



March 24, 2017

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

**Re: Atlantic Coast Pipeline, LLC & Dominion Transmission, Inc.
Atlantic Coast Pipeline & Supply Header Projects
Docket Nos. CP15-554-000, CP15-554-001, & CP15-555-000
Supplemental Information**

Dear Secretary Bose:

On September 18, 2015, Atlantic Coast Pipeline, LLC (Atlantic) and Dominion Transmission, Inc. (DTI) filed abbreviated applications (Applications), under the above referenced dockets CP15-554-000 and CP15-555-000, for the Atlantic Coast Pipeline and Supply Header Projects (Projects) pursuant to Section 7(c) of the Natural Gas Act, as amended, and Part 157 of the Rules and Regulations of the Federal Energy Regulatory Commission (Commission or FERC). Additionally, on March 14, 2016, Atlantic filed an Amendment to its pending Application, under the above referenced docket CP15-554-001.

DTI, on behalf of Atlantic and itself, hereby submits supplemental information. This submission consists of the following documents:

- Supplemental Information – March 24, 2017
- Appendix A – Marts Compressor Station Class II Administrative Update Application
- Appendix B – Marts Compressor Station Class II Administrative Update Application – Attachment E (**Contains Critical Energy Infrastructure Information – Do Not Release**)
- Appendix C – Site-Specific Designs of Representative Steep Slope Crossings on U.S. Forest Service Lands
- Appendix D – Noise Studies for Meter and Regulating Stations
- Appendix E – Revised Master Waterbody Crossing Table (**Contains Privileged Information – Do Not Release**)
- Appendix F – State Sensitive Species and Species-Specific Conservation Measures
- Appendix G – Aboveground Cultural Resources Survey Reports
- Appendix H – Archaeological Site Testing Reports (**Contains Privileged Information – Do Not Release**)
- Appendix I – Correspondence for the Atlantic Coast Pipeline
- Appendix J – Privileged Correspondence for the Atlantic Coast Pipeline (**Contains Privileged Information – Do Not Release**)
- Appendix K – Correspondence for the Supply Header Project

DTI requests that, pursuant to 18 C.F.R. § 388.112, the information filed in Appendices E, H, and J be treated as privileged and confidential, and that this information not be released to the public. This

information is labeled “Contains Privileged Information – Do Not Release” and contains the locations of sensitive species and archaeological resources, which are customarily treated as privileged and confidential.

DTI requests that, pursuant to 18 C.F.R. § 388.112, the information filed in Appendix B be treated as Critical Energy Infrastructure Information (CEII), and that this information not be released to the public. This information is labeled “Contains Critical Energy Infrastructure Information – Do Not Release” and contains information that is customarily treated as CEII.

If you have any questions, please contact me at 866-319-3382.

Respectfully submitted,

Angela M. Woolard

Angela M. Woolard
Regulatory and Certificates Analyst III

cc: Mr. Kevin Bowman, FERC
Service List

encl(s)/



ATLANTIC COAST PIPELINE, LLC
ATLANTIC COAST PIPELINE
Docket Nos. CP15-554-000 &
CP15-554-001

and



DOMINION TRANSMISSION, INC.
SUPPLY HEADER PROJECT
Docket No. CP15-555-000

Supplemental Information
March 24, 2017

Prepared by



March 24, 2017

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Appendix A	Marts Compressor Station Class II Administrative Update Application
Appendix B	Marts Compressor Station Class II Administrative Update Application – Attachment E (Contains Critical Energy Infrastructure Information – Do Not Release)
Appendix C	Site-Specific Designs of Representative Steep Slope Crossings on U.S. Forest Service Lands
Appendix D	Noise Studies for Meter and Regulating Stations
Appendix E	Revised Master Waterbody Table (excel file) (Contains Privileged Information – Do Not Release)
Appendix F	State Sensitive Species and Species-Specific Conservation Measures
Appendix G	Aboveground Cultural Resources Survey Reports
Appendix H	Archaeological Site Testing Reports (Contains Privileged Information – Do Not Release)
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ATLANTIC COAST PIPELINE – Docket Nos. CP15-554-000 and CP15-554-001**SUPPLY HEADER PROJECT – Docket No. CP15-555-000****1.0 PROJECT DESCRIPTION AND ENGINEERING****1.1 Air Permit Update Application for the Atlantic Coast Pipeline Marts Compressor Station**

On March 17, 2017, Atlantic Coast Pipeline, LLC (Atlantic) submitted a Class II Administrative Update Application to the West Virginia Department of Environmental Protection (WVDEP) for minor modifications proposed at Compressor Station 1 (also referred to as the Marts Compressor Station) as a result of ongoing engineering design. The proposed modifications include replacing the original emergency generator with two smaller emergency generators (with similar total capacity). The modifications also include changes in tank sizes. These modifications do not materially increase the emissions calculations for the Marts Compressor Station provided with the updates to the Resource Report 9 impact tables filed by Atlantic on January 19, 2017 (FERC Accession Number 20170119-5180). A copy of the Class II Administrative Update Application and Atlantic's transmittal to the WVDEP is provided as Appendix A. Because Attachment E of the Application contains plot plans, it has been filed under separate cover as Appendix B and is labeled "Contains Critical Energy Infrastructure Information – Do Not Release".

1.2 Site-Specific Crossing Plans for Recreational Trails

In its response to Question 62 of FERC's Environmental Information Request dated October 26, 2016 (filed on November 9, 2016; FERC Accession Number 20161109-5138), Atlantic and Dominion Transmission, Inc. (DTI) committed to filing site-specific crossing plans for recreational trails. Additionally, Staff Recommendations 68, 70, 71, and 72 of the Draft Environmental Impact Statement (DEIS) for the Atlantic Coast Pipeline (ACP) and Supply Header Project (SHP; collectively, the Projects) directed Atlantic or DTI to file site-specific crossing plans for the Greenbrier River Rail Trail, Allegheny Trail, North Bend Rail Trail, and Forest Trails Loop Trail, respectively. Staff Recommendation 78 directed Atlantic to evaluate the feasibility of crossing trails and roads on the George Washington National Forest (GWNF) using either the bore or horizontal directional drill (HDD) methods and provide site-specific crossing plans for trails or roads which cannot be crossed by bore or HDD. Site-specific crossing plans and/or responses to Staff Recommendations 68, 70, 71, 72, and 78 are provided in the subsections below.

1.2.1 Greenbrier River Rail Trail

Staff Recommendation 68 of the DEIS for the Projects directed Atlantic to file a site-specific crossing plan for the Greenbrier River Rail Trail identifying "the location(s) of a detour, public notification, signage, and consideration of avoiding days of peak usage". It additionally directed Atlantic to "provide evidence that the crossing plan was developed in consultation with the landowner or appropriate trail steward". This response, which provides Atlantic's site-specific crossing plan for the trail and documentation that the plan was developed in consultation with West Virginia State Parks, the trail steward, fulfills Staff Recommendation 68.

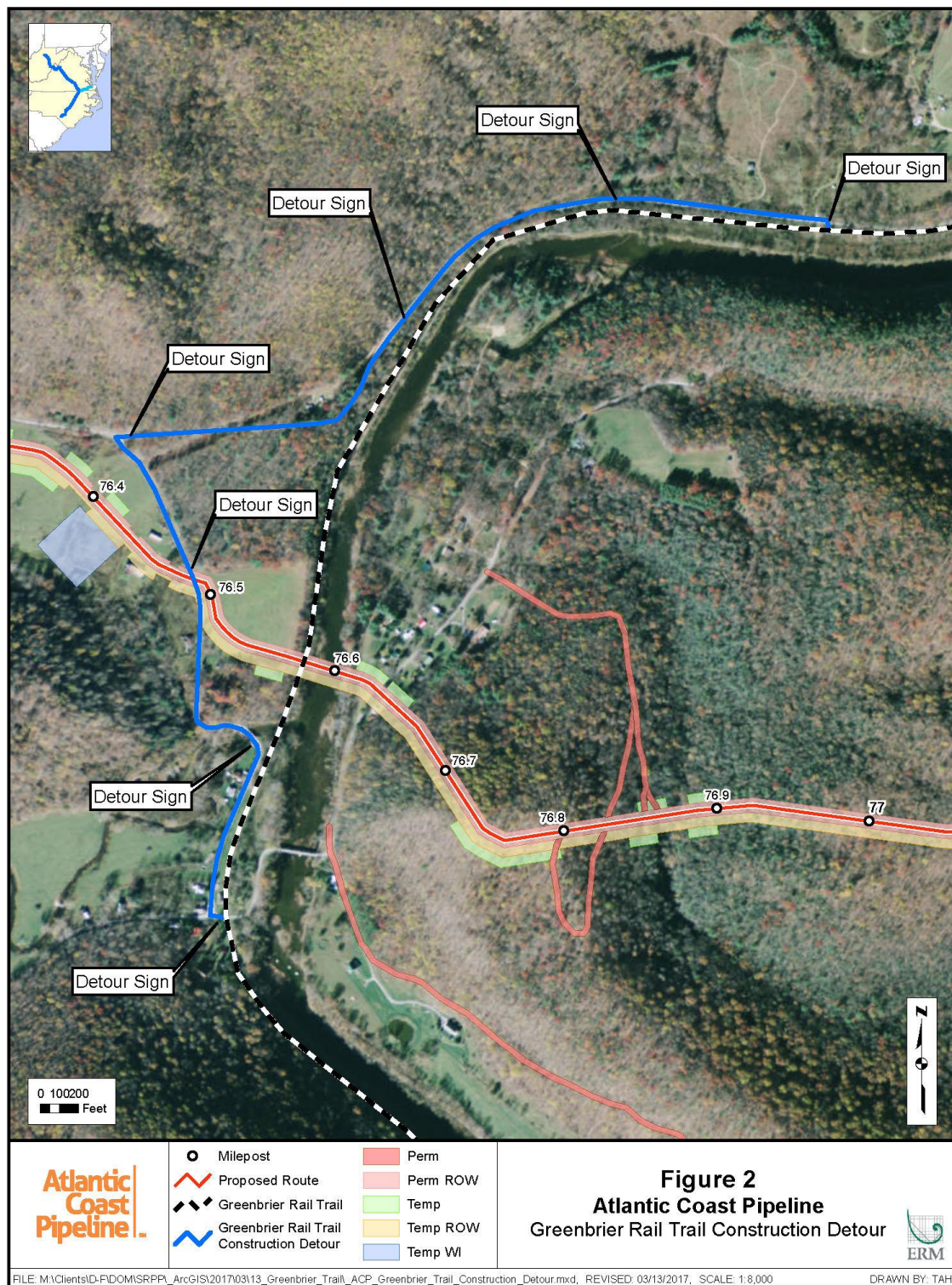
The Greenbrier River Rail Trail will be crossed by the AP-1 mainline at MP 76.6 in Clover Lick, West Virginia. In this area, the trail is roughly paralleled by three roads, CR 1/19, CR 1/4, and State Route 1 (Back Mountain Road) (see Figure 1). Because the crossing of the trail by the pipeline is in a location immediately adjacent to the Greenbrier River, which is proposed to be open cut utilizing cofferdams, and in an area with very steep river banks, it is not possible to keep the trail open at this location during construction of the pipeline river crossing. In order to keep the Greenbrier River Rail Trail open to cyclists and hikers in this area, Atlantic has developed a trail detour to route trail users around the trail crossing construction area by utilizing existing public roadways.

The trail detour will start about 0.8 mile upstream of the pipeline river crossing location (see Figure 2). At this point, users of the trail will be re-routed off the trail and onto CR 1/19, a low-use, surfaced county road that runs adjacent to the trail in this area. At the point where the detour will begin, the edge of the trail is about 40 feet from the edge of the roadway. Trail users heading south (downriver) on the trail will be diverted off the trail and onto the roadway. From this point, the detour will proceed south and west along CR 1/19 to an intersection with Back Mountain Road. The temporary detour will then proceed south along Back Mountain Road, crossing the pipeline construction area on the road surface. The pipeline crossing of Back Mountain Road will be bored, so the surface of the roadway will not be disturbed and the road will remain open during construction. The detour will continue to the south along Back Mountain Road until it meets Laurel Run Road, where it will turn right (east) for about 85 feet to intersect back into the Greenbrier Rail Trail. The length of the detour will be about 1.36 miles.

To guide trail users, Atlantic will place signage at the beginning and end of the detour indicating why the detour is needed and for how long, the length of the detour, and a map showing the location of the detour. Signs placed along the detour will ensure that trail users stay on the detour and make appropriate turns to get back to the Greenbrier River Rail Trail. Signs will also be placed along the road near the beginning and end of the detour warning motorists of the use of the road by cyclists and pedestrians in the area of the detour.

Atlantic consulted with West Virginia State Parks to discuss site-specific planning for the crossing of the trail during construction (see the minutes from Atlantic's October 5, 2016 meeting and March 1, 2017 meeting with West Virginia State Parks and Forest and West Virginia Division of Natural Resources (WVDNR) provided with Appendix I). West Virginia State Parks agreed that Atlantic's detour plan will be adequate to maintain an open trail during pipeline construction. Implementation of the trail detour is expected to occur in June 2019. West Virginia State Parks indicated that the summer is a low-use season for the trail, while spring and fall are higher use periods.





1.2.2 Allegheny Trail

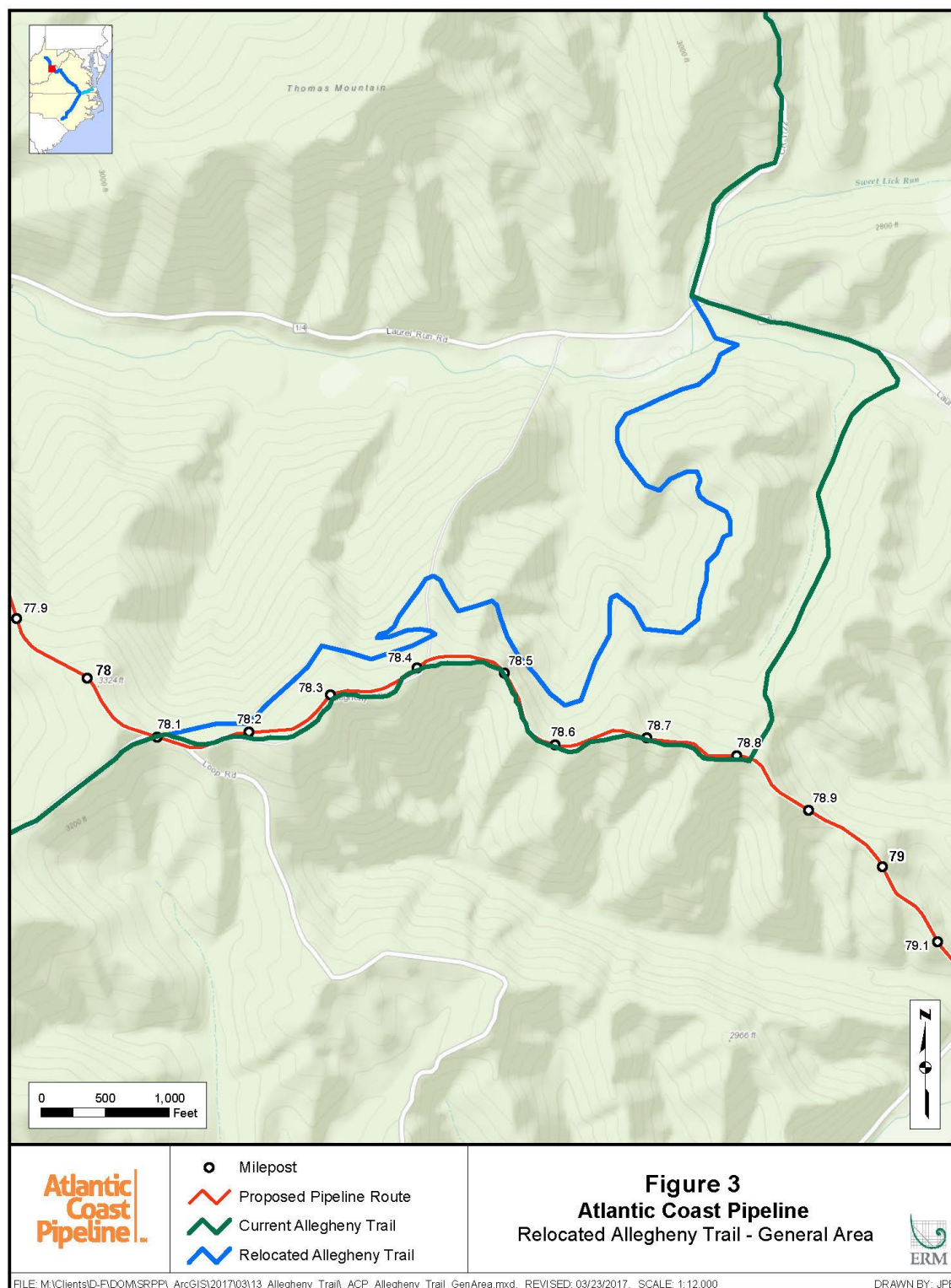
Staff Recommendation 70 of the DEIS for the Projects directed Atlantic to file “a site-specific crossing plan for the Allegheny Trail at AP-1 MP 77.3 that identifies the location(s) of a detour, public notification, signage, and consideration of avoiding days of peak usage”. It additionally directed Atlantic to “provide evidence that the crossing plan was developed in consultation with the landowner or appropriate trail steward”. This response, which provides Atlantic’s site-specific crossing plan for the Allegheny Trail and documentation that the plan was developed in consultation with WVDNR and West Virginia State Parks, the trail stewards, fulfills Staff Recommendation 70.

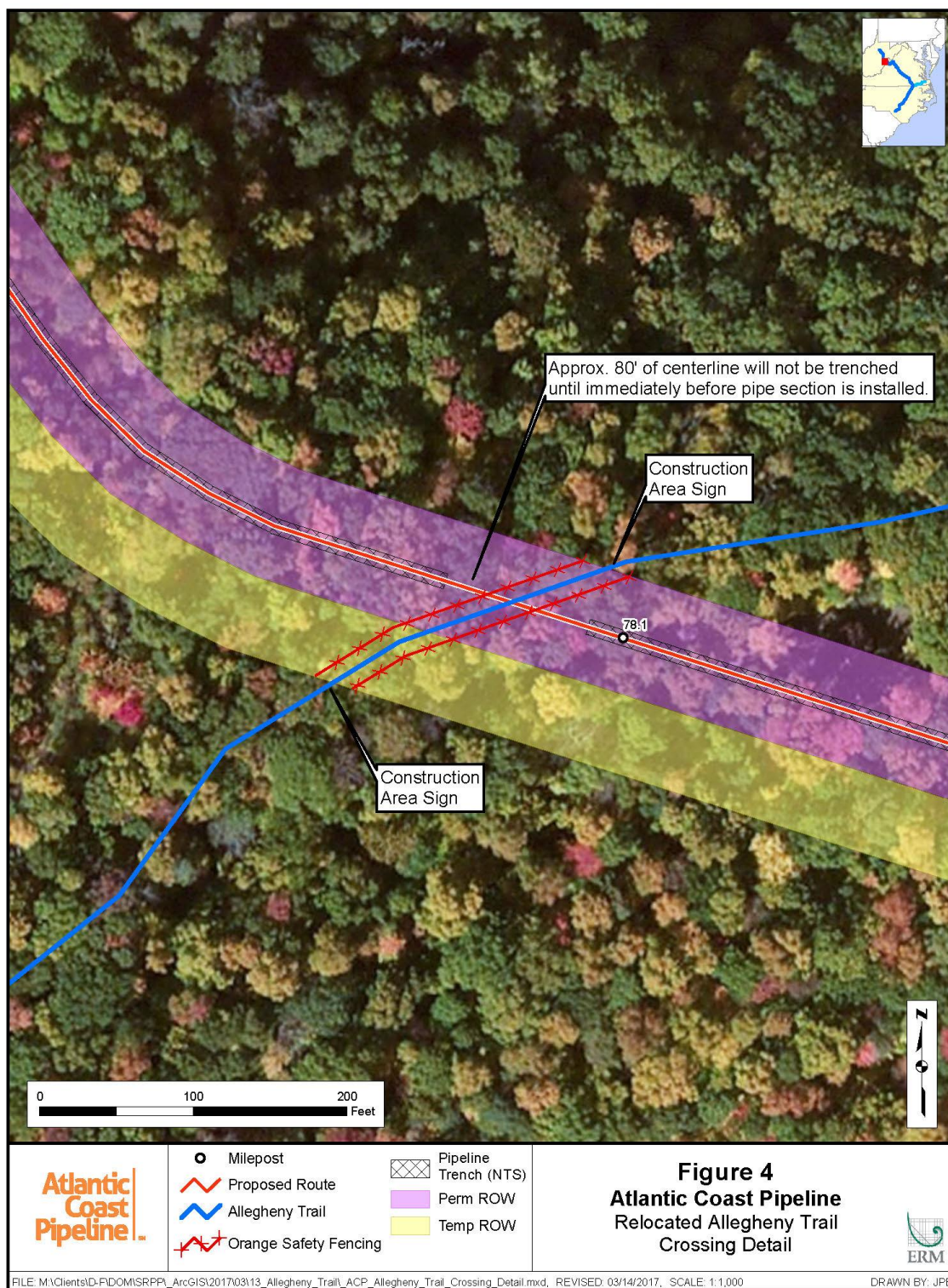
The current location of the Allegheny Trail will be moved by the State of West Virginia prior to construction of the ACP in 2019 (see the minutes from Atlantic’s October 5, 2016 meeting with the Seneca State Forest Park Superintendent and other agency representatives provided with Appendix I; also see Atlantic’s discussion of the trail relocation provided with its supplemental filing on January 10, 2017; FERC Accession Number 20170110-5142). The relocated Allegheny Trail will be crossed by the ACP at approximately MP 78.1 as shown in Figure 3. The pipeline will cross the relocated trail at the top of a ridge near an existing hiker shelter adjacent to the Seneca Forest Loop Road. These areas are all within Seneca State Forest.

To significantly reduce trail closure time to use by hikers, Atlantic will protect the trail by installing protective orange safety fencing on both sides of the trail where it crosses the cleared right-of-way (see Figure 4). The pipeline centerline underneath the trail will be left untrenched and undisturbed so that hikers can follow within the fenced area across the right-of-way. Construction vehicle traffic utilizing the construction right-of-way for material movement and general transportation along the right-of-way will be controlled at the trail crossing location on the construction right-of-way to ensure trail users are kept clear of construction vehicles and activities.

When Atlantic is ready to install the section of pipeline across the trail, it will halt trail traffic for a period of several hours while the trench is dug across the trail, the pipeline section is installed, and the trench backfilled with the excavated native soils. The safety fence in this area will be re-installed and trail traffic will be allowed to continue while the pipeline section is tied-in to (welded into) the mainline section on either side of the trail. Construction right-of-way restoration will continue around the fenced section of the trail, and when complete, the fencing will be removed and the trail area across the right-of-way restored by hand. Additionally, at the request of the trail stewards, stone will be placed on the surface of the trail across the restored right-of-way.

A trail detour will not be required due to the limited time the trail will be closed and the lack of a feasible detour for the trail that would not also require crossing the pipeline right-of-way at another location. Appropriate signage warning hikers of the construction area crossing and listing the safety requirements associated with crossing the restricted, fenced area will be installed on both sides of the construction right-of-way, with additional safety signs attached to the safety fencing warning trail users to stay within the fenced boundaries of the trail.





Atlantic consulted with the WVDNR and West Virginia State Parks and Forest to discuss site-specific planning for the crossing of the Allegheny Trail during construction (see the minutes from Atlantic's October 5, 2016 and March 1, 2017 meetings with the Seneca State Forest Park Superintendent and other agency representatives provided with Appendix I). The State of West Virginia agreed that this crossing plan should be adequate to maintain an open trail during pipeline construction. Construction in the area of the trail crossing is expected to occur in the third quarter of 2019.

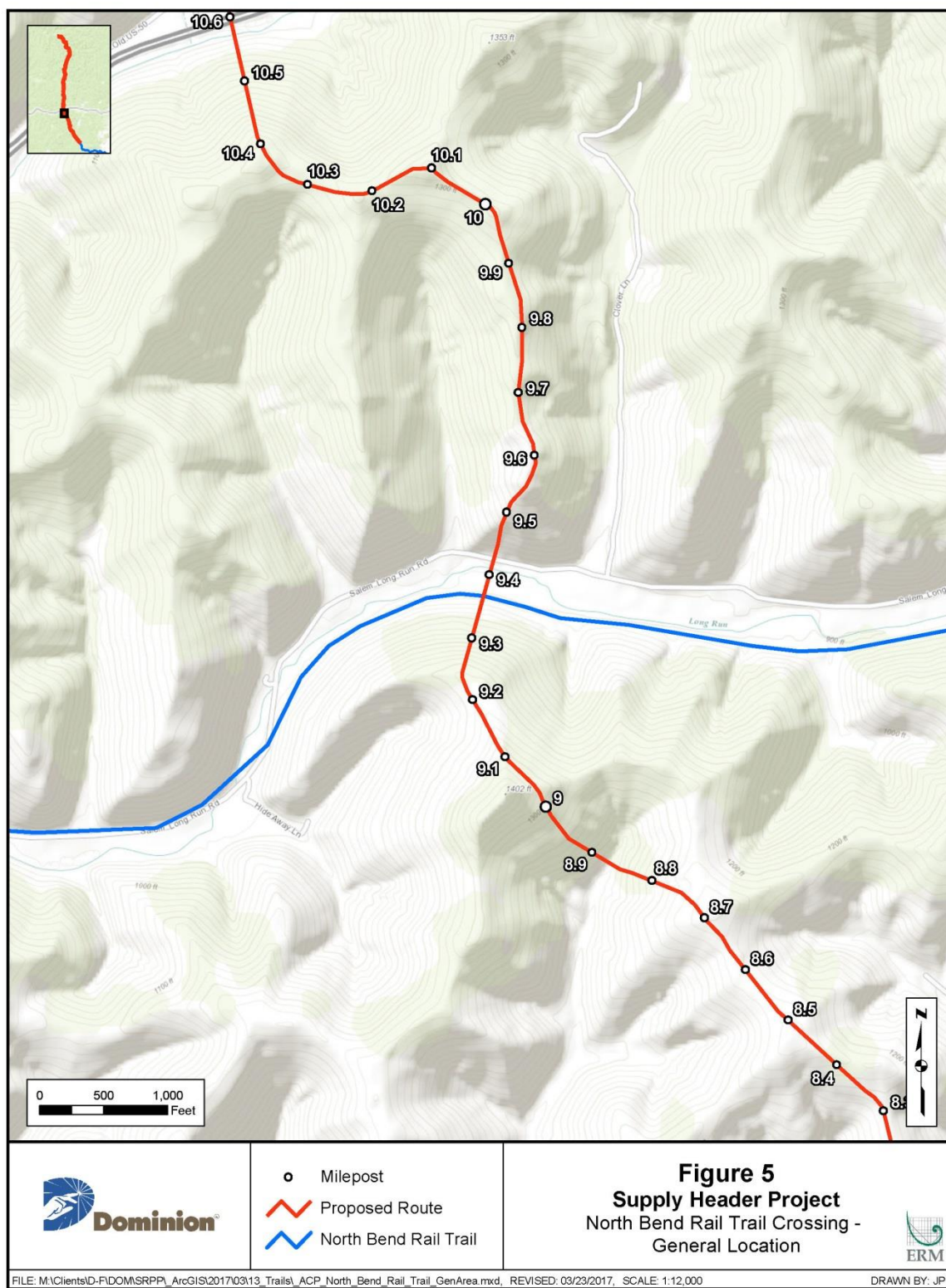
The State of West Virginia also indicated to Atlantic that it is planning to hold a timber sale in 2018 to include the portion of the pipeline construction right-of-way in the area of the trail crossing. Because the pipeline will cross the trail on the top of the ridge, the State has also indicated, as documented in the minutes provided with Appendix I, its intention to increase the area of forest clearing in the vicinity of the relocated trail crossing to provide a scenic vista for hikers crossing the ridge. The forest clearing additionally will mitigate visual impacts along the ridge at the trail crossing due to maintenance of the permanent easement for the pipeline.

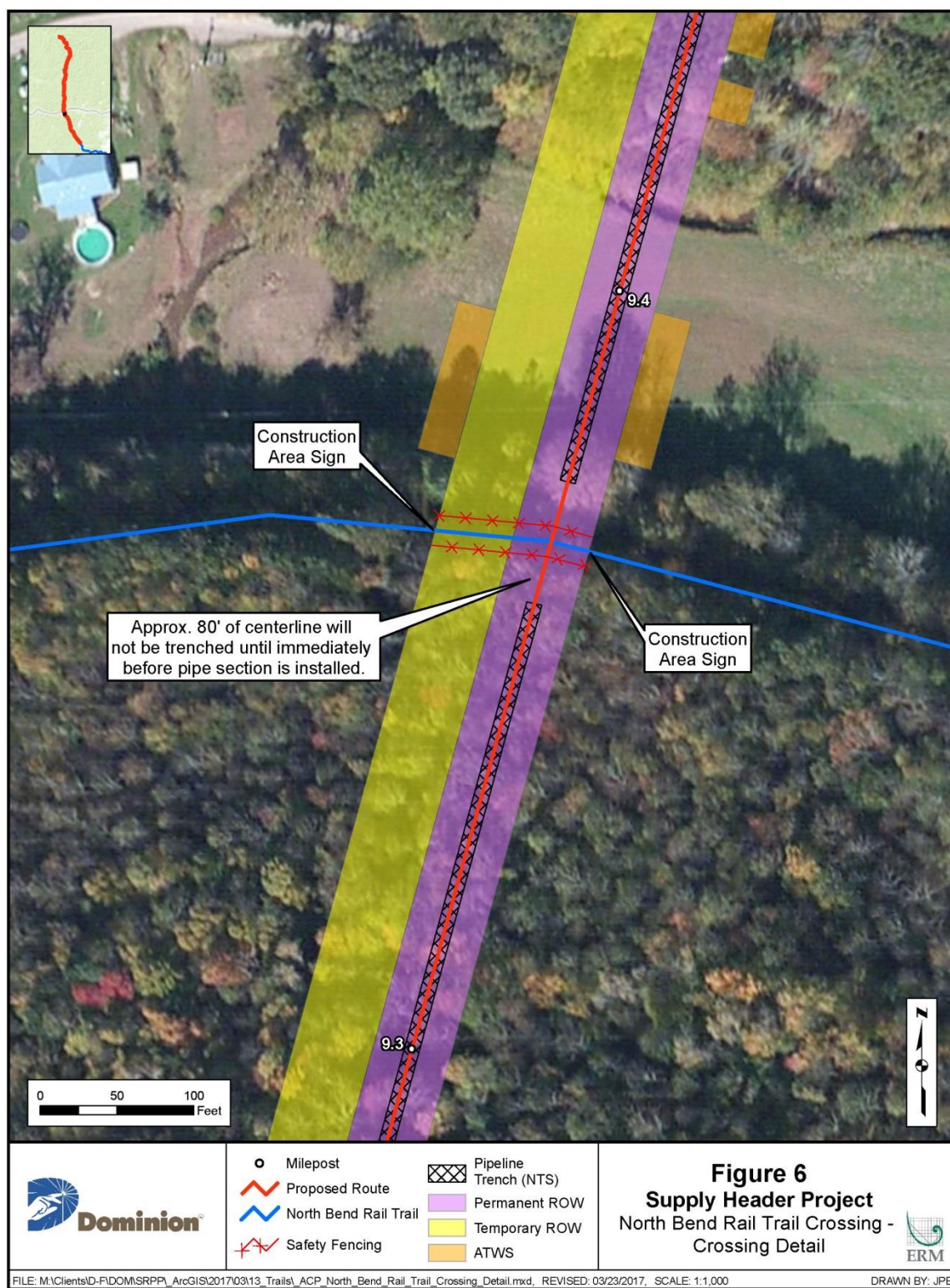
1.2.3 North Bend Rail Trail

Staff Recommendation 71 of the DEIS for the Projects directed DTI to file "a site-specific crossing plan for the North Bend Rail Trail that identifies the location(s) of a detour, public notification, and signage, and considers avoiding days of peak usage". It additionally directed DTI to "provide evidence that the crossing plan was developed in consultation with the landowner or appropriate trail steward". This response, which provides DTI's site-specific crossing plan for the trail and documentation that the plan was developed in consultation with the WVDNR, the trail steward, fulfills Staff Recommendation 71.

The SHP will cross the North Bend Rail Trail at approximately MP 9.4 of the TL-635 loop (see Figure 5). DTI met with the WVDNR to discuss its plans for crossing the trail, and on January 27, 2017 received a License Agreement (see Appendix K) from the State of West Virginia for the crossing of the trail. DTI investigated establishing a trail detour on a nearby road so that bicyclists and hikers could avoid the pipeline crossing location during construction. It was determined, however, that the only opportunity for a detour around the crossing location on the trail would be to utilize Salem-Long Run Road (CR-38) for a distance of about 1.3 miles. Although this road is paved throughout the area, the traffic levels are very high and the road is narrow. To avoid potential safety issues with bicyclists and hikers riding or walking along Salem-Long Run Road, DTI elected to keep the trail open to trail users during construction.

Similar to the site-specific crossing plan for the Allegheny Trail, DTI will protect the trail by installing protective orange safety fencing on both sides of the trail where it crosses the cleared right-of-way (see Figure 6). The pipeline centerline underneath the trail will be left untrenched and undisturbed so that hikers can follow within the protected safety fenced area across the right-of-way during construction. Construction vehicle traffic utilizing the construction right-of-way for material movement and general transportation along the right-of-way will be controlled at the trail crossing location on the construction right-of-way to ensure that trail users are kept clear of construction vehicles and activities.





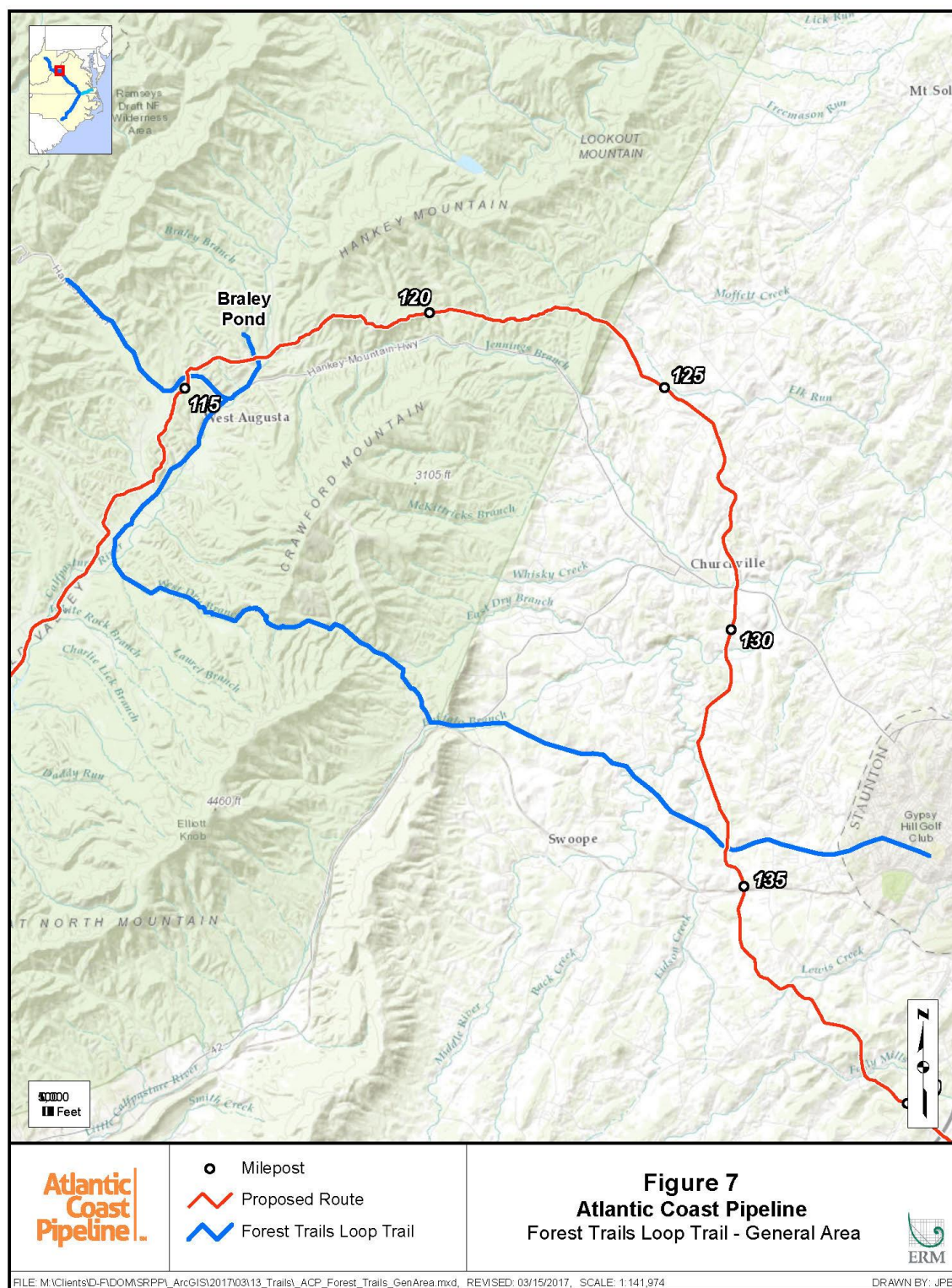
When DTI is ready to install the section of pipeline across the trail, it will halt trail traffic for a period of several hours while the trench is dug across the trail, the pipeline section is installed, and the trench backfilled with the native soils. The safety fence in this area will be re-installed and trail traffic will be allowed to continue while the pipeline section is tied-in (welded into) the mainline section on either side of the trail. Construction right-of-way restoration will continue around the fenced section of the trail, and when complete, the fencing will be removed and the trail area across the right-of-way will be restored by hand. DTI anticipates that construction across the trail will be completed in August of 2018.

A trail detour will not be required due to the limited time the trail would be closed and the lack of a feasible route variation for the trail that would not also require crossing the pipeline right-of-way. Appropriate signage warning hikers of the construction area crossing and listing the safety requirements associated with crossing the restricted area will be installed on both sides of the construction right-of-way, with additional safety signs attached to the safety fencing warning trail users to stay within the fenced boundaries of the trail.

1.2.4 Forest Trails Loop Trail

Staff Recommendation 72 directed Atlantic to file “site-specific crossing plans for the Forest Trails Loop Trail crossings (AP 1 MPs 116.7 and 134.1) that identifies the location(s) of a detour, public notification, and signage, and considers avoiding days of peak usage”. It additionally directed Atlantic to “provide evidence that the crossing plans were developed in consultation with the landowner(s) or appropriate trail steward(s)”. Because the Forest Trails Loop Trail consists of various segments of maintained Commonwealth and County roads linking different designated sites for birding, as discussed below, Atlantic believes that a site-specific crossing plan is unwarranted.

The Forest Trails Loop Trail is a road trail that is one of the loop trails associated with the Virginia Department of Game and Inland Fisheries’ Birding and Wildlife Trails in Virginia (see Figure 7 and <https://www.dgif.virginia.gov/vbwt/mountain-trail/MFT/>). Like other birding trails in Virginia, this trail is a route consisting of Commonwealth and County roads connecting stops along the route/trail for travelers interested in viewing birds. The trail has seven site-specific locations or stops identified along its length. The ACP pipeline route would cross three sections of road that are designated as part of the trail but that are not associated with specific stops: State Route 250 (Hankey Mountain Hwy) at AP-1 MP 115.2; County Route 715/Braley Pond Road at AP-1 MP 116.7; and State Route 254 (Parkersburg Turnpike) at AP-1 MP 134.1. The only identified site-specific birding stop along this trail that is near the ACP route is Braley Pond, which is 0.5 mile away from the pipeline route and the Braley Pond Road crossing location. Atlantic is proposing to bore Braley Pond Road so traffic into Braley Pond and the birding site will not be interrupted. Because these public road crossings, while part of the designated birding trail, will not be closed to traffic during construction and are not in the immediate vicinity of any of the site-specific designated stops along the trail, Atlantic does not propose a site-specific crossing plan for this trail.



1.2.5 Roads and Trails in the George Washington National Forest

Staff Recommendation 78 directed Atlantic to file “an evaluation of the feasibility of using the bore or HDD crossing method for all trails and roads on the GWNF” and site-specific crossing plans for trails or roads where use of the bore or HDD crossing methods is not feasible. This response provides an evaluation of the HDD and bore methods for crossing roads and trails in the GWNF in partial fulfillment of the recommendation. Atlantic has and will continue to consult with the USFS regarding road and trail crossings in the GWNF and will develop site-specific crossing plans as part of this process prior to construction.

The ACP has proposed to open cut four trails and fifteen unpaved roads on the GWNF. The technical feasibility of crossing USFS roads and trails using the HDD method cannot be ruled out without site-specific assessments of site topography and geologic matrix in the path of the drill. However, the HDD method is unlikely to be feasible, principally due to the mountainous terrain at these locations. For 42-inch pipe, an HDD requires a minimum 2,400-foot distance between the entry and exit points. It also requires equivalent elevations at entry and exit points and a long, level work area aligned at right angles to the crossing to string and weld the pull-back pipe. None of these criteria are likely to be met with the current route at the trail and road crossings in the GWNF, and even with significant route realignments, HDDs at these locations may not be feasible.

The conventional bore method would also face topographic constraints, and would not be technically feasible where the road is cut into a slope, or generally lies in steep terrain. The method would require additional temporary workspace of about 0.1 acre per bore on either side of the crossing to store excess spoil from excavations of the bore pits. This area must also be large enough to accommodate boring equipment, provide access for workers and equipment, and allow workers to enter the trench to tie the crossing sections into the mainline.

The open cut method provides near-equivalent minimization of impacts to users of GWNF roads and trails. As stated in Atlantic’s Resource Reports (filed on September 18, 2015; FERC Accession Number 20150918-5212) and Construction, Operation, and Maintenance Plan (COM Plan; filed on January 27, 2017; FERC Accession Number 20170127-5202), if no reasonable detour is available, USFS trails and roads will be kept open to foot or vehicular traffic, except during brief periods when it is essential to close the road or trail to excavate, lay, and bury the pipeline crossing section. This will be accomplished by leaving an unexcavated area where the trail or road crosses the right-of-way until the pipeline crossing section (approximately 40 feet long) is ready to be installed (generally after the mainline pipeline is installed on either side of the road or trail). At that time, the trench across the trail or road will be excavated, the pipeline section lowered into the trench, and the trench immediately backfilled so that foot or vehicular traffic can resume. Most road or trail crossings will be completed in less than a day and the road or trail crossing area restored in a few days using the same sub-bed and surface material as excavated from the crossing location. It should be noted that there will be construction traffic entering, exiting, and/or crossing these roads or trails where they intersect the right-of-way, with associated minor and infrequent traffic disruptions under either scenario.

Consequently, boring these unpaved roads would result in only nominal incremental benefits in terms of traffic disruption.

Boring the fifteen unpaved roads would extend the presence of construction on the GWNF by at least several weeks, but would not significantly reduce the impact on the users of these roads or trails, especially given the ACP's commitment to keep these transportation routes open for all but a brief period during the laying of the pipe in the road/trail bed.

In summary, ACP believes that the open cut method is the most suitable and safest method for crossing trails and unpaved roads on the GWNF. The open cut method is technically feasible in all instances, would entail the least amount of ground disturbance, and can be accomplished with minimal interruption to traffic. It would also allow construction to be completed on the GWNF within a shorter timeframe.

Prior to construction and as part of the ongoing development and review with the USFS of the COM Plan, Atlantic will continue to consult with GWNF staff to develop crossing plans that identify the location(s) of any detours or specific crossing methods, public notification, signage, and consideration of avoiding days of peak usage for trails and roads crossed, as is discussed in Section 17 of the COM Plan (Public Access Plan).

1.3 Site-Specific Designs of Representative Steep Slope Crossings on U.S. Forest Service Lands

Staff Recommendation 20 of the DEIS for the Projects directed Atlantic to file “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”. Updates to the site-specific designs previously filed by Atlantic on January 10, 2017 (FERC Accession Number 20170110-5142) for the two locations requested by the USFS (i.e., from AP-1 MPs 73.20 to 73.50 in the MNF and MPs 84.95 to 85.05 in the GWNF) are provided in Appendix C. The updates incorporate comments and input provided by USFS staff in meetings held on December 8, 2016 and January 17, 2017. Minutes from the December 8, 2016 meeting were filed on February 24, 2017 (FERC Accession Number 20170224-5149). Minutes from the January 17, 2017 meeting are pending review by the USFS. Atlantic's submittal of the updates to the site-specific designs fulfills Staff Recommendation 20.

1.4 Construction Footprint on U.S. Forest Service Lands

Staff Recommendation 77 of the DEIS for the Projects directed Atlantic to file locations and corresponding workspace requirements on the MNF and GWNF where a narrowed right-of-way will be adopted to minimize impacts on forest or ecologically sensitive areas; locations where an additional 25 feet of workspace will be required for full width topsoil segregation on USFS lands; and updated construction impact information for environmental, biological, and cultural resources based on these changes.

While Atlantic continues to review the proposed construction footprint on USFS lands, no areas have been identified where a narrowed right-of-way will be adopted due to topographic conditions, safety considerations, and pipe and equipment size. With regard to topsoil segregation, Atlantic continues to work with USFS staff through the COM Plan process to identify requirements for topsoil segregation in the MNF and GWNF, including areas where full width topsoil segregation may be warranted. Atlantic will file updates regarding its ongoing consultation with USFS staff as appropriate. Because no areas have been identified to date where a narrowed right-of-way will be adopted or full width topsoil segregation will be implemented on USFS lands, there are no updates to the construction impact information identified by Atlantic for the MNF and GWNF in the impact tables filed by Atlantic on July 18, 2016 (FERC Accession Number 20160718-5164) or in the COM Plan filed on January 27, 2017 (FERC Accession Number 20170127-5202).

1.5 Construction Footprint on Seneca State Forest

Staff Recommendation 69 of the DEIS for the Projects directed Atlantic to identify and file locations by milepost and corresponding workspace requirements where a narrowed right-of-way will be adopted to minimize impacts on forest land within Seneca State Forest; and provide updated construction impacts information for environmental, biological, and cultural resources based on these changes.

While Atlantic continues to review the proposed construction footprint on Seneca State Forest, no areas have been identified to date where a narrowed right-of-way will be adopted due to topographic conditions, safety considerations, and pipe and equipment size. Accordingly, there are no updates to the construction impact information specific to Seneca State Forest identified by Atlantic in the impact tables filed by Atlantic on July 18, 2016 (FERC Accession Number 20160718-5164).

1.6 Noise Studies for Meter and Regulating Stations

Staff Recommendation 86 of the DEIS for the Projects directed Atlantic to provide an acoustical analysis for the Long Run, Smithfield, Fayetteville, Pembroke, Elizabeth River, Brunswick, and Greenville Meter and Regulating (M&R) Stations which: a) identifies noise sensitive areas (NSAs) within 0.5 mile of each station; b) characterizes ambient sound levels at each NSA; c) estimates noise levels at each NSA due to operation of the M&R stations at maximum flow; and d) describes mitigation measures designed to ensure that noise impacts do not exceed a day-night equivalent sound level of 55 dBA at any nearby NSAs. A report providing the requested acoustical analysis is provided as Appendix D. Atlantic's submittal of this report fulfills Staff Recommendation 86.

1.7 Clarification on the Limits of the Water Well Identification

Staff Recommendation 21 of the DEIS states "Prior to construction, Atlantic shall complete the remaining field surveys for wells and springs within 150 feet of construction

workspace, and within 500 feet of construction workspace in karst terrain, and file the results, including type and location, with the Secretary (Section 4.3.1.5).”

Atlantic and DTI have engaged recognized karst specialists, GeoConcepts Engineering, Inc., who recommended that we identify wells and springs within 500 feet of the proposed pipeline centerline in karst areas. This 500-foot distance was determined by studies¹ of the effects of blasting on groundwater. Specifically:

- Studies have shown that significant fracturing in the rock around a blast hole is generally limited to a distance of 20 to 40 blast-hole diameters. Thus, for the typical three and one half inch drill hole, the zone of damage would generally be six to 12 feet.
- Studies at observation wells have concluded that there are little to no significant long-term mechanical changes in an aquifer that could be attributed to blasts detonated at distances greater than 500 feet from the well.
- Blast vibrations are not believed to permanently degrade groundwater quality, but can sometimes cause local and temporary turbidity that can extend for hundreds of feet beyond the blast zone. These sediments can remain in suspension for days or weeks; however, this is only temporary and aesthetic, and not suggestive of physical damage to the aquifer or well.

Based on this information, Atlantic and DTI identified wells or springs within 500 feet of the proposed pipeline centerline in karst areas.

Atlantic filed this water supply well identification intent in Section 2.1.3 of Resource Report 2 which accompanied the September 18, 2015 Application (FERC Accession Number 20150918-5212). In addition to the requirement to identify public and private supply wells within 150 feet of all construction workspace [18 CFR 380.12 (d) (9)], Atlantic elected to identify water supply wells within 500 foot of the proposed pipeline centerline in karst areas and within 0.25 mile of horizontal directional drilling (HDD) locations. This conservative approach was voluntarily initiated in order to be more protective in karst and HDD areas.

¹ Oregon Department of Transportation, 2006, “Rock Blasting and the Community” [ftp://ftp.odot.state.or.us/techserv/geo-environmental/Material%20Sources/Resources/Blasting_and_Community.pdf](http://ftp.odot.state.or.us/techserv/geo-environmental/Material%20Sources/Resources/Blasting_and_Community.pdf);
U.S. Department of the Interior-Office Surface Mining Publication 656: “Blasting Vibrations and their Effects on Structures”, 1971;
US Army Corps of Engineers, COE ETL 1110-1-142, Blasting Vibration Damage and Noise Prediction and Control, Publ.Date: 1989-09-01.

Excerpts from Resource Report 2, filed September 18, 2015 (FERC Accession Number 20150918-5212):

2.1.3 Water Supply Wells

Atlantic and DTI are in the process of identifying public and private supply wells and springs within the Project area, as outlined below. Atlantic will continue to identify public and private supply wells and springs within 150 feet of the construction workspace. In addition, wells and springs will be identified within 500 feet of the proposed pipelines in karst areas and within 0.25 mile of horizontal directional drill (HDD) activities.

2.1.3.2 Private Wells

Location data for private wells are not readily available from the PADEP, WVDHHR, VDEQ, VDH-ODW, and NCDENR-DWR. Atlantic and DTI, respectively, are documenting locations of private wells within 150 feet of the proposed ACP and SHP facilities through discussions with landowners and field (civil) surveys. Private water supply wells identified to date within 150 feet of the proposed workspace for the ACP and SHP facilities are listed in Table 2.1.3-2. Atlantic will continue to identify private supply wells within 150 feet of the construction workspace. In addition, wells will be identified within 500 feet of the proposed pipelines in karst areas and within 0.25 mile of horizontal directional drill (HDD) activities. These additional survey efforts are scheduled to begin in the Fall of 2015. Results of the surveys will be provided in supplemental filing.

On April 15, 2016 Atlantic filed updated Resource Reports (FERC Accession Number 20160415-5014) in which Section 2.1.3.2, Private Wells, was updated to read:

2.1.3.2 Private Wells

Private water wells identified to date within 0.25 mile of HDD sections, 500 feet of facilities in karst areas, and 150 feet of facilities across the remaining portions of the ACP and SHP are summarized in Table 2.1.3-2. Private water wells identified during surveys along the GWNF-6 and the Fayetteville Major Route Alternatives will be provided in a supplemental filing.

The revision to Section 2.1.3.2 was intended to convey and affirm to FERC and the public that Atlantic was identifying water supply wells within 150 feet of the pipeline *and* aboveground facilities such as compressor stations, metering and regulating (M&R) sites, and valve sites, and in karst areas within 500 feet of the pipeline *and* aboveground facilities. Throughout these Resource Reports the term “facility” is intended to denote aboveground operating facilities. The intent was not to extend the survey buffer to within 500 feet of the construction workspace around the pipeline in karst areas.

The Draft Environmental Impact Statement (DEIS) issued by FERC on December 30, 2016 states that “Atlantic and DTI provided data for water supply wells and springs identified within...500 feet of facilities in karst areas...”.

Excerpts from the DEIS, issued December 30, 2016:

4.3.1.5 Water Supply Wells and Springs

Atlantic and DTI provided data for water supply wells and springs identified within 0.25 mile of HDD sections, 500 feet of facilities in karst areas (based on Weary and Doctor, 2014) and for the portion of ACP between AP-1 MPs 59 and 157), and within 150 feet of the workspace for the remainder of ACP and SHP facilities.

Prior to construction, Atlantic should 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.

To date, Atlantic has provided data for water supply wells and springs for sources identified within:

- 150 feet of the limit of disturbance (i.e. construction workspace);
- 500 feet of the proposed pipeline (i.e. centerline) in karst areas, between AP-1 mileposts (MPs) 59 and 157; and
- 0.25 mile of HDD locations.

The data provided by Atlantic to date is accurately reflected in DEIS Section 4.3.1.7, Groundwater Impacts and Mitigation, subsection Blasting, which states, “Atlantic and DTI would contact landowners to determine the location of private water wells and water supply springs within 500 feet of the proposed pipelines in karst areas and within 150 feet of approved construction workspace along the remainder of the route...”

Excerpt from Section 4.3.1.7, Groundwater Impacts and Mitigation, of the DEIS issued December 30, 2016:

Blasting

As discussed above, Atlantic and DTI would contact landowners to determine the location of private water wells and water supply springs within 500 feet of the proposed pipelines in karst areas and within 150 feet of approved construction workspaces along the remainder of the route, 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 impacted the water quality and/or yield of a well, Atlantic and DTI would provide a temporary or permanent alternative water source depending on the type and degree of impact.

In conclusion, Atlantic has provided data to meet the requirements of 18 CFR 380.12 (d) (9) (which requires data within 150 feet of construction workspace). Additionally, Atlantic has voluntarily identified wells within 500 feet of the proposed pipeline centerline in karst terrain, in order to mitigate any potential impacts from blasting. Staff Recommendation 21 to identify wells and springs within 500 feet of the *construction workspace* (i.e. limit of disturbance) in karst terrain, which would go beyond the voluntarily identified wells and springs within 500 feet of the *proposed pipeline* centerline in karst terrain, has not been undertaken to date and, based on review of technical studies and consultation with karst technical experts, Atlantic believes that it is not necessary.

2.0 ENVIRONMENTAL AND CULTURAL RESOURCES

2.1 Revised Master Waterbody Crossing Table

Staff Recommendation 54 of the DEIS for the Projects directed Atlantic to file with FERC and provide to the USFWS “a revised master waterbody crossing table that assumes presence of the Roanoke logperch in waterbodies where desktop analysis has indicated suitable habitat, and implementation of all conservation measures described in this EIS.” The update to the draft Biological Assessment (BA) for the Projects, which Atlantic and DTI filed with FERC and provided to the USFS on January 27, 2017 (FERC Accession Number 20170127-5203), identified waterbodies where the presence of Roanoke logperch is known or assumed and described conservation measures for the species. Atlantic subsequently incorporated information regarding Roanoke logperch, including conservation measures, into a revised master waterbody table. The table was provided to the USFWS by email on March 23, 2017. The revised table is provided as Appendix E; because the revised table includes location information for sensitive species in waterbodies, it has been filed under separate cover and is marked “Contains Privileged Information – Do Not Release”. Atlantic’s transmittal email to the USFWS is provided in Appendix I. Atlantic’s submittal of the update to the draft BA and revised master waterbody table to FERC and the USFWS fulfills Staff Recommendation 54.

Staff Recommendation 64 of the DEIS for the Projects directed Atlantic to file an update to the master waterbody crossing table confirming time of year restrictions for various mussel species at select waterbody crossings. The time of year restrictions for the mussel species at the waterbodies identified in the recommendation have been incorporated into the revised master waterbody table provided as Appendix E. Therefore, the submittal of the revised master waterbody table fulfills Staff Recommendation 64.

The revised master waterbody table also incorporates updates to sources and volumes of water withdrawals consistent with commitments made in the draft BA for the Projects to minimize impacts on waterbodies containing sensitive species. Therefore, in conjunction with the revised master waterbody table, Atlantic and DTI additionally are filing updates to Resource Report 2 Tables 2.2.6-1 and 2.2.7-1, which identify water requirements for HDDs and hydrostatic testing, respectively.

2.2 Update on Waterbody Crossings

Staff Recommendation 25 of the DEIS for the Projects directed Atlantic to file “the results of quantitative modeling for turbidity and sedimentation associated with the wet open-cut crossings of the Neuse River (and all other major waterbodies crossed via a wet open-cut method)”. Atlantic has modified the proposed crossing method for the Neuse River from a wet open cut to a cofferdam (see the revised mater waterbody table provided as Appendix E). With this change, there are no major waterbodies which will be crossed by the ACP using the wet open-cut method. Therefore, Staff Recommendation 25 is no longer applicable to the Project.

TABLE 2.2.6-1					
Water Requirements for Horizontal Directional Drills for the Atlantic Coast Pipeline					
Project/HDD	County or City / State or Commonwealth	Pipeline Segment / Milepost	Approximate Water Requirement for Hydro-testing (thousands of gallons)	Approximate Water Requirement for Drilling Mud (thousands of gallons)	Locations of Water Withdrawals ^a
ATLANTIC COAST PIPELINE					
I-79	Lewis County, Virginia	AP-1 Mainline/MP 14.0	201	1,438	Municipal Water Source
Blue Ridge Parkway/ Appalachian National Scenic Trail	Augusta County, Virginia	AP-1 Mainline/ MP 158.2	325	4,517	James River
James River	Nelson and Buckingham Counties, Virginia	AP-1 Mainline/ MP 184.7	208	1,486	James River
Roanoke River	Northampton and Halifax Counties, North Carolina	AP-2 Mainline/ MP 9.9	78	533	Municipal Water Source
Fishing Creek	Halifax and Nash Counties, North Carolina	AP-2 Mainline/ MP 33.9	92	1,451	Municipal Water Source
Swift Creek	Nash County, North Carolina	AP-2 Mainline/ MP 40.6	82	1,297	Municipal Water Source
Tar River	Nash County, North Carolina	AP-2 Mainline/ MP 59.4	76	1,205	Municipal Water Source
Contentnea Creek	Wilson County, North Carolina	AP-2 Mainline/ MP 73.6	67	1,055	Municipal Water Source
Little River	Johnston County, North Carolina	AP-2 Mainline/ MP 82.5	73	594	Municipal Water Source
Cape Fear River	Cumberland County, North Carolina	AP-2 Mainline/ MP 154.2	83	566	Municipal Water Source
Nottoway River	Southampton, Virginia	AP-3 Lateral/ MP 32.6	26	286	Municipal Water Source
Blackwater River	Southampton County and City of Suffolk, Virginia	AP-3 Lateral/ MP 38.6	34	380	Blackwater River
Prince Lake	City of Suffolk, Virginia	AP-3 Lateral/ MP 61.0	30	332	Lake Prince
Western Branch Reservoir	City of Suffolk, Virginia	AP-3 Lateral/ MP 62.4	22	250	Western Branch Reservoir

TABLE 2.2.6-1 (continued)					
Water Requirements for Horizontal Directional Drills for the Atlantic Coast Pipeline					
Project/HDD	County or City / State or Commonwealth	Pipeline Segment / Milepost	Approximate Water Requirement for Hydro-testing (thousands of gallons)	Approximate Water Requirement for Drilling Mud (thousands of gallons)	Locations of Water Withdrawals ^a
Western Branch Nansemond River	City of Suffolk, Virginia	AP-3 Lateral/ MP 63.6	52	584	Municipal Water Source
Nansemond River	City of Suffolk, Virginia	AP-3 Lateral/ MP 64.4	62	700	Municipal Water Source
Route 58	Suffolk County, Virginia	AP-3 Lateral/MP 71.5	40	442	Municipal Water Source
I-64 Crossing	City of Chesapeake, Virginia	AP-3 Lateral/ MP 77.8	31	346	Unnamed Pond at 36° 45' 52" 76° 20' 29"
US Route 17	City of Chesapeake, Virginia	AP-3 Lateral/ MP 78.6	45	501	Un-named Pond at 36° 45' 54" 76° 20' 17"
South Branch Elizabeth River	City of Chesapeake, Virginia	AP-3 Lateral/ MP 81.8	26	295	Municipal Water Source
SUPPLY HEADER PROJECT					
No HDDs proposed			N/A	N/A	N/A
^a Atlantic and DTI continue to review waterbodies for supply capacity.					

TABLE 2.2.7-1			
Water Requirements for Hydrostatic Testing for the Atlantic Coast Pipeline and Supply Header Project			
State or Commonwealth/ Spread	Approximate Water Requirement (Millions of Gallons) ^a	Locations of Water Withdrawals (Milepost)	Locations of Discharges (Milepost) ^b
ATLANTIC COAST PIPELINE			
West Virginia			
Spread 1-1	4.5	Municipal Water Source	0.0; 7.4; 8.2; 11.0; 17.2
Spread 1-2	N/A	Jump 3.5 million gallons from Spread 1-1	17.2; 20.8; 25.7; 30.7; 31.7
Spread 2-1	3.4	Buckhannon River (MP 31.7)	31.7; 31.9; 39.8; 47.3
Spread 2-2	N/A	Jump 3.0 million gallons from Spread 2-1	47.3; 52.7; 56.2
Spread 2A	N/A	Jump 2.8 million gallons from Spread 2-2	56.2; 59.1; 62.3; 65.4
Spread 3	2.6	Municipal Water Source	66.2; 69.2
Spread 3	4.5	Municipal Water Source	69.2; 72.8; 74.5; 76.4; 76.9; 79.2
Virginia			
Spread 3A	2.8	Back Creek (MP 87.2)	79.2; 87.2; 91.4
Spread 3A and 4	2.6	Jackson River (MP 91.5)	87.2; 91.4; 95.7
Spread 4	3.6	Municipal Water Source	91.4; 95.7; 97.8; 103.8
Spread 4A	2.5	Calfpasture River (MP 111.4)	103.8; 107.9; 112.2; 123.6; 125.9
Spread 5	3.2	Jennings Branch (MP 129.2)	125.9; 129.1; 130.8; 134.1; 137.7; 139.7; 140.9; 146.9; 154.0; 156.3
Spread 5	1.6	Municipal Water (MP 134.2)	156.3; 158.7

TABLE 2.2.7-1 (continued)

Water Requirements for Hydrostatic Testing for the Atlantic Coast Pipeline and Supply Header Project			
State or Commonwealth/ Spread	Approximate Water Requirement (Millions of Gallons) ^a	Locations of Water Withdrawals (Milepost)	Locations of Discharges (Milepost) ^b
Spread 5	3.6	South Fork Rockfish River (MP 163.7)	158.7; 162.0; 163.8; 164.1; 169.5; 172.6; 178.9; 183.3
Spread 6	8.5	James River (MP 184.7)	183.3; 184.4; 184.8; 184.8; 199.8; 202.5; 214.3
Spread 6	6.5	Appomattox River (MP 220.8)	214.3; 228.7; 239.6
Spread 7 and 12	8.25	Municipal Water Source	239.6; 245.8; 247.5; 260.5; 272.3; 279.8; 282.4; 284.4; 291.6; 300.1
Spread 11	3.5	Blackwater River (MP 38.6)	0.0; 15.9; 17.1; 32.1; 32.5; 37.9; 38.3; 38.8; 39.0; 56.2; 57.3; 59.3; 66.3; 71.2; 71.9; 76.6
Spread 11	0.055	Municipal Water Source	60.7; 60.9
Spread 11	0.1	Western Branch Reservoir (MP 62.4)	62.0; 62.3
Spread 11	0.055	Municipal Water Source	63.2; 63.5
Spread 11	0.1	Municipal Water Source	65.1; 65.9
Spread 11	1.0	Municipal Water Source	76.6; 77.2; 77.5; 78.1; 78.6; 82.1; 82.2; 82.7
North Carolina			
Spread 8	5.1	Municipal Water Source	0.0; 2.3; 3.5; 5.4; 8.3; 10.2; 10.5; 12.8; 13.7; 27.2; 40.1; 50.7; 53.2; 57.8
Spread 8	1.6	Municipal Water Source	57.8; 59.9; 61.6
Spread 9	6.6	Municipal Water Source	61.6; 63.2; 64.2; 65.7; 74.8; 78.6; 82.4; 88.3; 93.0; 98.7; 101.1; 112.0; 117.9; 125.0
Spread 10	6.6	Municipal Water Source	125.0; 126.7; 141.0; 141.7; 153.7; 153.8; 154.0; 161.7; 163.5; 163.9; 167.1; 167.4; 177.7; 183.0
SUPPLY HEADER PROJECT			
West Virginia			
Spread 13	0.9	South Fork Fishing Creek (MP 29.5)	29.5; 30.4; 33.6
Spread 13	2.1	McElroy Creek (MP 18.5)	0.0; 7.4; 10.4; 10.9; 18.5; 29.5
Pennsylvania			
Spread 14	0.7	Municipal Water Source (MP 2.7)	0.0
^a Atlantic and DTI continue to review waterbodies for supply and discharge capacity.			
^b Discharge locations will be to upland locations a minimum of 300 feet from these sensitive waterbodies.			

2.3 State Sensitive Species and Species-Specific Conservation Measures

Staff Recommendation 65 of the DEIS for the Projects directed Atlantic to file a description of impacts and species-specific conservation measures, developed in consultation with the appropriate agencies, for the state sensitive species listed in Table 4.7.4-4 of the DEIS “where Atlantic has identified potential impacts and/or where the appropriate agency has requested additional analysis or conservation measures”. For areas where survey data are pending, the recommendation additionally directed Atlantic to consult with the appropriate agencies to “to identify the conservation measures that [Atlantic] will implement if the species

and/or suitable habitat are identified during preconstruction surveys, or where presence has been assumed”.

A description of impacts and species-specific conservation measures for the state-listed species identified in Table 4.7.4-4 of the DEIS, including conservation measures to be implemented if species or suitable habitat are found during preconstruction surveys or in areas where presence is assumed, is provided as Appendix F. The submittal of this table fulfills Staff Recommendation 65.

2.4 Cultural Resource Survey and Testing Reports

Atlantic and DTI are conducting field investigations for archaeological sites, historic architectural sites, and other cultural resources. With this filing, Atlantic is submitting copies of the following reports for the ACP:

- Addendum Architectural Survey Resources Report for West Virginia;
- Addendum Architectural Survey Resources Report for Virginia;
- Addendum Architectural Survey Resources Report for North Carolina;
- Phase II Archaeological Site Testing Report for Virginia; and
- Phase II Archaeological Site Testing Report for North Carolina.

Copies of the aboveground survey reports and archaeological site testing reports are provided in Appendices G and H, respectively. Because the testing reports contain location information for archaeological sites, Appendix H has been filed under separate cover. The testing reports are marked “Contains Privileged Information – Do Not Release”.

Atlantic provided the West Virginia aboveground survey report to the West Virginia Division of Culture and History on March 24, 2017; the Virginia aboveground survey report and archaeological site testing report to the Virginia Department of Historic Resources on March 24, 2017; and the North Carolina aboveground survey report and archaeological site testing report to the North Carolina Department of Cultural and Natural Resources on March 24, 2017. Copies of the transmittal letters to these agencies are provided with Appendices G or H, as appropriate. Atlantic will file comments from the agencies on the reports when available.

3.0 AGENCY CORRESPONDENCE

Atlantic submitted summaries of agency contacts and copies of select correspondence with agencies in Appendices 1H and 1I of Resource Report 1, which were filed with the FERC Application on September 18, 2015 (FERC Accession Number 20150918-5212). Updated summaries of agency contacts and copies of correspondence were also provided with supplemental filings or data responses on October 30, November 13, and December 15, 2015; January 13, January 29, March 24, April 15, May 13, June 17, July 1, July 18, July 29, August 15, September 1, September 15, September 30, October 17, October 20, October 31, November

17, and December 1, 2016; and January 10, January 27, February 24, and March 10, 2017 (FERC Accession Numbers 20151030-5363, 20151113-5192, 20151215-5252, 20160113-5231, 20160129-5227, 20160324-5120, 20160415-5014, 20160513-5223, 20160617-5151, 20160701-5255, 20160718-5164, 20160729-5256, 20160816-5051, 20160901-5260, 20160915-5216, 20160930-5310, 20161017-5045, 20161020-5049, 20161031-5198, 20161117-5168, 20161201-5309, 20170110-5142, 20170127-5202, 20170224-5149, and 20170310-5157, respectively).

A summary of recent agency contacts and copies of correspondence for the ACP are provided in Appendix I. Because some of Atlantic’s recent correspondence with agencies contains location information on threatened or endangered species or archaeological sites, this correspondence is being filed under separate cover as Appendix J, which is marked “Contains Privileged Information – Do Not Release”. Recent agency correspondence for the SHP is provided in Appendix K.