January 22, 2018

MEMORANDUM

To: Linda Culpepper
Interim Director, Division of Water Resources

From: Brian Wrenn, Ecosystems Branch Supervisor
Division of Water Resources, Water Sciences Section

Subject: Hearing Officer's Report and Recommendations
Atlantic Coast Pipeline, LLC
Individual 401 Water Quality Certification and Buffer Authorization Certificates
Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties

I served as the Hearing Officer for the subject Public Hearings held at the Fayetteville Technical Community College in Fayetteville, NC on July 18, 2017 and at the Nash Community College in Rocky Mount, NC on July 20, 2017. The public hearings were held under the authority of Title 15A NCAC 02H .0504. The purpose of these public hearings was to receive comment on the Division of Water Resources' 401 Water Quality Certification (401 WQC) and buffer authorization certificates application (Appendix A) submitted by Atlantic Coast Pipeline, LLC (ACP). A 401 WQC and buffer authorization certificates are needed to construct a natural gas pipeline through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties.

In addition to listening to oral comments at the public hearings, I have reviewed all written comments received prior, during and after the public comment period. In preparation of this report, I have considered all of the public comments, the public record, discussions with Division of Water Resources (DWR) staff related to the rules, and their review of the applications for the project.

The report has been prepared using the following outline:

I. Site History / Background
II. July 18, 2017 Public Hearing Summary
III. July 20, 2017 Public Hearing Summary
IV. Comments
V. Recommendations
VI. Summary
VII. Appendices

I. History / Background

On May 9, 2017, Atlantic Coast Pipeline, LLC (ACP) submitted an application for a 401 WQC and buffer authorization certificates. ACP had previously applied to DWR on October 23, 2015. DWR requested additional information on November 18, 2015. The requested information was not provided, therefore DWR returned the application on August 31, 2016.

ACP is proposing to construct and operate an approximately 605-mile-long interstate natural gas transmission pipeline system including laterals through West Virginia, Virginia and North

Carolina. In North Carolina, ACP is proposing to construct one compressor station and install approximately 186 miles of transmission pipeline and appurtenances, including 3 metering and regulating stations, 11 valve sites and 4 pig launchers/receivers, through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland and Robeson Counties.

ACP is proposing over 300 crossings of streams and open waters, temporarily impacting over 35,000 linear feet and permanently impacting over 700 linear feet of stream. ACP is also proposing crossing wetlands, temporarily impacting over 450 acres and permanently impacting less than one acre of wetlands. ACP will impact protected riparian buffers within the Neuse and Tar-Pamlico River basins, impacting over 655,000 square feet of zone 1 and over 459,000 square feet of zone 2 protected riparian buffer.

DWR requested and received additional information several times throughout the application review process:

Date	Action
June 27, 2017	Req. for Add Info (1)
July 12, 2017	Add Info Received (1)
September 14, 2017	Req. for Add Info (2)
September 22, 2017	Add Info Received (2)
October 2, 2017	Add Info Received (2)
October 13, 2017	Add Info Received (2)
October 26, 2017	Req. for Add Info (3)
November 4, 2017	Add Info Received (3)
November 15, 2017	Add Info Received (3)
November 28, 2017	Req. for Add Info (4)
November 29, 2017	Add Info Received (4)
December 8, 2017	Add Info Received (4)
December 14, 2017	Req. Correction to (4)
December 20, 2017	Add Info Received (4)
January 17, 2018	Add Info Received
January 18, 2018	Add Info Received

Under the authority of Title 15A NCAC 02H .0504, DWR held a public comment period from June 16, 2017 until August 19, 2017 to accept public input on the application. The public comment period included two public hearings described below.

In accordance with Title 15A NCAC 02H .0503, notice of the public hearings and availability of the 401 WQC and riparian buffer authorization certificates application was published in The Fayetteville Observer, the News & Observer, the Rocky Mount Telegram, the Roanoke-Chowan News-Herald, the Robesonian and the Wilson Times on June 17, 2017, in the Daily Herald and the Sampson Independent on June 18, 2017, and posted online and sent by mail to the Water Quality Certification Mailing List on June 16, 2017 (Appendix B). A correction to the public notice to correct a typo in the pipe diameter was posted online on June 19, sent to the mailing list on June 20, and issued in the newspapers on June 21 and 22 (Appendix C).

The public comment period ended on August 19, 2017; however, since August 19th was a Saturday, DWR accepted comments through Monday, August 21.

II. July 18, 2017 Public Hearing

A public hearing was held July 18, 2017, at 6 p.m. at the Fayetteville Technical Community College in Fayetteville, NC. The public hearing was held under the authority of Title 15A NCAC 02H .0504. This was a public hearing to receive public comment for the DWR 401 WQC application (Appendix A) submitted by ACP in order to construct a natural gas pipeline through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties.

One hundred thirty-nine people attended the July 18 public hearing, including eight staff members from the Department. A total of 131 individuals signed the attendance sign-in sheets at the registration table (Appendices D and E). The hearing officer provided opening remarks and Jennifer Burdette, DWR, presented background information on the 401 WQC process and the proposed application before the hearing was opened for public comment. Forty-four individuals registered in advance of the hearing to provide comments, and two additional individuals made comments for a total of 46 speakers. Speakers were given three minutes for initial presentations. Additional time was allowed for speakers after everyone that registered to speak was finished, which was used by three speakers. The list of speakers is included (Appendix E).

The public hearing transcript, including oral comments, is attached to this report (Appendix H). DWR also received approximately 9,600 written comments during the public comment period from local and state government agencies, individual citizens, and citizen groups (Appendix J). Approximately 8,220 comments were opposed to the project and approximately 1,370 were in favor. Some of the comments were written transcripts of the comments provided during the public hearings. A summary of the comments for both hearings and the comment period, along with detailed responses that have a direct impact on the certification decision making process are included in Sections IV and V below.

III. July 20, 2017 Public Hearing

A second public hearing was held July 20, 2017, at 6 p.m. at the Nash Community College in Rocky Mount, NC. The public hearing was held under the authority of Title 15A NCAC 02H .0504. This was a public hearing to receive public comment for the DWR 401 WQC application (Appendix A) submitted by ACP in order to construct a natural gas pipeline through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties.

One hundred seventy-six people attended the July 20 public hearing, including eight staff members from the Department. A total of 168 individuals signed the attendance sign in sheets at the registration table (Appendices F and G). The Hearing Officer provided opening remarks and Jennifer Burdette, DWR, presented background information on the 401 WQC process and the proposed application before the hearing was opened for public comment. Sixty-five individuals registered in advance of the hearing to make comments. Speakers were

given three minutes for presentations and the hearing was held open an additional thirty minutes to allow all speakers that registered to speak. The list of speakers is included (Appendix G).

The public hearing transcript, including oral comments, is attached to this report (Appendix I). DWR also received approximately 9,600 written comments during the public comment period from local and state government agencies, citizens and citizen groups (Appendix J). Approximately 8,220 comments were opposed to the project and approximately 1,370 were in favor. Some of the comments were written transcripts of the comments provided during the public hearings. A summary of the comments for both hearings and the comment period, along with detailed responses that have a direct impact on the certification decision making process, are included in Sections IV and V below.

IV. General Comments

The following is a summary of the comments received during the July 18, 2017 and July 20, 2017 public hearings and emails and other written comments received by DWR during the public comment period. Comments received outside of the public comment period were made part of the public record. An overwhelming majority of the comments were in opposition to the pipeline for a variety of reasons.

- Many comments received expressed concerns about the continued use of fossil fuels, specifically fracked natural gas, and their negative impact on climate change. Many think NC and the US should be moving toward the use of renewable energy sources. Proponents of the project believe that natural gas is a "clean" fuel option to replace coal and other fossil fuels.

  These comments are outside of the evaluation criteria established in N.C. Administrative Codes for the 401 WQC and Buffer Authorization Certificates review and should be directed to the Federal Energy Regulatory Commission (FERC).

- Many comments received were skeptical of ACP's promotion of the project as a job creation opportunity and economic stimulator for local communities. Several pointed out that ACP's own job creation estimates are very low and that the economic benefits to local communities are vague. Proponents of the project reiterated that the pipeline would bring jobs and economic development to NC.

  These comments are outside of the evaluation criteria established in N.C. Administrative Codes for the 401 WQC and Buffer Authorization Certificates review and should be directed to the NC Department of Commerce.

- Many comments received expressed concerns about the cumulative impacts analysis provided by ACP. Many believe that the analysis did not contain sufficient detail to properly evaluate the cumulative impacts. Some comments indicated that the temporary impacts from the project should be considered in the cumulative impact analysis and that the sheer volume of temporary impacts should be calculated to equal some level of permanent impacts.

  Cumulative impacts are addressed in Section V below. Further comments should be directed to the U.S. Army Corps of Engineers (Corps).

- Many comments received questioned the purpose and need of the project. Many pointed to evidence that the growth of natural gas markets was estimated to be negligible and questioned the need to build such a large and expensive pipeline. Many noted that the market demand was generated through companies owned or affiliated with Duke and Dominion power companies and that the need was self-serving rather than one identified through public interest. Furthermore, several commenters stated that the purpose of economic benefit was misleading as ACP's own estimates predict little permanent job growth as a result of the project.

  These comments are outside of the evaluation criteria established in N.C. Administrative Codes for the 401 WQC and Buffer Authorization Certificates review and should be directed to FERC and the Corps.

- Many comments received expressed concerns about environmental justice issues associated with pipeline's construction and operation. Many believe that the pipeline will have a disproportionate impact on low-income and minority communities. Many commenters feel that ACP has not made significant efforts to coordinate with these communities or to consider other routes that would reduce the impacts on these communities. Specifically, several commenters mentioned ACP's lack of coordination with state-recognized tribes such as the Lumbee and Haliwa-Saponi. Furthermore, they do not believe ACP has adequately addressed potential impacts to cultural resources along the pipeline route.

  Environmental Justice is addressed in Section V below. Further comments should be directed to FERC.

- Several commenters expressed opposition to ACP's use of eminent domain to obtain right-of-way for the pipeline.

  These comments are outside of the evaluation criteria established in N.C. Administrative Codes for the 401 WQC and Buffer Authorization Certificates review and should be directed to the NC Attorney General's Office.

- Several commenters raised concerns about Duke Power's past record of non-compliance with environmental regulations and permits.

  Compliance Inspection recommendations are addressed in Section V below.

- Several commenters raised concerns about living within the "blast zone" of the pipeline and questioned ACP's liability response should an explosion occur. Others believe that the pipeline is a safe and efficient way to transport natural gas.

  These comments are outside of the evaluation criteria established in N.C. Administrative Codes for the 401 WQC and Buffer Authorization Certificates review and should be directed to FERC.

- Many comments received expressed concerns over ACP's potential impacts to water quality from erosion and sedimentation. Many commenters feel that ACP's erosion and sedimentation control plan is inadequate and lacks sufficient detail. Others believe that trenching through streams and wetlands will have a negative effect on stream stability and threaten wildlife. Concerns over blasting effects were also raised.

  Water Quality is addressed in Section V below.

- Many comments received expressed concerns over impacts to wildlife, specifically threatened and endangered species. Many felt that the construction activities could destroy critical habitat and primary nursery areas for a variety of terrestrial and aquatic species. Others felt that the extensive coordination process with the US Fish and Wildlife Service and NC Wildlife Resources Commission (NCWRC) has adequately addressed any potential impacts.

  Aquatic species are addressed in Section V below. Further comments should be directed to NCWRC.

- Many commenters believe that the 401 WQC application is incomplete. They pointed to the lack of erosion and sedimentation control plans and site-specific water body crossing details as evidence that necessary information was missing from the application. In contrast, some commenters believe that the ACP project has gone through an extensive regulatory review process.

  The Division requested additional information multiple times as detailed in Section I above.

- The overwhelming majority of comments received raised concerns over the degradation of ground and surface waters as a result of the construction and operation of the pipeline. Many commenters mentioned the large number of streams and wetlands that would be crossed by the pipeline and raised red flags regarding the large amount of temporary and permanent impacts. They connected these impacts with the degradation of downstream uses including drinking water supply, aquatic life, primary and secondary contact recreation, and fisheries. Furthermore, commenters spoke in detail of the loss of wetlands through temporary impacts. Many felt the temporal and permanent vegetation changes from temporary wetland impacts should be considered permanent wetland impacts. Finally, many comments were made regarding potential impacts to drinking water wells. A significant level of concern was present among the commenters about impacts to wells from construction activities (mainly blasting activities) and operation of the pipeline.

  Degradation is addressed in Section V below.

V. Certification Specific Comments and Recommendations

Based on the review of public comments, the application, the North Carolina General Statutes and Administrative Code, and discussions with DWR staff, I offer the following comments and recommendations on the criteria for issuance of a 401 WQC pursuant to 15A NCAC 02H .0506(b) and the issuance of Neuse and Tar-Pamlico River Basin Buffer Authorization Certificates pursuant to 15A NCAC 02B .0233 and 15A NCAC 02B .0259, respectively.

15A NCAC 02H .0506(b)

(1) Has no practical alternative under the criteria outlined in Paragraph (f) of this Rule. Paragraph (f) states: "A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration or density of the proposed activity and all alternative designs the basic project purpose cannot be

practically accomplished in a manner which would avoid or result in less adverse impact to surface waters or wetlands."

The project proposes to construct a pipeline to transport natural gas from West Virginia and Pennsylvania through Virginia and North Carolina. The North Carolina portion of the proposed route will be constructed through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties. As part of the Federal Energy Regulatory Commission (FERC) National Environmental Policy Act (NEPA) analysis, ACP investigated several alternatives to meet the purpose and need of the project including no build, alternative energy, energy conservation, and system alternatives. Of these alternatives, FERC and ACP found that the build alternative best met the purpose and need of the project.

Next, ACP conducted an extensive alternatives analysis on potential route locations including collocation of the ACP with existing pipelines as well as Eastern and Western route alternatives. Ultimately, ACP chose the Eastern route as the best option based on the evaluation of a variety of criteria such as project length and human and natural resources. ACP continued to refine the Eastern alternative balancing a variety of human and natural environmental resources such as public lands, roads, conservation easements, forested lands, streams and wetlands, known historical and cultural resources, and homes and businesses. Development of the proposed pipeline route included the analysis of seventeen major route alternatives and thrity-seven minor adjustments in the North Carolina portion of the project in an effort to avoid and minimize impacts to these resources. This analysis included pre- and post-application communication with DWR and NC Wildlife Resources Commission (NCWRC) on avoidance and minimization opportunities. ACP has continued to refine the avoidance and minimization practices in response to additional information requests from DWR and through environmental commitments. A more detailed discussion of avoidance and minimization can be found below.

***Recommendation**: None. The applicant has sufficiently demonstrated that there is no practical alternative that can accomplish the project's basic purpose with less adverse impact to surface waters or wetlands.*

(2) Will minimize adverse impacts to the surface waters based on consideration of existing topography, vegetation, fish and wildlife resources, and hydrological conditions under the criteria outlined in Paragraph (g) of this Rule.

Paragraph (g) states: "Minimization of impacts may be demonstrated by showing that the surface waters or wetlands are able to continue to support the existing uses after project completion, or that the impacts are required due to:

(1) The spatial and dimensional requirements of the project; or

(2) The location of any existing structural or natural features that may dictate the placement or configuration of the proposed project; or

(3) The purpose of the project and how the purpose relates to placement, configuration or density.

The applicant has minimized impacts to surface waters and wetlands to the greatest extent practical. The permanent impacts will be 766 linear feet of streams and 0.80 acres of wetlands. The permanent impacts related to streams and wetlands will be a result of

upgrading and improving access roads constructed for installation and maintenance of the pipeline, not from the pipeline itself. All crossings of major rivers will be conducted using horizontal directional drilling (HDD) to avoid open trenching. The magnitude of the temporary impacts is very high but within reason considering the size and scope of the project. The applicant will use a narrower construction corridor when crossing wetlands and construction techniques such as timber matting, temporary work bridges, and clean rock over piping to minimize temporary impacts to streams and wetlands. Temporary impacts to streambanks and wetland areas will be restored to the original contours and revegetated with native plants. ACP will monitor any temporary impact areas in streams or wetlands to ensure there is no permanent loss at these locations. The monitoring plan includes monitoring for a minimum of two years for streams and three years for wetlands with stability, vegetation, and hydrology requirements. Upon successful completion of the restoration and monitoring activities, the stream and wetland impact areas will continue to support existing uses of hydrology, vegetation, and aquatic and wildlife habitat.

The applicant has committed to a number of best management practices to avoid and minimize impacts to streams and wetlands.

- *Demarcation of wetland boundaries with flagging and signs prior to start of construction*
- *Use of temporary work bridges, matting and pads to reduce the risk of soil compaction*
- *Trench backfilling using native material to prevent soil contamination and to accelerate revegetation*
- *Limiting operation of construction equipment in wetlands to only that necessary for clearing, excavation, pipe installation, backfilling, and restoration*
- *Installing trench breakers or plugs at the boundaries of wetlands to prevent draining of wetlands*
- *Pump-out activities in the work area will be routed through an energy dissipation/sediment filtration device prior to discharging to waterbodies*
- *Use of a project-specific invasive plant species management plan*
- *Stump removal, grading, and excavation will be limited to the area immediately over the trench line to maintain native seed and rootstock*
- *Coating for concrete-coated pipe will be conducted at least 100 feet from surface waters and springs*
- *Prohibiting use of live concrete as a building material so that wet concrete does not come in contact with surface waters*
- *Prohibiting storage of chemicals, fuels, hazardous materials, and lubricating oils within 100 feet of surface waters*
- *Voluntarily implementing the requirements of the Construction Stormwater General Permit No. NCG010000*
- *Use of horizontal directional drilling for all major river crossings*
- *Implementation of a Spill Prevention, Control, and Countermeasure plan and a Horizontal Directional Drill Drilling Fluid Monitoring, Operations, and Contingency plan*

ACP has completed formal consultation with US Fish and Wildlife Service (USFWS) on threatened and endangered species along the corridor. In an October 16, 2017 biological opinion, USFWS did not identify any threatened and endangered species or sensitive habitat in NC along the proposed corridor. ACP has also coordinated extensively with the NCWRC. This coordination began with the alternatives analysis and site-specific routing of the pipeline. ACP worked with NCWRC to avoid threatened and endangered species and sensitive habitats and to develop relocation protocols for fish and mussels. ACP conducted pre-construction surveys for fish and mussels in the Neuse River at the proposed crossing location. These surveys found that the mussel population was much more abundant and diverse than previously known. This survey and the continued coordination with NCWRC resulted in ACP's revised proposal to use HDD at the Neuse River instead of open trenching. ACP has also developed a relocation plan for fish and mussels in coordination with NCWRC.

***Recommendation**: The applicant has sufficiently demonstrated that impacts to surface waters and wetlands are required due to spatial considerations, natural features and the purpose of the project. The 401 WQC should include requirements for monitoring of temporary impact areas in accordance with the proposed restoration and monitoring plan. The certification should also include reopener language in the event that temporarily disturbed wetland areas do not return to wetland conditions as defined by the 1987 US Army Corps of Engineers (Corps) Wetland Manual and confirmed by a Corps representative. The reopener language should require a modification to the 401 WQC to account for the additional permanent impacts and mitigation for all permanent wetland impacts should the permanent impacts exceed 1.0 acre. Furthermore, the 401 WQC should be conditioned to comply with any work moratoriums suggested by NCWRC for the proposed project as well as the fish and mussel relocation plan.*

(3) Does not result in the degradation of groundwaters or surface waters.

The main risk to surface and groundwater from the ACP project will be during construction activities. These risks include sedimentation and turbidity in surface waters, breaches of drilling fluids during HDD, and spills of petroleum products and hydraulic fluids from fueling and equipment maintenance. In addition, some commenters raised concerns regarding impacts to drinking water wells from trenching and blasting activities associated with the pipeline installation and from possible contamination due to pipeline leaks during operation.

The applicant has committed to working in the dry for all stream and wetland crossings unless site-specific conditions warrant working in wet conditions and the applicant obtains prior written approval from DWR. Proper erosion and sedimentation control measures will be required for the entire project in accordance with the Division of Energy, Mineral and Land Resources (DEMLR) sedimentation and erosion control Certificate of Plan Approval. All temporary fill placed in surface waters related to construction of the pipeline will be removed once installation of the pipeline is completed at the crossing. The stream banks or wetlands will be restored to the original contours and revegetated with a native seed mix to prevent erosion. Only in areas where vegetative stabilization is not successful will hardened stabilization (rip-rap, geogrid, etc.) techniques be used. No hardening will be placed below

the ordinary high water mark. Furthermore, the applicant has voluntarily agreed to meet the requirements of the NPDES Construction Activities General Permit No. NCG010000.

The applicant will store chemicals, fuels, hazardous materials, and lubricating oils and conduct all equipment and vehicle fueling and maintenance at least 100 feet from surface waters and 200 feet from private drinking water wells. In situations where equipment must continue to operate during fueling activities such as dewatering pumps near surface waters, secondary containment structures will be used to prevent any spillage from reaching the surface waters.

The applicant has conducted a desktop survey to identify all known drinking water wells within 150 feet of the pipeline construction corridor. Almost 50 private drinking water wells were located in NC. The applicant proposes to test each well prior to construction for a suite of parameters including pH, total suspended solids, total dissolved solids, conductivity, alkalinity, acidity, sulfates, oil/grease, phenolic, iron, manganese, aluminum, fecal coliform, copper, lead, nickel, silver, thallium, zinc, chromium, arsenic, mercury, selenium, cyanide, calcium magnesium, hardness, chlorides, antimony, cadmium, and beryllium as well as well yields. These tests will provide a baseline of groundwater quality and quantity against which to measure any construction-related impacts. In the event that blasting will occur within 500 feet of a drinking water well, the applicant proposes to conduct pre-blasting monitoring for the parameters listed above. Should the applicant receive a complaint regarding damage to well water quality or quantity, the applicant proposes to conduct post-construction well testing of the same parameters to verify no adverse impacts have occurred. Furthermore, in the event that adverse impacts do occur as a result of construction activity, ACP has committed to providing temporary water supplies, and/or a new water treatment system or well.

Operation of the pipeline is not expected to have adverse effects on surface waters and groundwater. Any post-construction stormwater generated as a result of impervious surfaces installed during construction are subject to state and local stormwater requirements. ACP has committed to using sheetflow and existing stormwater conveyances and drainage ditches. No curb and gutter stormwater management will be constructed. For impervious surfaces constructed in areas with no state or local stormwater programs, these stormwater management techniques will be protective of water quality.

Many commenters raised concerns about leaks from the pipeline impacting groundwater. The pipeline will be transporting dry natural gas which is not soluble in water. Liquids contained in the gas are removed at a natural gas processing plant prior to transport and at liquid separators at compressor stations. Any remaining liquid will be de minimus and is not likely to impact groundwater.

***Recommendation**: The project is not expected to violate water quality standards if the conditions in the 401 Water Quality Certification are fully complied with by the applicant (or its successor). The 401 WQC should be conditioned to require full compliance with the following permits:*

- *Certificate of Plan Approval No. Cumbe-2018-036, issued by DEMLR, Fayetteville Regional Office*
- *NPDES Permit No. NCG010000 issued by DEMLR*

The 401 WQC should also be contingent on the issuance of a sedimentation and erosion control Certificate of Plan Approval issued by DEMLR, Raleigh Regional Office and upon issuance of appropriate state and local stormwater permits. FERC NEPA and 401 WQC application documentation indicates that the applicant has agreed to conduct pre-construction water quality testing for drinking water wells within 150 feet of the pipeline construction corridor and within 500 feet of blasting activities. The 401 WQC should be conditioned to require ACP to conduct pre- and post-construction testing of all wells within 150 feet of the construction corridor and within 500 feet of blasting activities regardless of whether a complaint is received. Should post-construction testing indicate that well water quality or quantity has been impacted by the construction, ACP should be required to provide temporary water supplies, and/or a new water treatment system or well. An independent, qualified groundwater specialist should determine whether an impact has occurred or not.

The 401 WQC should be conditioned to require monthly ride-through inspections with appropriate DWR and DEMLR staff to measure compliance with the respective certifications and permits. The 401 WQC should also require a pre-construction meeting with the construction contractors, ACP staff, and DWR and DEMLR staff to review the conditions and requirements of the respective certifications and permits for clarity and understanding.

(4) Does not result in cumulative impacts, based upon past or reasonably anticipated future impacts, that cause or will cause a violation of downstream water quality standards.

Cumulative impacts are those impacts that would result from the incremental effects of the project added to other past, present and reasonably foreseeable future activities (15A NCAC 01C .0103). This includes secondary impacts or impacts from future activities that occur as a result of the proposed project. The proposed project for the most part will consist of temporary water quality impacts from the installation of the pipeline. These impacts could include sedimentation and temporary disturbance of aquatic and riparian habitat during construction. Permanent impacts will occur in streams and wetlands from access road improvements. The temporary and permanent impacts will be reduced through avoidance and mitigation efforts, erosion and sedimentation control and stormwater best management practices (BMPs), and spill prevention, control, and countermeasure practices. Any projects occurring in similar locations to the proposed project will be subject to local, state, and federal regulations that address stream and wetland impacts, stormwater management, and watershed protection.

Almost 80% of the increased natural gas supply has been committed to natural gas power plants. The remaining supply will be available for commercial, industrial and residential use. However, only three distribution points or M&R stations will be constructed in NC. These M&R stations will be located in Johnston, Cumberland, and Robeson Counties. Secondary development as a result of the pipeline is likely to be focused around these distribution points; therefore, water quality impacts are most likely in proximity to these areas. The applicant conducted a qualitative analysis of the potential secondary and cumulative impacts in these three counties.

In the qualitative analysis, the applicant completed an "indirect (secondary) and cumulative effects screening matrix" where a series of parameters including scope of the project, population growth, available land, water/sewer availability, natural gas availability, market for development, public policy, and notable water resources were evaluated on their ability to contribute to indirect and cumulative effects on water quality. Based on these ratings, areas of potential growth and development were identified. These growth areas were then compared in an action/no-action forecast where the differences in growth and development between building the pipeline and not building the pipeline were determined. Areas that had significant increases in growth and development from building the pipeline were mapped.

As discussed above, any new development projects will be subject to state and federal regulations for impacts to streams and wetlands and erosion and sedimentation control. However, stormwater management regulations are variable by location. Existing state and local stormwater programs were overlain on the areas of potential growth identified in action/no-action analysis to predict the net impact to water quality resulting from secondary development.

The action/no-action analysis demonstrated that growth could significantly increase in Johnston and Cumberland Counties if the pipeline is built. These areas have existing infrastructure for water/sewer and transportation, are predicted to have population growth, and have a number of shovel-ready development sites. Johnston and Cumberland Counties are almost entirely covered by state and local stormwater programs and Johnston County is subject to the Neuse River Nutrient Sensitive Waters Management Strategy. Any potential water quality impacts due to growth in the area would be mitigated through these programs.

Most of Robeson County does not have state or local stormwater programs. Those that are present are associated with High Quality Waters or Water Supply Watersheds and are limited in area. However, the action/no-action analysis demonstrated that Robeson County is not expected to have a significant increase in growth and development as a result of the pipeline. According to ACP's analysis, lacking infrastructure, population decline, and separation from metropolitan areas has stunted growth in this area. Only one shovel-ready industrial site is available in Robeson County, and it is located in the protected Water Supply Watershed and would be subject to a local stormwater program. Water quality impacts from secondary growth in this area would be minimal.

***Recommendation**: The project is not expected to result in cumulative impacts that violate water quality standards, if the conditions in the 401 WQC are fully implemented by the applicant (or its successor). The qualitative cumulative impacts analysis should be forwarded to the NC Department of Commerce for informational purposes.*

(5) Provides for protection of downstream water quality standards through the use of on-site stormwater control measures.

Post-construction stormwater is another potential water quality concern. The vast majority of the proposed pipeline project will not result in new impervious surfaces. However, some new impervious surfaces are proposed as part of the project. The impervious surfaces include multiple improved access roads, eleven valve stations, a compressor station, three metering

and regulating (M&R) stations, and multiple contractor yards. The access roads are existing unpaved roads that will be improved to allow construction and maintenance equipment to safely pass. Improvements will include minor widening and/or surface water crossing upgrades (e.g., minor pipe/culvert extensions). The valve sites are needed to segment the pipeline for safety, operation, and maintenance purposes. The compressor station will be located in Northampton County, and the M&R stations will be located in Johnston, Cumberland, and Robeson Counties. The applicant has indicated that stormwater will be managed by using existing drainage ditches and swales for access roads. No curb and gutter stormwater conveyances are proposed for the compressor or M&R stations, and stormwater will be managed through existing drainage ditches and swales.

Stormwater management for these impervious surfaces will be regulated through state programs in Phase II communities or by local programs where applicable. Valve sites and access roads in a small portion of Nash County and access roads, valve sites, and a contractor yard in Cumberland County will be regulated through the state-implemented Phase II Stormwater Program. ACP will have to meet the requirements of SWG040000 – General Permit To Construct A Linear Utility Line and Associated Incidental Built-Upon Area (SWG04) or an individual state stormwater permit. SWG04 and individual state stormwater permits require compliance with the conditions of the respective permits and with the provisions of 15A NCAC 02H .1000, Session Law 2006-246, and Session Law 2008-211 which ensure the protection of downstream water quality standards through on-site stormwater control measures. Any impervious surfaces built in areas covered by local stormwater programs will have to meet the requirements of the local stormwater program. The applicant also proposes to build impervious surfaces in areas where no state or local programs are applicable. Based on the descriptions of stormwater best management practices proposed by the applicant, stormwater is not expected to violate downstream water quality standards in these areas.

Recommendation: *Session Law 2017-10 prohibits DWR from requiring on-site stormwater management through a 401 WQC. As discussed above, the 401 WQC should be conditioned to require compliance with all applicable state and local stormwater permits for construction of a linear utility line and associated incidental built-upon area.*

(6) Provides for replacement of existing uses through mitigation.

Both federal and state requirements allow for the purchase of in lieu fee credits to offset unavoidable impacts to streams and wetlands. DWR requires mitigation [15A NCAC 02H .0506(h)] at a 1:1 ratio for permanent perennial stream impacts above 300 linear feet and a 1:1 ratio for permanent wetland impacts above one acre. Perennial stream and wetland impacts for this project will not exceed the respective mitigation thresholds, therefore, no stream or wetland mitigation is required by DWR. Mitigation is required, however, by the U.S. Army Corps of Engineers for the wetland conversion impacts. Riparian buffer mitigation is required for the uses identified in the Table of Uses of the Neuse and Tar-Pamlico River Basins Nutrient Sensitive Waters Management Strategies [15A NCAC 02B .0233(6) and 15A NCAC 02B .0259(6), respectively] as "ALLOWABLE WITH MITIGATION." "ALLOWABLE WITH MITIGATION" uses are defined in 15A NCAC 02B .0233(7)(c) and 15A NCAC 02B .0259(7)(c),

respectively. Buffer mitigation is discussed below in the buffer authorization certificates section.

***Recommendation**: No mitigation is required for stream or wetland impacts as a result of the proposed project. The 401 WQC should be conditioned to include language requiring mitigation should permanent impact changes occur that exceed mitigation thresholds.*

Neuse and Tar-Pamlico Nutrient Sensitive Waters Management Strategy

The Neuse River Basin Nutrient Sensitive Waters Management Strategy and the Tar-Pamlico River Basin Nutrient Sensitive Waters Management Strategy have the exact same requirements [15A NCAC 02B .0233 and 15A NCAC 02B .0259, respectively]. Furthermore, the mitigation requirements for impacts to protected buffers are exactly the same for the Neuse and Tar-Pamlico River Basins [15A NCAC 02B .0242 and 15A NCAC 02B .0260 respectively] and both make reference to the buffer mitigation rules [15A NCAC 02B .0295]. For the purposes of this report, the buffer authorization certificates recommendations will be combined in one discussion.

15A NCAC 02B .0233 and 15A NCAC 02B .0259

(5) DIFFUSE FLOW REQUIREMENT. Diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow and reestablishing vegetation.

As discussed above in Section 5 of the 15A NCAC 02H .0506 discussion, the vast majority of the proposed project will not result in new impervious surfaces that will create concentrated stormwater flow. However, there will be improved temporary and permanent access roads, and five valve sites constructed and maintained in the Neuse and Tar-Pamlico River Basins as part of the project. The access roads are existing unpaved roads that will be improved to allow construction and maintenance equipment to safely pass. Upgrades will include minor widening and/or surface water crossing upgrades (e.g., minor pipe/culvert extensions). The valve sites will consist of gravel pads around above-ground valves with gravel driveways.

Stormwater from these areas will be managed by sheetflow or by using existing roadside ditches and swales. Sheetflow from the access roads meets the diffuse flow requirements associated with the Neuse and Tar-Pamlico River Basins Nutrient Sensitive Waters Management Strategies [15A NCAC 02B .0233(5) and 15A NCAC 02B .0259(5), respectively]. ACP has committed to managing the existing roadside ditches and swales to minimize sediment, nutrients, and other pollution prior to entering surface waters. The Table of Uses for the Neuse and Tar-Pamlico River Basins Nutrient Sensitive Waters Management Strategies [15A NCAC 02B .0233(6) and 15A NCAC 02B .0259(6), respectively] identifies use of existing drainage ditches, roadside ditches, and stormwater outfalls provided they are managed to minimize the sediment, nutrients, and other pollution that convey to waterbodies as "EXEMPT" uses. "EXEMPT" uses are defined in 15A NCAC 02B .0233(7)(a) and 15A NCAC 02B .0259(7)(a), respectively.

The applicant proposes to locate the Smithfield M&R station in Johnston County which is subject to the Neuse River Buffer Rules. This station is also subject to state stormwater

permitting requirements as part of the Phase II stormwater rules. Stormwater management and diffuse flow requirements will addressed through the Phase II process.

***Recommendation**: The buffer authorization certificates should include conditions requiring that diffuse flow conditions be maintained for all stormwater from impervious surfaces flowing to or within the protected buffers in accordance with the diffuse flow requirements stated above or other applicable buffer clarification memos.*

(6) TABLE OF USES.

Non-electric utility lines:

- **Impacts other than perpendicular crossings in Zone 2 – Allowable**
- **Impacts other than perpendicular crossings in Zone 1 – Allowable with Mitigation**

Non-electric utility lines:

- **Perpendicular crossings that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width - Allowable with Mitigation**
- **Perpendicular crossings that disturb greater than 150 linear feet of riparian buffer – Allowable with Mitigation**

The proposed project is categorized as a non-electric utility line. The proposed project includes perpendicular and non-perpendicular crossings of streams and other surface waters subject to this rule. Due to the width of the maintenance corridor, 50 feet, all buffer impacts are "ALLOWABLE WITH MITIGATION" uses. "ALLOWABLE WITH MITIGATION" uses are defined in 15A NCAC 02B .0233(7)(c) and 15A NCAC 02B .0259(7)(c), respectively.

***Recommendation**: None. The proposed project is "ALLOWABLE WITH MITIGATION" under the Table of Uses.*

(8) DETERMINATION OF "NO PRACTICAL ALTERNATIVES." Persons who wish to undertake uses designated as allowable or allowable with mitigation shall submit a request for a "no practical alternatives" determination to the Division or to the delegated authority. The applicant shall certify that the criteria identified in Sub-Item (8)(a) of this Rule are met. The Division or the delegated local authority shall grant an Authorization Certificate upon a "no practical alternatives" determination. The procedure for making an Authorization Certificate shall be as follows:

(a) For any request for an Authorization Certificate, the Division or the delegated local authority shall review the entire project and make a finding of fact as to whether the following requirements have been met in support of a "no practical alternatives" determination:

(i) The basic project purpose cannot be practically accomplished in a manner that would better minimize the disturbance, preserve aquatic life and habitat, and protect water quality.

(ii) The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality.

(iii) Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

The project proposes to construct a pipeline to transport natural gas from West Virginia and Pennsylvania through Virginia and North Carolina. The North Carolina portion of the proposed route will be constructed through Northampton, Halifax, Nash, Wilson, Johnston, Sampson, Cumberland, and Robeson Counties. The proposed project will permanently impact 521,430 square feet and 594,070 square feet of protected riparian buffers in the Neuse River Basin and the Tar-Pamlico River Basin, respectively. As part of the FERC NEPA analysis, ACP investigated several alternatives to meet the purpose and need of the project including no build, alternative energy, energy conservation, and system alternatives. Of these alternatives, the build alternative best met the purpose and need of the project.

Next ACP, conducted an extensive alternatives analysis on potential route locations including collocation of the ACP with existing pipelines as well as Eastern and Western route alternatives. Ultimately, ACP chose the Eastern route as the best option based on an evaluation of a variety of criteria such as project length and human and natural resources. ACP continued to refine the Eastern alternative balancing a variety of human and natural environmental resources such as public lands, roads, conservation easements, forested lands, streams, wetlands, protected riparian buffers, known historical and cultural resources, and homes and businesses. Development of the proposed pipeline route included the analysis of seventeen major route alternatives and 37 minor adjustments in the North Carolina portion of the project in an effort to avoid and minimize impacts to these resources. This analysis included pre- and post-application communication with DWR and NCWRC on avoidance and minimization opportunities. ACP has continued to refine the avoidance and minimization practices in response to additional information requests from DWR and through environmental commitments.

The applicant has demonstrated that the basic project purpose cannot be practically accomplished in a manner that would better minimize the disturbance, preserve aquatic life and habitat, and protect water quality. The applicant has demonstrated that the use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality. The applicant has proposed a number of best management practices in an effort to minimize disturbance, preserve aquatic life and habitat, and protect water quality including but not limited to the following:

- *Use of temporary work bridges, matting and pads to reduce the risk of soil compaction*
- *Trench backfilling using native material to prevent soil contamination and to accelerate revegetation*
- *Pump-out activities in the work area will be routed through an energy dissipation/sediment filtration device prior to discharging to waterbodies*
- *Coating for concrete-coated pipe will be conducted at least 100 feet from surface waters and springs*
- *Use of horizontal directional drilling for all major river crossings*
- *Implementation of a Spill Prevention, Control, and Countermeasure plan and a Horizontal Directional Drill Drilling Fluid Monitoring, Operations, and Contingency plan*
- *Use of a project-specific invasive plant species management plan*

- *Limiting operation of construction equipment in wetlands to only that necessary for clearing, excavation, pipe installation, backfilling, and restoration*
- *Stump removal, grading, and excavation will be limited to the area immediately over the trench line to maintain native seed and rootstock*
- *Voluntarily implementing the requirements of the Construction Stormwater General Permit No. NCG010000*

***Recommendation**: The applicant has sufficiently demonstrated that there is no practical alternative that can accomplish the project's basic purpose with less adverse impacts to protected buffers. The buffer authorization certificates should be conditioned to incorporate the best management practices proposed by the applicant intended to minimize disturbance, preserve aquatic life and habitat, and protect water quality. Furthermore, the buffer authorization certificates should require demarcation of protected buffer with flagging or signs prior to the initiation of construction and limiting operation of construction equipment in buffers to only that necessary for clearing, excavation, pipe installation, backfilling, and restoration*

(10) Mitigation. Persons who wish to undertake uses designated as allowable with mitigation shall meet the following requirements in order to proceed with their proposed use.

(a) Obtain a determination of "no practical alternatives" to the proposed use pursuant to Item (8) of this Rule.

(b) Obtain approval for a mitigation proposal pursuant to 15A NCAC 02B .0242 [.260].

15A NCAC 02B .0242 and .0260 have been repealed and replaced with 15A NCAC 02B .0295.

As discussed above, the applicant has demonstrated that there is no practical alternative that can accomplish the project's basic purpose with less adverse impacts to protected buffers. Due to the fact that the maintenance corridor for the proposed pipeline will have a width of greater than 10 feet, all of the buffer impacts are considered "ALLOWABLE WITH MITIGATION" uses and subject to the buffer mitigation requirements [15A NCAC 02B .0295]. However, impacts to wetlands within the buffers are not subject to the buffer mitigation requirements and are regulated under 15A NCAC 02H .0506(h) as discussed above in section (6) of the 401 WQC application review process. The buffer mitigation totals reflect the removal of wetland areas within the buffer.

The applicant has proposed to obtain all buffer mitigation credits through the in-lieu fee program with the Division of Mitigation Services (DMS). A letter addressed to the applicant from DMS dated May 4, 2017 and renewed on October 6, 2017, states that DMS is willing to accept payment for the buffer mitigation credits for the proposed project. DMS will administer the mitigation credits in accordance with the In-Lieu Fee program instrument dated July 28, 2010 and 15A NCAC 02B .0295.

***Recommendation**: The buffer authorization certificates should include conditions requiring buffer mitigation in accordance with the table below:*

	Compensatory Mitigation Amount Required	River & Sub-basin Number	
Buffers	301,168 (square feet)	Tar-Pamlico	03020102
	318,868 (square feet)	Tar-Pamlico	03020101
	245,612 (square feet)	Neuse	03020203
	486,344 (square feet)	Neuse	03020201

Environmental Justice

One of the most common topics of the commenters was environmental justice. As discussed above in the General Comments Section, many comments received expressed concerns about environmental justice issues associated with pipeline's construction and operation. FERC's Final Environmental Impact Statement determined, "as a result of the project, no disproportionately high and adverse impacts on environmental justice populations as a result of air quality impacts, including impacts associated with the proposed Compressor Station 2, would be expected as a result of ACP and SHP. Also, no disproportionately high and adverse impacts on environmental justice populations as a result of other resources impacts would be expected." Many commenters disagreed with this determination and requested that the 401 WQC be denied based on the potential environmental justice impacts.

The Director evaluates a 401 WQC application based on five criteria including a no practical alternatives analysis, minimization of adverse impacts to surface waters, an analysis of the degradation of groundwaters or surface waters, a cumulative impacts analysis, and replacement of existing uses through mitigation. Environmental justice is not included in the criteria upon which the Director must evaluate the application. Although environmental justice is not an evaluation criteria, the Department has been intimately engaged with the stakeholders of North Carolina through the permitting process.

On March 23, 2017, the Department hosted a stakeholder meeting in Raleigh, NC to provide information and receive feedback on the proposed pipeline project. Eight environmental organizations, four government agencies, and a representative of the Commission of Indian Affairs were in attendance.

On July 18 and 20, 2017, the Department hosted 401 WQC Application Public Hearings. This was to allow the citizens of North Carolina to comment on the certification. Notification of the public hearings was provided in accordance with 15A NCAC 02H .0506(d) and (e). In addition, the Division of Water Resources provided notices of the hearings by mailing flyers in both English and Spanish to community organizations, such as churches, government and non-government organizations, libraries, etc.

On August 9, 2017, the Department participated in an Environmental Justice Forum hosted by the Haliwa-Saponi Indian Tribe and the North Carolina Commission of Indian Affairs. The forum allowed an opportunity for tribal leaders, commission members, state and federal regulators, and other stakeholders to discuss information on the proposed Atlantic Coast Pipeline.

Between August 15 and 17, 2017, the Department hosted three listening sessions along the proposed pipeline route to obtain additional public feedback on the project. In addition to the Department, the NC Department of Commerce, NC Department of Natural and Cultural Resources, and the US Army Corp of Engineers were present.

On October 20 and 21, 2017, the Department participated in the North Carolina Environmental Justice Network's Summit. This allowed for the Department to provide a summary of the permitting status of the project.

In addition to the various stakeholder engagements listed above, the Department has been transparent with citizens who requested to sign up for the email news feed on the project, as well as meetings with the Commission of Indian Affairs. The Department has been thorough in its review of the applications submitted for the proposed Atlantic Coast Pipeline.

VI. Summary

Public comments concerning the two public hearings focused on several major issue areas, including the degradation of water quality, cumulative impacts, environmental justice, sedimentation and erosion control, the permitting process, impacts on wildlife including threatened and endangered species, and ground and surface water supply protection. Due to the number of public comments, many of which expressed concerns on the same issues, each comment is not addressed individually. Only comments that have direct relevance to the certification decision have been addressed in the recommendations (Section V).

As stated above, a thorough review of all public comments received and the project record has been conducted, and additional insight has been obtained through discussions with DWR staff. Based on all of this information, it is my recommendation that the 401 Water Quality Certification and Buffer Authorization Certificates be issued and subject to the conditions included in the recommendations in Section V. It is further recommended that DWR include any additional conditions necessary to ensure that the project will meet state water quality standards.

VII. Appendices (available on Laserfiche)

A. May 8, 2017 401 Water Quality Certification Application
   a. Laserfiche Folder Name: *401 Application*
   b. Laserfiche link: http://edocs.deq.nc.gov/WaterResources/0/fol/547515/Row1.aspx

B. Notice of Public Hearings –June 16-18, 2017
   a. Laserfiche Filename: *Listserve Public Notice 06_16_2017*
   b. Laserfiche link: http://edocs.deq.nc.gov/WaterResources/0/doc/547528/Page1.aspx

C. Correction to Notice of Public Hearings – June 19-22, 2017
   a. Laserfiche Filename: *Listserve Public Notice Correction 06_19_2017*
   b. Laserfiche link: http://edocs.deq.nc.gov/WaterResources/0/doc/547588/Page1.aspx

D. July 18, 2017 Non-speaker sign-in sheets

a. Laserfiche Filename: *ACP_July18_FayettevilleHearing_Non-SpeakerSignInSheets*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/552613/Page1.aspx

E. July 18, 2017 Speaker list

a. Laserfiche Filename: *ACP_July18_Fayetteville Hearing_SpeakerSignInSheets*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/552611/Page1.aspx

F. July 20, 2017 Non-speaker sign-in sheets

a. Laserfiche Filename: *ACP_July20_RockyMtHearing_Non-SpeakerSignInSheets*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/553245/Page1.aspx

G. July 20, 2017 Speaker list

a. Laserfiche Filename: *ACP_July20_RockyMt Hearing_SpeakerSignInSheets*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/553247/Page1.aspx

H. July 18, 2017 Public Hearing transcript, including oral comments

a. Laserfiche Filename: *ACP_July18_Fayetteville Hearing_Transcripts*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/557323/Page1.aspx

I. July 20, 2017 Public Hearing transcript, including oral comments

a. Laserfiche Filename: *ACP_July20_RockyMt Hearing_Transcripts*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/doc/557322/Page1.aspx

J. Written comments received during the comment period, including at the public hearings

a. Laserfiche Folder Name: *Public Notice Comments*
b. Laserfiche link:
http://edocs.deq.nc.gov/WaterResources/0/fol/548242/Row1.aspx