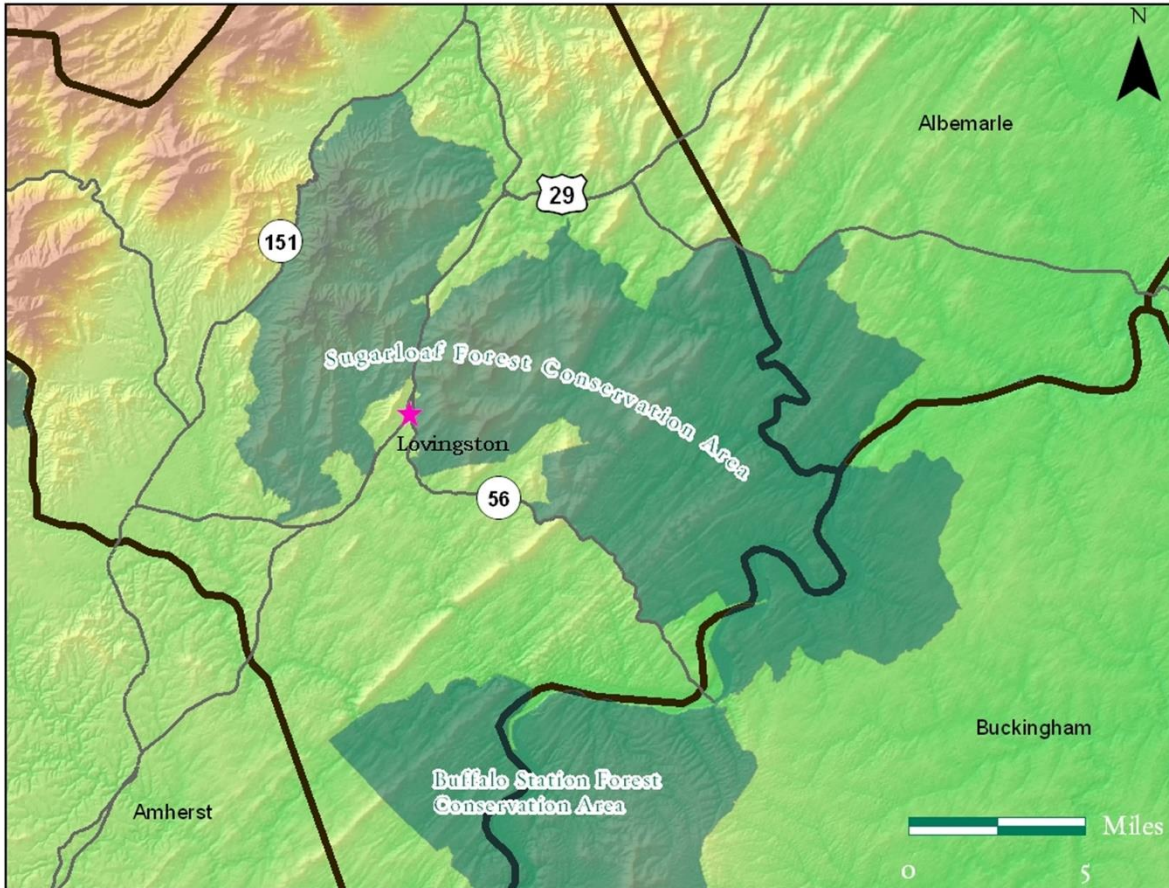
In 2003, landowners in the Dutch Creek watershed met to create the Dutch Creek Ag/Forestral District (AFD) as a way to protect the area from development. Today, we have 25 families who have put more than 3,600 acres into the AFD. Included are nearly 1,200 acres that 5 families have placed under conservation/open space easements with The Nature Conservancy and the VA Dept. of Conservation and Recreation (DCR). Dutch Creek flows through the middle of more than half of these conserved properties, all of which have strict riparian buffer restrictions in place.

A few of the owners of these properties have spent a significant amount of effort rehabilitating and closing old logging roads. Irresponsible loggers of these lands in prior years often bulldozed skid roads straight up the slope of a mountain rather than spend the time to build logging roads that zig zag up a mountain. Steep, straight skid roads become fast moving streams during rain storms, which carry a lot of soil to the creeks. The ACP will be the equivalent of a 125-foot-wide skid road. No amount of rehabilitation of abandoned skid roads by landowners in the Dutch Creek AFD will be able to make up for the ACP. It is pure folly to think that the MVP mudslide in Franklin County was an anomaly. Nelson is a lot more mountainous than Franklin, and the mountain slopes surrounding Dutch Creek and Falls Run are much steeper than the slopes that surround the mudslide that occurred on Cahas Mountain Road in Franklin. Has DEQ taken into consideration any of this in our area?

Several years ago, a few of us in the AFD discussed the idea of nominating Dutch Creek for "Exceptional State Water" designation under the Tier III section of Virginia's water quality regulation. To qualify, a water body must be in a location of outstanding scenic beauty and have exceptional aquatic communities and/or superior recreational opportunities. Dutch Creek should qualify. The scenic beauty of the area is well-known, and the creek has been used for educational programs by four different environmental organizations. Local residents use the creek for birdwatching, nature study, photography, hiking, wading, picnics, playing with our dogs in the water, and swimming. It is also important to note that the creek is the thread that binds this community together. However, with no threat to the creek, there has never been a sense of urgency to apply for Exceptional State Water status – that is, until now. It never in our wildest dreams occurred to us that an interstate pipeline carrying fracked gas would be proposed to cross our creek and fragment our forest!

Our original intentions were to nominate the entire length of Dutch Creek for special status, from its source on Sugarloaf Mountain to its juncture with the Rockfish River. If the ACP is built, I now wonder if Dutch Creek could only be declared an Exceptional State Water to the point where the ACP will cross.

Both Dutch Creek and Falls Run are located within the Sugarloaf Forest Block, identified by DCR as the largest unfragmented forest in the Piedmont. The extent of forest through which these streams flow is what makes them not only beautiful, but healthy. The map below shows the forest block, and the top of Sugarloaf Mountain is under the "r" in the word "forest." The ACP will fragment Virginia's finest Piedmont forest, and severely impact two of its best streams.



Several landowners within the Dutch Creek AFD have banded together to create the Dutch Creek Stewardship Area under the auspices of the Blue Ridge Partnership for Regional Invasive Species Management <http://blueridgeprism.org/> known as PRISM. The first of its kind in VA, PRISM is a volunteer-driven organization dedicated to reducing the negative impact of nonnative invasive plants on the health of the natural and agricultural environment in the Blue Ridge Mountains of Virginia. The ACP will introduce invasive species on a scale that we have not seen in this forested area.

I realize that invasive species is beyond the scope of your request for information about water crossings. However, I think it is important for those of you reading this letter to understand the full extent of the time, money, and effort expended over many years by local landowners to improve and maintain the health of the forest and streams in our community. Nearly half of all rivers and streams in the U.S. have been rated as being in poor biological condition [www.montana.edu/alindsey/documents/Albertson et al. 2018](http://www.montana.edu/alindsey/documents/Albertson%20et%20al.%202018.pdf). The ACP will negatively impact the quality of water in Dutch Creek and Falls Run, and marginalize our efforts. The Chesapeake needs *more* clean creeks, not *fewer*!

The ACP has not yet been built, but a grave concern of mine is that Falls Run has been identified by Dominion as one of the creeks where water used to hydrostatically test the pipeline will be discharged. I asked an environmental engineer employed by Dominion how heavy metals and other impurities would be removed before this water was discharged into the creek. The answer was nothing less than

astounding. I was told that the water would be run through hay bales before entering the creek. At that point, I asked the engineer where she got her environmental degree.

InfluenceMap <https://influencemap.org/index.html> is a UK-based organization that quantifies political and social opposition to climate change mitigation. The three companies building the ACP were rated by this organization, with these results:

- Southern Company, with a 5% stake in the ACP, ranks the worst among all utilities worldwide
- Duke, with a 47% stake, ranks second worst
- Dominion, with a 48% stake, ranks fourth worst.

These are not companies to which any reasonable person would entrust the safety of our water resources in Virginia!

On Earth Day, 1990, a CD entitled Living Planet was released by Magpie, a musical duo known for environmental and civil rights songs. Listen to their song about the Chesapeake, and it will make all your long hours reading letters like mine fall into place. It is why all of this effort matters. As the last line says, "This old bay could use a friend." https://www.youtube.com/watch?v=nl_qnspRx5w.

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Dutch Creek, Nelson County

Crossings of Falls Run (we call it Falls Creek) and Dutch Creek, as provided on the DEQ list:

http://www.deq.virginia.gov/Portals/0/DEQ/Water/Pipelines/AttchB_TableB-1ImpactTable.pdf?ver=2018-04-26-152943-340

Included are crossings of both the main stems of each creek as well as tributaries to the creeks. All crossings are found between Mile Post 172.8 and Mile Post 176.2.

VA AP-1 0262, MP 172.8, sney001, Nelson County 02080203, Dutch Creek, WQS not assessed
37.79551 / -78.79409 N

VA AP-1 0262, MP 172.9, sney002, Nelson County 02080203, Dutch Creek, WQS not assessed
37.79559 / -78.79370 N

VA AP-1 9062, MP 173.2, snea414, Nelson County 02080203, Falls Run, WQS not assessed
37.79232 / -78.78955 N

VA AP-1 9063, MP 173.2, snea413, Nelson County 02080203, Falls Run, WQS not assessed
37.79243 / -78.78881 N

VA AP-1 9064, MP 173.2, snea415, Nelson County 02080203, Falls Run, WQS not assessed
37.79194 / -78.78883 N

VA AP-1 0264, MP 175.1, snec057, Nelson County 02080203, Dutch Creek, WQS not assessed
37.76685 / -78.78887 N

VA AP-1 0265, MP 175.6, snec056, Nelson County 02080203, Dutch Creek, WQS not assessed
37.76109 / -78.78722 Y

VA AP-1 0266, MP 175.9, snee201, Nelson County 02080203, Dutch Creek, WQS not assessed
37.75698 / -78.79067 N

VA AP-1 0267, MP 176.2, snee200, Nelson County 02080203, Dutch Creek, WQS not assessed
37.75289 / -78.79176 N