Burdette, Jennifer a

From: Spencer Trichell <Spencer.Trichell@dominionenergy.com>
Sent: Wednesday, December 20, 2017 1:59 PM
To: Burdette, Jennifer a
Cc: Richard B Gangle; Higgins, Karen
Subject: [External] RE: ACP
Attachments: 20171220 NCDEQ Cumulative Impacts - Out.pdf; ACP_Robeson_NCDEQ_Certified Site figure.pdf; ACP_Robeson_PGA_revised figure.pdf

Jennifer, we have revised the ICI Assessment to make the noted correction below and have also incorporated the results of additional research conducted in Robeson County. Revised and new figures are also attached. We will mail a hard copy of the entire package today.

In addition, and in response to our phone conversation on December 14, 2017, regarding increasing capacity of existing ditches in subject buffer areas, Atlantic is not proposing to increase the capacity or change the existing drainage characteristics of ditches.

Please let me know if you have questions.

Regards,

Spencer Trichell
Environmental Consultant - Atlantic Coast Pipeline

Dominion Energy Services, Inc.
5000 Dominion Blvd
Glen Allen, VA 23060
O:(804)-273-3472 M:(804)-263-5980
spencer.trichell@dominionenergy.com

Dominion Energy

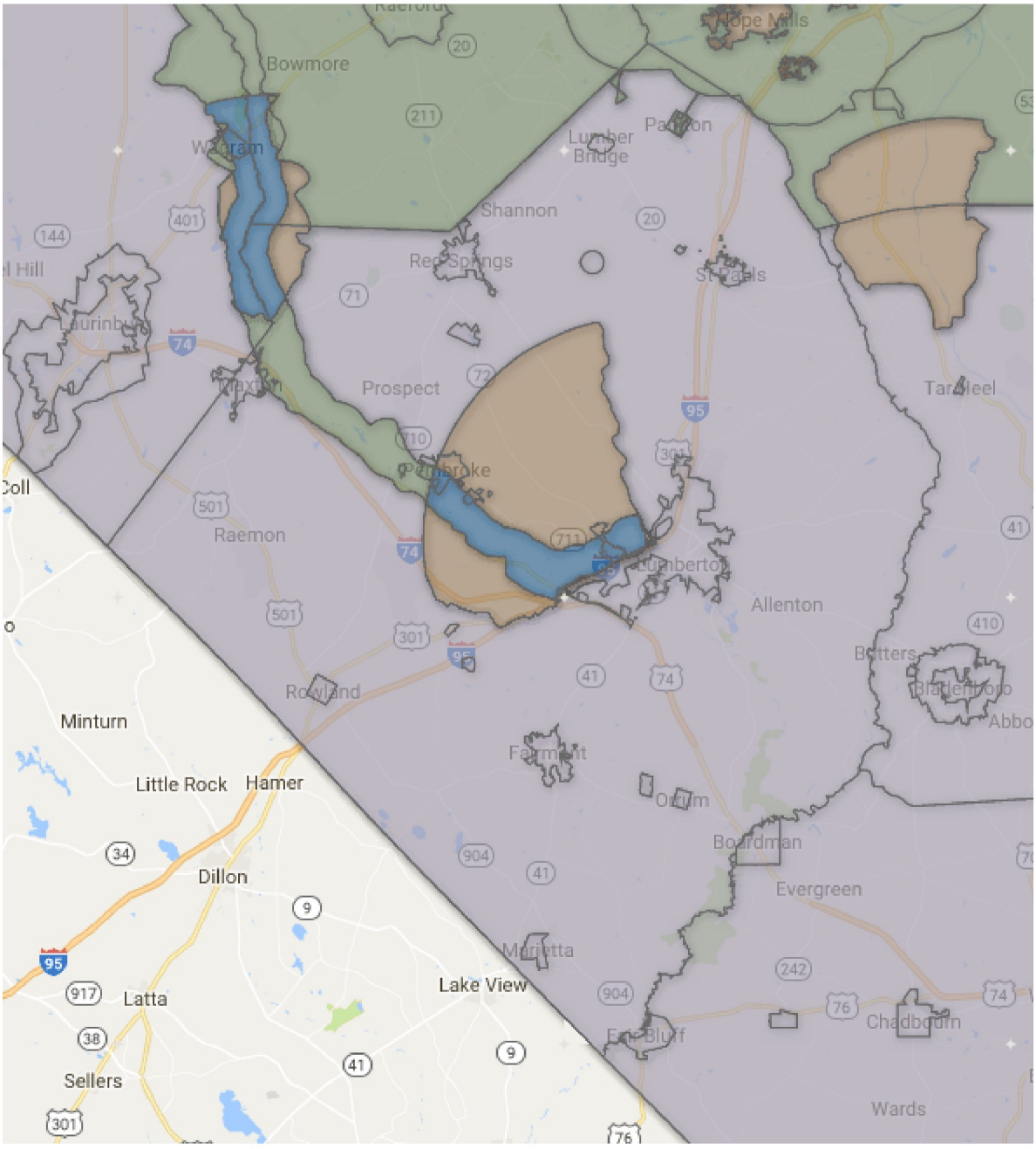
From: Burdette, Jennifer a [mailto:Jennifer.Burdette@ncdenr.gov]
Sent: Thursday, December 14, 2017 3:50 PM
To: Spencer Trichell (Services - 6)
Cc: Richard B Gangle (Services - 6); Higgins, Karen
Subject: [External] ACP

Spencer,

Thank you for your response to our request for additional information received initially by email last Friday. As we discussed, the Indirect and Cumulative Impacts Assessment incorrectly states that Robeson County is subject to the NPDES Phase II Stormwater Rule. Please see an excerpt from the stormwater program map below. The purple-gray areas do not have a stormwater program.

Because of the lack of stormwater programs in this county, additional information is necessary to determine whether the growth stimulating effects anticipated by the project would be expected to impact water quality. More detailed information regarding the development anticipated is necessary for this determination. Please let us know if you have any questions about this request.

Thanks,
Jennifer



Jennifer Burdette

401/Buffer Coordinator
Division of Water Resources - 401 & Buffer Permitting Branch
Department of Environmental Quality
919 807 6364 office
jennifer.burdette@ncdenr.gov

1617 Mail Service Center
Raleigh, NC 27699-1617
(*Physical Address: 512 N. Salisbury St, Raleigh, NC 27604 - 9th Flr Archdale Bldg – Room 942F)*

Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, VA 23060
DominionEnergy.com

December 20, 2017

ELECTRONIC MAIL

Jeff Poupart
Water Quality Section
North Carolina Department of Environmental Quality
1617 Mail Service Center
Raleigh, NC 27699-1617
Jeff.Poupart@ncdenr.gov

Re: Atlantic Coast Pipeline – DWR Project #14-0957 v2
Response to Request for Additional Information – Cumulative Impacts
401 Water Quality Certification Review

Dear Mr. Poupart:

Atlantic Coast Pipeline, LLC (Atlantic) has attached a revised Cumulative Impacts Assessment for Johnston, Cumberland, and Robeson Counties. This submittal is in response to the request for additional information provided by email on December 14, 2017, from the North Carolina Department of Environmental Quality (NCDEQ).

Atlantic respectfully requests that NCDEQ continue to process its application. Please contact Spencer Trichell at (804) 273-3472 or Spencer.Trichell@dominionenergy.com, if you have questions regarding this submittal.

Please direct written responses to:

Richard B. Gangle
Dominion Energy Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

Sincerely,

Richard B. Gangle
Environmental Project Manager, Atlantic Coast Pipeline

cc: Spencer Trichell (Dominion Energy)
Jennifer Burdette (NCDEQ)

Attachment - Cumulative Impacts Assessment for Johnston, Cumberland, and Robeson Counties

North Carolina Department of Environmental Quality –

Response to Information Request Dated December 14, 2017

Item 7

CUMULATIVE IMPACTS ASSESSMENT FOR JOHNSTON, CUMBERLAND AND ROBESON COUNTIES, NORTH CAROLINA

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Attachment 2 Developed and Undeveloped Land in Johnston, Cumberland, and Robeson Counties, North Carolina
Attachment 3 General Extent of Potential Growth Areas Identified in Johnston, Cumberland and Robeson Counties, North Carolina and Highway 72 Rail Site Conceptual Plan
Attachment 4 Wetlands and Waterbodies Crossed by the Atlantic Coast Pipeline in Johnston, Cumberland, and Robeson Counties, North Carolina

INDIRECT AND CUMULATIVE IMPACTS ASSESSMENT
Atlantic Coast Pipeline

December 2017

SCOPE AND PURPOSE

The purpose of this analysis is to supplement the qualitative cumulative analysis requested by the North Carolina Department of Environmental Quality (NCDEQ) in its September 14, 2017 and October 26, 2017 letters. In accordance with NCDEQ guidance, "Cumulative Impacts and the 401 Water Quality Certification and Isolated Wetland Permitting Programs," dated April 10, 2014, this analysis evaluates and describes secondary[1] (hereafter referred to as indirect) and cumulative[2] impacts that could potentially result from construction and operation of those portions of the Atlantic Coast Pipeline (ACP or Project) within the Study Area, which has been defined by the NCDEQ as Johnston, Cumberland, and Robeson counties, North Carolina (see Figure 1). Consistent with North Carolina guidance, this analysis focuses on the cumulative impacts on downstream water quality standards and designated uses.[3] The analysis addresses whether growth will be induced by the Project, and how the water quality impacts of such growth will be managed.

The categories listed on the Indirect and Cumulative Effects Screening Matrix below have been shown to influence land development decisions in numerous areas statewide and nationally. Each characteristic is assessed individually and the results of the table are analyzed to determine the indirect effects potential of the proposed project.

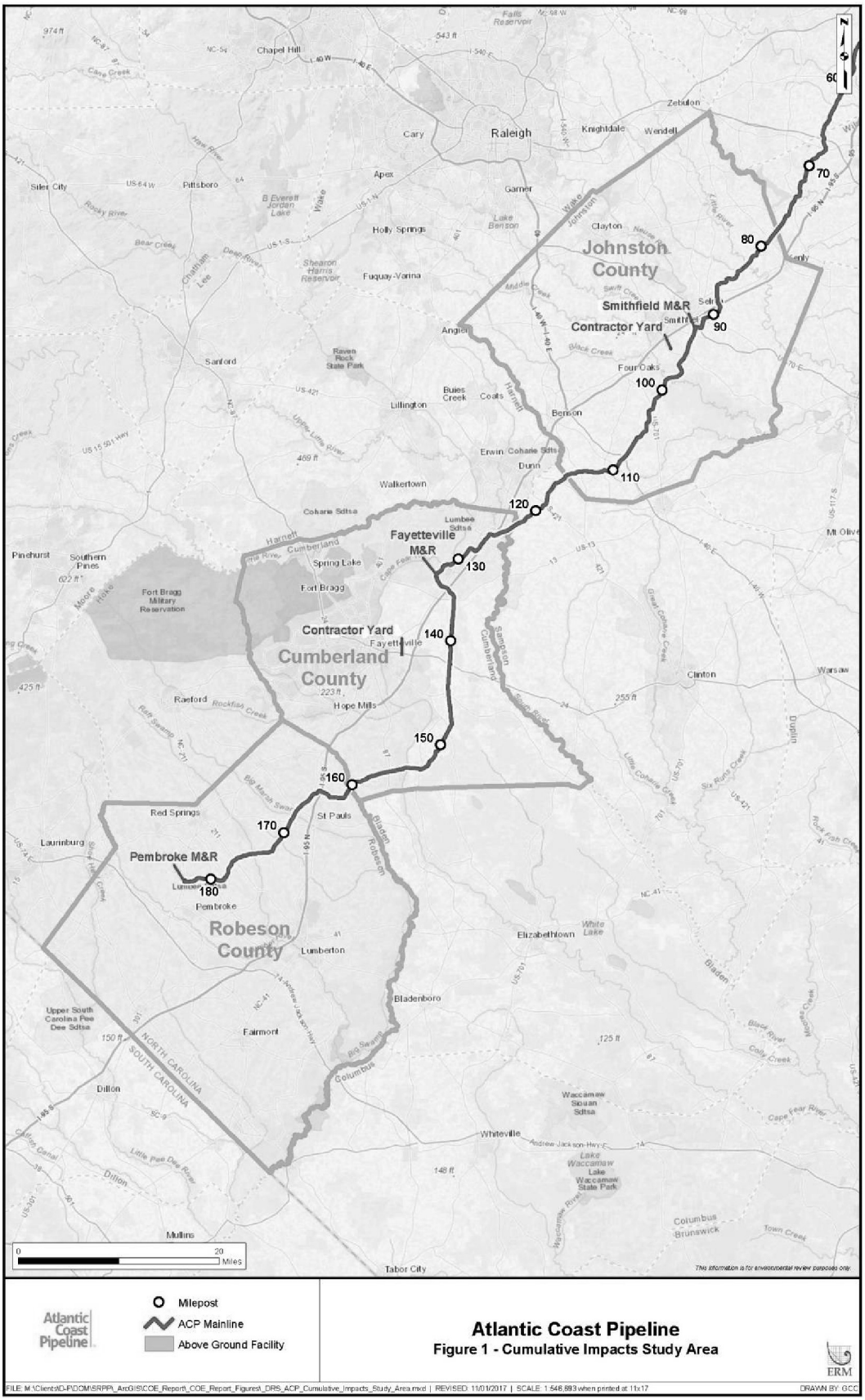
This cumulative impacts analysis is focused on water quality, wetlands, and water resources. A cumulative impact assessment of other resources affected by the ACP was included in the previous submittal to the NCDEQ on September 29, 2017, and the final environmental impact statement for the Project prepared by the Federal Energy Regulatory Commission (FERC). Pursuant to guidance provided in the October 26, 2017, Information Request Letter from NCDEQ, projects included in the cumulative impacts assessment for the Project were limited to those within Johnston, Cumberland, and Robeson counties that would be constructed in a similar timeframe or as a result of the Project. Attachment 1 summarizes the components of the Project with potential cumulative impacts identified in each county.

---

1 "Secondary impact" means actions, or actions directly linked to an activity, that may affect classified surface waters or wetlands that would not occur but for the proposed activity.

2 "Cumulative impact" means environmental impacts resulting from incremental effects of an activity when added to other past, present, and reasonable forseeable future activities regardless of what entities undertake such other actions.

3 A cumulative impact assessment of other resources affected by the ACP was included in the previous submittal to the NCDEQ on September 29, 2017, and the final environmental impact statement for the Project prepared by the FERC.


Johnston County
Smithfield M&R
Contractor Yard
Fayetteville M&R
Contractor Yard
Cumberland County
Pembroke M&R
Robeson County
60
70
80
90
100
110
120
130
140
150
160
170
180
Raleigh
Cary
Apex
Garner
Clayton
Zebulon
Knightdale
Wendell
Smithfield
Selma
Four Oaks
Benson
Angier
Fuquay-Varina
Holly Springs
Sanford
Lillington
Erwin
Dunn
Walkertown
Fayetteville
Spring Lake
Fort Bragg
Pinehurst
Southern Pines
Raeford
Hope Mills
Red Springs
St Pauls
Laurinburg
Pembroke
Lumberton
Elizabethtown
Clinton
Warsaw
Mt Olive
Dublin
Whiteville
Tabor City
Columbus
Brunswick
Bladenboro
Fairmont
Dillon
Mullins
Milepost
ACP Mainline
Above Ground Facility
Atlantic Coast Pipeline
Figure 1 - Cumulative Impacts Study Area
0
20
Miles
This information is for environmental review purposes only.

In accordance with the National Environmental Policy Act and North Carolina State Environmental Policy Act, the indirect and cumulative impacts of the Project and other projects or actions in the same areas are considered. This analysis uses an approach consistent with the guidelines set forth by the NCDEQ. Under these guidelines, the inclusion of actions within the analysis is based on identifying commonalities of impacts from other actions to potential impacts that would result from the Project.

Screening Tool Results

Based on the information gathered from local land use and development plans and information from mapping and data reviews, a screening tool was developed.

SCREENING RESULTS

The results of the screening tool are summarized in Table 1 and discussed in more detail below.

TABLE 1

Indirect and Cumulative Effects Screening Matrix

Rating	Scope of Project	Population Growth	Available Land	Water/Sewer Availability	Natural Gas Availability	Market for Development	Public Policy	Notable Water Resources
More Concern	Major new location	> 3% annual population growth	5000+ acres of land	All services existing/ available	All services existing/ available	Development activity abundant	Less stringent, no growth management	Targeted or threatened resources
↑	X		X		X			
↑								
↔		X				X	X	
↓				X				X
↓								
Less Concern	Very limited scope	No population growth or decline	Limited land available	No service available now or in future	No service available now or in future	Development activity lacking	More stringent, growth management	Featured incorporated in local protection

SCOPE OF THE PROJECT

Atlantic Coast Pipeline, LLC (Atlantic) is proposing to construct approximately 600 miles of mainline natural gas transmission underground pipeline, 81 miles of lateral underground pipeline, three compressor stations, nine metering and regulating (M&R) stations, and various appurtenant facilities in West Virginia, Virginia, and North Carolina. Approximately 100 miles of pipeline and 3 M&R stations would be constructed in Johnston, Cumberland, and Robeson Counties, North Carolina. The proposed route and facility locations within the 3 North Carolina counties under review are depicted in Figure 1, above. County-specific descriptions of proposed facilities are provided below.

Johnston County

The ACP enters Johnston County from the northeast and extends approximately 38 miles southwest to the border of Cumberland County. The proposed pipeline route passes near the towns of Kenly, Micro, Selma, Smithfield, Four Oaks, and Benson. Throughout Johnston County, 12 permanent and 4 temporary access roads would be utilized along the pipeline. Johnston County has one M&R station, the Smithfield M&R station, which is approximately 5.5 acre in size and located in central Johnston County. The M&R station is in a rural setting approximately 2.5 miles west from the town of Smithfield.

The ACP would require approximately 616.4 acres of construction workspace in Johnston County, of which 254.8 acres would be maintained during operations for the permanent pipeline right-of-way, permanent access roads, and the Smithfield M&R station. Table 2 includes a summary of the construction and operations impacts.

TABLE 2

Construction and Operational Impacts (in acres) in Johnston, Cumberland, and Robeson County, North Carolina

	Construction (Temporary and Permanent)	Operation (Permanent)
Johnston County	616.4	254.8
Cumberland County	589.1	270.7
Robeson County	313.5	144.3
Total	1,519.0	669.8

Cumberland County

The ACP enters Cumberland County from the northwest and extends approximately 39.7 miles south, then east, to the border of Robeson County. The proposed pipeline route passes near the towns of Godwin, Wade, Fayetteville, and Stedman. Throughout the county, 16 permanent access roads would be utilized along the pipeline. In Cumberland County, the Project includes one M&R station, the Fayetteville M&R station, which is an approximately 7.3 acre site located in northern Cumberland County. The M&R station is approximately ten miles north of the city of Fayetteville and 1.5 miles west from the town of Wade. The area immediately surrounding the site is rural and contains agricultural fields. The ACP would require approximately 589.1 acres of construction workspace in Cumberland County, of which 270.7 acres would be maintained during operations for the permanent pipeline right-of-way, permanent access roads, and the Fayetteville M&R station (see Table 2).

Robeson County

The Project enters Robeson County from the northeast and extends 22.4 miles southwest to the southern terminus of the ACP. The proposed pipeline route passes by the towns of St. Pauls and Rennert, and ends approximately 3.3 miles northwest of the town of Pembroke. The Pembroke M&R station is an approximately 2.5 acre site. The area immediately surrounding the site is rural and contains agricultural fields. Throughout Robeson County, 12 permanent and four temporary access roads would be utilized along the pipeline. The ACP would require approximately 313.5 acres of construction workspace in Robeson County, of which 144.3 acres would be maintained during operation for permanent pipeline right-of-way,

permanent access roads, and the Pembroke M&R station (see Table 2). Since the Project would impact 1,519 acres and crosses through multiple counties, the potential for this project to contribute to growth and development was rated as **High.**

Location of the Pipeline Terminus

The ACP was designed in response to a joint request for proposal (RFP) from Duke Energy and Piedmont Natural Gas in April, 2014. The purpose of the RFP was to support the anticipated increase in required natural gas transportation capacity and to provide greater diversity and reliability of natural gas supply for the State of North Carolina. The RFP was designed to meet the growing needs for natural gas to meet Duke Energy's electric generation needs in addition to supporting Piedmont's core load growth. Piedmont has an existing pipeline system used to distribute natural gas to its customers and also provides the delivery mechanism for wholesale natural gas supplies from ACP to Duke Energy's natural gas fired electric generating stations. The RFP specifically required a delivery point at a proposed interconnect between ACP and Piedmont at Piedmont's existing pipeline "Junction A" located in Robeson County, North Carolina.

POPULATION GROWTH

According to the U.S. Census Bureau, Johnston, and Cumberland Counties have experienced an estimated population increase of 13.3 and 2.3 percent, respectively, from 2010 until early 2016. The population in Robeson County decreased an estimated 0.7 percent from 2010 until 2016. In comparison, the state of North Carolina had an estimated growth of 6.4 percent during this same period. In 2016, the total estimated population of the three counties was estimated to be 651,812; approximately 6.4 percent of the total population of North Carolina (U.S. Census Bureau, 2016). Based on the range of population growth from high in Johnston County to negative in Robeson County, the potential for this project to contribute to population growth was rated as **Moderate**.

AVAILABLE LAND

Table 3 summarizes the undeveloped land in Johnston, Cumberland, and Robeson Counties based on the U.S. Geological Survey (USGS) gap data (USGS, 2011). Attachment 2 provides figures illustrating the extent of developed and undeveloped land in each county. Availability of land in Johnston, Cumberland, and Robeson Counties, does not appear to be limiting; therefore, the potential for this Project to contribute to development based on the availability of land is rated as **High**.

TABLE 3

Developed and Undeveloped Land By County

	Total Land (Acres)	Developed Land (Acres)	Undeveloped Land (Acres)
Johnston	372,241	30,754	341,487
Cumberland	369,271	69,063	300,208
Robeson	608,654	36422	572,232

WATER/SEWER AVAILABILITY

Municipal water service is available for the majority of Johnston County; sewer services are mainly only available for the western portion of the county (Johnston County, 2017). Municipal water and sewer services are available for portions of Cumberland County, mainly in the areas in and around the City of Fayetteville (Cumberland County, 2017). In Robeson County, larger municipalities such as Lumberton, Pembroke, Fairmont, Red Springs, and St. Pauls, all have municipal water and sewer systems; however these services are lacking in unincorporated towns (Robeson County, 2014). The figures in Attachment 2 illustrate the general distribution of sewer and water services for the three counties. For Johnston and Cumberland Counties, this information is based on the Geographic Information System (GIS) mapping tools available online for each county (Johnston County, 2017; Cumberland County, 2017). Robeson County did not have available GIS data; as a result, the distribution of sewer and water services depicted in the Robeson County figure is based on the boundaries of municipalities identified as containing water and sewer service (Robeson County, 2014). Based on the availability of municipal water and sewer in the developed or developing areas of Johnston, Cumberland, and Robeson Counties, the potential for the Project to contribute to water/sewer availability is rated as **Moderately Low**.

NATURAL GAS AVAILABILITY

Natural gas service is currently available in larger municipalities of Johnston County such as Benson, Clayton, Smithfield, and Selma; expansion of these services is ongoing (Johnston County, 2017). Natural gas utilities are available in the large municipalities of Cumberland County such as Fayetteville; however, there is limited information available on the extent of distribution in other areas of the county (Cumberland, 2010). Natural gas availability is limited in Robeson County. In 2010, it was estimated that approximately 60 to 70 percent of homes in Robeson County are farther than 0.25 mile away from a gas distribution line (Robeson County, 2014).

While county-specific data is limited, some data and analysis on a state-wide scale is available. Increased natural gas use by power generators is driving demand in North Carolina. The electric power sector is the state's largest natural gas-consuming sector. The industrial sector led the state in natural gas consumption until 2012, when the electric power sector became the largest user for the first time. The residential sector is the third-largest natural gas-consuming sector in the state. About one-fourth of North Carolina households use natural gas for home heating (U.S. Energy Information Agency, 2017).

Existing interstate pipelines have historically transported natural gas into North Carolina, including Williams (Transco system), TransCanada (Columbia Gas system), and Enbridge (East Tennessee system). ACP would be an additional carrier of natural gas supply into North Carolina and would provide a new source of gas. According to the U.S. Energy Information Agency (EIA), the State of North Carolina utilized 522 MM cubic feet of natural gas in 2016. ACP would be capable of transporting up to 1.5 MM cubic feet per day to delivery points in Virginia and North Carolina.

Based on the expected increase in availability of natural gas in the developed or developing areas of Johnston, Cumberland, and Robeson Counties, the potential for the Project to contribute to the availability of natural gas was rated as **High**.

MARKET FOR DEVELOPMENT

Johnston County

With transportation improvements, approved development, and availability of suitable land, *The Johnston County 2030 Comprehensive Plan* estimated 42,500 new dwelling units and accompanying non-residential growth would occur across the county. It is suggested that future growth demands should benefit from municipal planning initiatives, decisions and investments already in place (Johnston County, 2009).

In northern Johnston County, a steady, long-term increase in economic activity due to the County's proximity to the Research Triangle Park in Durham and Wake Counties has transformed what had long been an agrarian area to a more diverse mix of urban, agricultural, and forested landscapes. Conversely, the southern portion of the county has seen little or no growth due to a limited real estate market, less available public transportation, and limited water and sewer infrastructure development. According to the County's 2009 comprehensive plan, Johnston County has experienced significantly high growth rates overall since 1990, a trend that has continued through 2017.

Urban development is most intense in the western part of the county; however, residential developments are becoming increasingly dense in central Johnston County between the towns of Selma and Pine Level. According to the County Comprehensive Plan, additional development within these two communities "is both likely and desirable." The County Comprehensive Plan anticipates future municipal annexations (Johnston County, 2009).

According to the *Johnston County Planning and Zoning Department Annual Report* (Johnston County Planning and Zoning Department, 2016), there were 611 plats for new subdivisions reviewed and signed in 2016. This was the most plats signed in one year since the county assumed map review responsibility in 2009. In 2015, there were 523 plats signed. The county reported 1,200 subdivision lots recorded or permitted in 2016. Additionally, 1,637 single-family housing units are proposed in the near future. The Report indicates that development and housing demand is strong, due in-part to steady job and population growth, as well as, the replacement of existing aging homes (Johnston, 2017).

Cumberland County

Cumberland County is within the Fayetteville Metropolitan Statistical Area. Existing and future development in the county is centered on Fayetteville and the surrounding area. Other towns where growth is likely to occur include those along the I-95 corridor. These towns include Eastover, Falcon, Hope Mills, Spring Lake, and Wade. Another driver for development stems from housing needs associated with Fort Bragg and Pope Air Force Base.

The Cumberland County Community Development published the *Housing Market Analysis* in 2015 that gave a number of conclusions and recommendations regarding housing

needs and developments goals. The *Analysis* found that housing costs are relatively inflated and workers in lower-wage jobs are priced out of affordable housing. The analysis acknowledges a housing shortage that needs to be addressed through new construction and rehabilitation of vacant properties (Cumberland County, 2015).

Robeson County

Robeson County's future growth and market for development will likely occur near Lumberton, Maxton, Pembroke, Red Springs, and Saint Pauls. Development corridors in the county are generally adjacent to the I-95 and I-74 which bisect the county. Based on a review of city and county websites, press releases, and public documents, there is no information on major developments pending as of December 2017.

Based on the current and planned development in the entire study area- Johnston, Cumberland, and Robeson Counties- the potential for the Project to support the market for development was rated as **Moderate**. At the county level however, only Johnston and Cumberland County were rated as **Moderate**, while Robeson was rated as having a **Low** potential for Project-supported market development. This distinction is needed because Robeson County is more characteristically rural, has a steadily declining population, and is less affluent than Johnston and Cumberland Counties. Furthermore, Robeson County is located furthest from the state's growth centers and large metropolitan areas where development is more likely to occur.

PUBLIC POLICY

Johnston County

Several public policy documents influence land use planning and development in Johnston County. In addition to the County *Comprehensive Plan* many of the municipalities in Johnston County have their own comprehensive plans to direct future growth. The towns of Four Oaks, Clayton, Smithfield, and Selma all have such plans. Planning efforts are coordinated between municipality governing bodies and the county. Johnston County and local municipal governments created the Municipal Transition District (MTD) to aid in land use planning and development. The MTD allows for greater residential densities in some areas to promote efficient development near existing urban areas. MTDs are more readily served by existing services and utilities and discourage sprawling suburban development into agricultural areas in rural Johnston County.

Development in Johnston County is anticipated to occur in existing communities along the I-95 corridor that have established MTDs. These communities include Kenly, Micro, Selma, Smithfield, Four Oaks, and Benson. Other cities where development is likely to occur are Clayton and Princeton. The Annual Report (2016) indicates that the majority of building permits and recorded lots/subdivisions are within the MTDs of the aforementioned communities. This demonstrates the general trends of planned and realized development scenarios.

Cumberland County

Cumberland County has adopted a *2030 Growth Vision Plan* and a *Land Use Policies Plan* (Cumberland County, 2008). The Cumberland County Joint Planning Board divided the county into several land use planning study areas.

The Cumberland County 2030 Growth Vision Plan shows that the Northeast part of the county includes open space, farmland, residential, commercial, and industrial land (Cumberland County, 2011). Rural residential and suburban tract development is relatively dense in some portions of this section of Cumberland County.

The Draft Wade Study Area Detailed Land Use Plan addresses the City of Wade and surrounding areas. This includes the land-use designated "Farmland," and areas within the Wade City limits which are planned for low density residential use, but are currently undeveloped.

The *South Central Land Use Plan* covers the section of the county south of the Cape Fear River to the Robeson County line. With the exception of a one-mile strip of land south of the Cape Fear River to Rainey Road, the land use is designated as "Farmland." Despite this designation, there are numerous housing tracts with parcels of less than one acre. The land between the Cape Fear River and Rainey Road is designated for "One Acre Mixed Housing Types." The Cumberland County zoning ordinance does not specifically address natural gas transmission pipelines; however, the ordinance contains a "Use Matrix" indicating that public/community utility stations/substations are allowable in all zoning districts (Cumberland County, 2010).

The stated overarching goal of land use planning in Cumberland County is to concentrate development around Fayetteville and maintain traditional agricultural land use in the rural areas of the county (Cumberland County, 2011). In general, the residents envision Southeast Cumberland Area remaining a rural farming community intermixed with some small concentrated residential areas, very limited commercial, and lots of natural areas. This is accomplished by establishing Farmland Protection Areas throughout the county and limiting services and utilities to rural areas to control urban development outside of established planning areas.

Robeson County

Future development in Robeson County is directed, in part, by the goals stated in the *Robeson County Comprehensive Plan* (Robeson County, 2014). The Robeson County Comprehensive Plan was developed to outline goals for enhancing the quality of life for residents. The plan supports long-term economic growth and protection of natural areas while providing land-use patterns to support economic development.

The Plan's future land use map seeks to direct growth in and near Municipal Planning Jurisdictions including Lumberton, Maxton, Pembroke, Red Springs, and Saint Pauls.

Robeson County is largely undeveloped with the majority of existing lands classified as agricultural lands, rural residential, or vacant. There is no unincorporated land in the county that

is zoned. As an estimated minimum, 4,500 new dwellings will be required by 2030 correlating with population growth (Robeson County, 2014).

Based on the Public Policy designed to control expected growth for Johnston, Cumberland, and Robeson Counties, the potential for the Project to contribute to public policy goals was rated as **Moderate**.

ANALYSIS OF POTENTIAL PROJECT-INDUCED GROWTH

The three-county study area could experience project-induced growth if the ACP is constructed. As examined earlier in this report, there are several existing conditions that help inform a *no-action forecast*, which describes the future condition in the absence of the ACP, and an *action forecast*, which describes conditions in the future following the implementation of the ACP. The following analysis considers population growth, available land, water/sewer availability, natural gas availability, market for development, and public policy to provide a no-action and action forecast for the study area.

Johnston County

Johnston County has the fastest growing population of the three counties in the study area. Johnston County's population grew 13.3 percent from 2010 to 2016 and has an estimated population of 191,450 persons (U.S. Census Bureau). The majority of the county land area is classified as undeveloped, which consists largely of agricultural land producing cotton, tobacco, peanuts, soybeans, and various specialty crops. Within Johnston County are dozens of commercial and industrial zoned properties for sale including existing buildings and shovel-ready greenfield lots that have sewer and water access. In general, these properties are located along the major highway and interstate corridors (Johnston County Economic Development Office, 2017).

There are multiple growth drivers in Johnston County. The county is located east of the State Capitol of Raleigh in Wake County. The area forming the Wake County / Johnston County border has recently developed as an expanding commercial and housing market attracting retail and residential opportunities for thousands of new residents. It is estimated that over 70% of all new building permits issued within Johnston County occur within this western portion of the county (Johnston County Economic Development Office, 2017a). As a result of this growth, average daily traffic counts have increased on the interstate highway networks and four-lane divided highways of US 70 Business and Bypass. Over one million cars per month traverse the north/south corridor established by Interstate 95. An even larger volume of traffic utilizes US Highway 70 between I-95 and the Raleigh Metropolitan Area (NCDOT, 2017). As anticipated, retail sales have increased, reflecting the expanded population base as well as shopping patterns of commuters. Johnston County annually exceeds $1 billion per year in retail sales (Johnston County Economic Development Office, 2017a).

Access to transportation is an important factor in the Johnston County's overall growth potential. Railroads within Johnston County have impacted development of the 11 major municipalities. CSX Transportation and Norfolk Southern Corporation provide rail service to many local industries as well as passenger service for Amtrak. These two railroads converge at

Selma, North Carolina west of Exit 98 on Interstate 95. The Raleigh-Durham International Airport (RDU), with over 100 departures per day, is 30 miles from Clayton. In addition to the RDU airport, the Johnston County Airport Authority operates an airport located west of Smithfield. The airport maintains a 5,500-foot long, 100-foot wide runway that supports 65,000 pounds for dual-gear aircraft (AirNav, 2017).

Growth potential is also encouraged by existing access to energy. Piedmont Natural Gas operates and maintains a 10-inch natural gas main that generally traverses Johnston County from east to west. In addition to transmitting quantities of gas, numerous two-inch and four-inch laterals extend from this line to provide gas service to the towns of Benson, Clayton, Smithfield, Selma, and Wilson's Mills (Rextag, 2017)

Electricity in Johnston County is currently provided by several different electrical distributors. They include Progress Energy (formally Carolina Power & Light), ElectriCities, and South River EMC (Johnston County Economic Development Office, 2017a). The Towns of Smithfield, Selma, Benson, and Clayton provide electrical service through their membership to North Carolina ElectriCities. The majority of the county has electrical service provided by Progress Energy.

Utilities such as water and wastewater services are managed by the county and independently by several county municipalities. The county has a 12 million gallon per day (mgd) surface water treatment plant and bulk water purchase agreements with public utilities in adjacent counties. The total supply capacity is 17.6 mgd. A 24" and 16" diameter pipeline network extends east/west and north/south generally tracking US Hwy. 70 and Interstate 95. The transmission network is supported by interconnecting 16" and 12" mains, 17 booster pumping stations, and 11 elevated tanks with an aggregate storage volume of 3.8 million gallons. The Towns of Benson, Clayton, Kenly, and Princeton operate separate wastewater treatment plants while the Towns of Smithfield, Selma, Pine Level, Four Oaks, and a portion of the Town of Clayton's service areas are treated by the Central Johnston County Wastewater Treatment Plant located in Smithfield. The Central Regional Plant has a capacity of 9.5 mgd (Johnston County Public Utilities, 2017).

In Johnston County there are several large manufacturing firms that represent the county's major employers and whose expansion would constitute a significant increase in employment. Some of those manufacturers include Grifols Therapeutics, Novo Nordisk Pharmaceutical, Flanders Airpure, Caterpillar, and Air Flow Products (Johnston County Economic Development Office, 2017a). Information on manufacturers or industries expanding or entering Johnston County is not known at this time.

There are several specific areas of potential growth identified in Johnston County in the Land Use Plan. The Plan identifies future land uses broadly into Primary Growth Areas, Secondary Growth Areas, and Agricultural / Rural Conservations Areas. Primary Growth Areas are defined as areas in which high levels of growth pressures currently exist or are anticipated in the near term. That majority of Primary Growth Areas surround the Town of Clayton several miles beyond the town limits and town planning jurisdiction. Other Primary Growth Areas are in the vicinity of Micro, Pine Level, Princeton, Selma, and Smithfield. Most of the anticipated growth in Johnston County is near Clayton, which is heavily influenced by the Raleigh

metropolitan area. The figure in Attachment 4 shows the general extent of potential growth areas in Johnston County.

Secondary Growth Areas are areas in which low to moderate levels of growth pressures are anticipated over the next 20 years. These areas encompass almost the entire northwest half of the county in anticipation of continued development around Clayton, I-95, and Highway 70. The southern portion of the county is much more rural in character and is identified as Agricultural/Rural Conservations Areas. These are areas in which low levels of growth pressures are anticipated over the next 20 years and are identified by the County Land Use Plan as under consideration for rural conservation and agricultural preservation programs.

Cumberland County

Cumberland County is the most populous county in the study area at 324,000, but has grown gradually between 2010 and 2016 with a population increase of 2.3 percent (U.S. Census Bureau, 2016). Cumberland County's land area is dominated by its largest city, Fayetteville, whose urban areas encompass nearly one-third of the county's land area.

The *Cumberland County Growth Plan* identifies Growth Strategy Areas to guide development and land use decisions. As mentioned, a significant portion of the county is classified as Urban Areas and has a full range of urban services in place, or is well located for provision of urban services. Urban Areas are the county's the top priority areas for planning, programming, and providing public urban services such as centralized water and sewer, parks, schools, police, fire and rescue services, garbage service, storm water systems, streets & roads, transit, cultural facilities, sidewalks, streetlights, and other amenities. To encourage development in these areas, local government entities may provide incentives in the form of density bonuses, infrastructure subsidies, or other advantages. New development densities should be higher than four units per acre (Cumberland County, 2011). By using density bonuses and development subsides, the county incentivizes dense, urban development over development in the county's rural and agricultural land.

Most important to the county's future growth and development are those areas designated as Urban Fringe. Urban Fringe Areas are located to the north of Fayetteville, south of Hope Mills, and in the area between Eastover, Wade, and Stedman. Urban Fringe Areas include those parts of the county that are not currently urban in character but that, during the planning period, are likely to reach a level of development requiring urban services. These areas may have some services already in place including, particularly, centralized water and sewer. Other services, including stormwater management, are likely to be in place here within the planning period. The county considers Urban Fringe Areas as a secondary area for planning, programming, and providing public urban services. Although local governments will not discourage development in these areas, the public sector will not provide incentives for development. Those parts of the Urban Fringe that have good soils and drainage, are not in the floodplain, have road capacity available, and have sewer service nearby should generally be developed at 3 or more units per acre (Cumberland County, 2011). Land areas constrained by poor soils and/or lack of topography and resulting flooding problems should generally be developed at lower densities.

Development capacity in Cumberland County is also carried by Community Growth Areas. Community Growth Areas are located around the smaller incorporated communities in Cumberland including Linden, Godwin, Falcon, Stedman, Eastover, and Wade (Cumberland County, 2011). These communities normally provide for a full range of urban services through a combination of municipal and county services. The use of community funds for planning, programming or providing urban services in these areas is left up to local policy makers in each community in keeping with community goals. Community Growth Areas may be developed at a variety of development densities and land use types to meet the housing, business, and employment needs of area residents. The figure in Attachment 4 shows the general extent of potential growth areas in Cumberland County.

Development is discouraged in Cumberland County's Rural Areas and Conservations Areas. These areas are suitable for low intensity residential development with on-site waste disposal. Premature development of Rural Areas to urban level development and the resulting loss of valuable farmland and open space is discouraged (Cumberland County, 2011). Conservation Areas provide for the long-term management and protection of significant, limited, or irreplaceable natural areas (e.g. riparian buffers along streams, Natural Heritage Areas, critical wildlife habitat, wetlands, public parks, scenic sites, land trust and other non-profits properties, historic sites, unique natural features, etc.). Conservation of the natural, cultural, recreational, scenic or ecologically productive values of these areas is preferred over development in these areas of Cumberland County and the county discourages the provision of urban services to these areas that could stimulate development.

There are multiple shovel-ready and developed industrial and commercial sites located in the county that are marketed by the Fayetteville Cumberland County Economic Development Corporation. The majority of available sites, include some large industrial parks, are located along the I-95 corridor around Fayetteville (FCEDC, 2017). These areas coincide with the county's preferred development locations within Community Growth Areas and Urban Fringe Areas.

From a development standpoint, the county promotes itself as a growth center and leverages its location as a benefit to potential manufacturing and logistics operators. Cumberland County is located within an eight-hour drive to two-thirds of the U.S. population and has access to several major ports including Wilmington, Morehead City, and Charleston. Also nearby are Raleigh and the Research Triangle Park, one of the most prominent high-tech research and development parks in the country with over 200 companies employing 50,000 workers and 10,000 contractors (RTP, 2017).

Cumberland County has Class I rail service from Norfolk Southern and CSX, as well as regional rail service from the Aberdeen, Carolina & Western. Fayetteville Regional Airport (FAY) has frequent service to Washington, Charlotte, and Atlanta, with a 7,709-foot runway that accommodates larger business and cargo jet traffic (Airnav, 2017).

Cumberland County hosts a variety of industries that have the potential for future growth. Top manufacturing employers include Goodyear Tire, Purolator Filters, and Eaton Corporation (Alliance, 2017). A significant economic engine is Fort Bragg. There are approximately 6,000 people exiting the military from Fort Bragg every year and many choose to stay in the county,

thereby maintaining a trained workforce and large labor pool for local employers (FCEDC, 2017).

Robeson County

Robeson County is the least populous county in the study area at 135,000 persons. The population decreased by 0.7 percent between 2010 and 2016 (U.S. Census Bureau, 2016). Robeson is the most characteristically rural of the counties in the study area but has several potential growth centers in and around the communities of Saint Pauls, Lumberton, Red Springs, Pembroke, and Fairmont. The figure in Attachment 3 shows the general extent of potential growth areas in Robeson County.

Robeson County, compared to the other counties, possesses geographic and infrastructure characteristics that are less suited to enabling future growth. As with Cumberland County, most East Coast destinations are within a day's trucking distance from Robeson County, and a full 70% of U.S. and Canadian markets (and 170 million consumers) can be reached overnight. Southeastern North Carolina is also a crossroads for rail service, and a major deep water port is 60 miles to the east (RCED, 2017).

Robeson County is explicit about courting growth and economic development in its Comprehensive Plan. The county is actively seeking to encourage growth and combat unemployment through a variety of measures including: increasing the number of state certified industrial sites; increasing the availability of natural gas, including access to 6-8 inch lines; and expanding municipal sewer services to both industrial/business and housing sites (Robeson County, 2014). Approximately 60%-70% of the county by land area is not within 0.25 mile of a transmission or distribution gas main. This lack of infrastructure is deemed a deterrent to growth by the county and may act as a barrier to entry for potential industrial and commercial users. Currently, the Robeson County Economic Development is advertising the sale and lease of multiple industrial sites around Lumberton that could enable growth and development under the right market conditions.

Robeson County currently has one property that is designated as a Certified Site under the North Carolina Certified Sites Program. Certified Sites meet various criteria that make them shovel-ready for development. The properties are equipped with all the information companies and site selectors need to develop detailed timelines for development, construction, budgeting, cost control, risk mitigation and planning (NCDOC, 2017). Several additional sites in Robeson County were previously certified, but have since seen their certifications lapse (EDPNC, 2017). The lapsed certifications are due, in part, to changes in the certification criteria enacted in 2012. These changes included more stringent requirements for site planning (EDPNC, 2017b).

No-Action Forecast

The no-action forecast for the study areas differs from community to community and largely depends on macro-economic considerations that supersede many of the county and community level conditions discussed in this report. However, there are growth indicators that can be extrapolated for the purpose of making a no-action forecast.

If the ACP does not proceed, it is likely that the overall population trends and projections will continue, which will result in continued growth in the study area. Where the growth occurs can be inferred based on public policy, land cost, and access to infrastructure and utilities as discussed above.

In Johnston County, it is reasonable to forecast increasing urbanization and growth over a wide geographic area that would proceed regardless of the ACP. Raleigh has such a large influence over growth and development in the region that one could anticipate significant growth in and around Clayton, which will extend to the smaller communities along the I-95 and Highway 70 corridors. Relatively speaking, the towns of Pine Level and Princeton stand to see the most dramatic growth if industrial users locate or expand in the area south of I-95 along Highway 70.

In Cumberland County it is assumed that growth and development will continue gradually based on the strengths of new tech industries and a strong labor market maintained, in part, by proximity to Fort Bragg, which is an economic multiplier for Fayetteville and the county as a whole. Proximity to the Research Triangle Park also favors development because tech services and manufacturing firms tend to benefit greatly from economies of agglomeration. In accordance with the county's 2030 growth Strategy Map, one could reasonably assume steady growth and continued development to the north of Fayetteville, southwest of Hope Mills, and perhaps more pronounced growth in the unban fringe areas between Stedman and Eastover.

In Robeson County, very modest growth or stagnation could be expected based on existing conditions. This no-action forecast is based on the declining population, lack of growing industry, high-unemployment, and a need for increased gas delivery and infrastructure. Impacts of state subsidies and pro-development policies could encourage growth and development, though certain market conditions would need to be met to entice capital expenditures. In a growth scenario one might anticipate the success of the Certified Sites and growth in and around the communities of Pembroke, Lumberton, and Saint Pauls.

Action Forecast

The action forecast for the implementation of the ACP is informed by demand for natural gas observed in North Carolina. The ACP would serve the growing energy needs of multiple public utilities and local distribution companies (LDCs) in North Carolina. Based on current customer commitments, approximately 79.2 percent of the natural gas transported by the ACP will be used as a fuel to generate electricity for industrial, commercial, and residential uses. The remainder of the natural gas will be used directly for residential (9.1 percent), industrial (8.9 percent), and commercial and other uses such as vehicle fuel (2.8 percent). By providing access to low-cost natural gas supplies, the ACP will increase the reliability and security of natural gas supplies in North Carolina.

In recent years, demand for natural gas in North Carolina has grown significantly. Demand for natural gas for all uses grew by 78 percent in North Carolina between 2009 and 2013. Demand for gas-fired electric power generation grew by 417 percent in North Carolina from 2009 to 2014 (EIA, 2015a, 2015b, 2015c, 2015d, and 2015e).

Demand for natural gas in North Carolina is expected to increase in coming decades due to a combination of population growth and displacement of coal-fired electric power generation. The U.S. Census Bureau predicts 4.2 million new residents in North Carolina between 2000 and 2030 (U.S. Census Bureau, 2014). At the same time, use of natural gas for power generation is expected to increase significantly. By 2035, natural gas is expected to surpass coal as the most common fuel for electric power generation due to coal-fired plant retirements and low natural gas prices. The EIA (2015a) expects renewable generation to grow 2.0 percent per year from 2013-2040, meeting a part of the demand for power, but more than 60 percent of new generating capacity needed from 2025 to 2040 will be fueled by natural gas.

A study prepared by ICF International (2015) projects that electric power generation in North Carolina will increasingly rely on natural gas over the next two decades. As a result, demand for natural gas for power generation in North Carolina is expected to grow 6.3 percent annually between 2014 and 2035, increasing from 1 to 3.7 billion cubic feet per day.

There are currently no interstate natural gas transmission pipelines that supply eastern North Carolina. A new source of natural gas would bring with it the opportunity to enable major manufacturing to locate in the eastern part of the state. The types of manufacturing could include those that typically require large quantities of natural gas (tire, glass, automotive, agricultural, pulp and paper, chemical, specialty fabrics, and lumber). In correspondence with local economic development officials, there have been extensive studies to analyze the industry sectors that are a fit for southeast North Carolina. There are multiple industry sectors that are drawn to natural gas infrastructure when considering where to locate or expand their operations including food manufacturing, agribusiness, advanced manufacturing (e.g. automotive and aerospace), and industries serving the Department of Defense. For example, North Carolina is actively trying to recruit the Toyota/Mazda Project (Charlotte Observer, 2017). If North Carolina is successful, it is projected that numerous product suppliers would also locate in nearby counties. Potential users would look to the rural areas east of Randolph County, within the study area, due to access to ACP and the I-95 corridor.

The action forecast, which describes conditions in the future following the implementation of the ACP, anticipates growth and development in Johnston County. In a recent correspondence with the Johnston County Economic Development (JCED) office, a representative there stated that Johnston County is at an extreme disadvantage in siting major commercial/industrial development due, in part, to the way that site data is collected and scored to inform decisions on where to build manufacturing and other facilities for large corporate users. Johnston County is often dropped from consideration by those searching for commercial/industrial sites because of the lack of natural gas access. In the opinion of the JCED, the implementation of ACP and the corresponding availability of natural gas will help foster development and economic growth in Johnston County (JCED, 2017b). Considering the implementation of ACP, coupled with continued population growth and ample transportation access, it is reasonable to assume that the action forecast for Johnston County would be favorable to increased growth potential compared to the no-action forecast.

The action forecast for Cumberland County also assumes increased growth and development based on the increased availability of natural gas infrastructure. In a recent correspondence with the Fayetteville Cumberland Economic Development Corporation

(FCEDC), it was explained that the elected bodies in Cumberland County desire to attract, grow, and diversify the county's industrial base to increase tax revenues and create job opportunities for residents. In the absence of the ACP, some sectors will be able to continue growing; however, there are industries that the county could not accommodate in terms of infrastructure and lack of natural gas (FCDEC, 2017a). The ACP would provide natural gas that could remedy this aspect of the Cumberland County's competitive disadvantage at attracting commercial/industrial users. Given the favorable economic conditions present in Cumberland County supported by high-tech industry and existing transportation infrastructure, it is reasonable to assume that the action forecast would be favorable to growth and development.

The action forecast for Robeson County can be characterized as having the potential for only modest increases in development. Unlike Johnston and Cumberland County, the potential for Project-induced growth in Robeson County is low due to a combination of development obstacles that include a declining population, lack of utility infrastructure, and separation from development hubs in Fayetteville and Raleigh. The low growth assumption is supported by the long-term availability of unoccupied commercial/industrial real estate in the County. As of 2014, there were five sites designated as Certified Sites that were listed for sale. Since 2014, certification has lapsed on all but one of the five sites and all remain on the market and undeveloped. Because Certified Sites offer a shovel-ready development option for commercial/industrial users, the certification lapses and non-renewal indicate low demand for new construction. Another indicator of slow growth is evidenced by the availability and vacancy of existing commercial/industrial properties in Robeson County. There are 15 commercial/industrial buildings on the market in and around Lumberton, many of which are vacant, totaling almost one million square feet of commercial/industrial space available for sale or lease (EDPNC, 2017). . Despite the lack of demand, State and County involvement with economic development policy could provide incentives for business to locate in Robeson County and the availability of gas infrastructure may provide an attractive infrastructure component that could help draw users looking for less expensive developable land away from the established technology and manufacturing centers in and around Raleigh and other communities in the study area. However, due to the slower population growth and diminished market for development in Robeson County, the action forecast is tempered compared to Johnston and Cumberland County.

STORMWATER PERMITTING

Stormwater permitting requirements are not uniform in North Carolina. Often, regulatory regimes in North Carolina differ from county to county, town to town, and sometimes cross multiple jurisdictions to protect specific river basins and watersheds. In many cases, a construction stormwater permit, usually concerning erosion and sediment control, will be required if development disturbs more than one acre of land. Post-construction stormwater permitting, dealing with increases in impervious surfaces, is location-specific in North Carolina. Post-construction stormwater permits are often required at the state, county, and town level due to the project footprint falling within areas with state and local stormwater programs simultaneously.

Nearly all of Johnston County falls under the jurisdiction of the Johnston County Stormwater Management Program (Johnston County Public Utilities, 2017). The program was adopted with goal of reducing the amount of nitrogen delivered to the Neuse River Basin from

point and non-point sources by a minimum of 30 percent of the 1995-loading rate. Wastewater treatment plants and industrial plants are considered point source discharges. Point source discharges are regulated under the National Pollutant Discharge Elimination System (NPDES) administered through the NC Department of Environment and Natural Resources Division of Water Quality (DWQ). Non-point source discharges originate from rainfall or snow melt flowing across lawns, streets, parking lots, agricultural fields, forests, industrial sites, construction sites, etc.

In May 1998, the Johnston County Board of Commissioners adopted the Johnston County Stormwater Management Ordinance. The intent of the ordinance was to protect streams from the secondary impacts of development. Later in 1998, the Environmental Management Commission adopted the Neuse River Basin – Nutrient Sensitive Waters Management Strategy: Basin-wide Stormwater Requirements (Neuse Rules). In those rules, Johnston County was identified as one of 15 local governments required to adopt a stormwater program specifically addressing nitrogen reduction.

Cumberland County has two primary stormwater regulatory regimes. The North Carolina DWQ oversees the majority Cumberland County's stormwater permitting through the NPDES Stormwater Phase II Final Rule. The Phase II program expands the Phase I program by requiring additional operators of municipal sewer systems in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. North Carolina is an EPA delegated state for the federal NPDES program and implements this program through the DWQ (North Carolina DEQ, 2017). The City of Fayetteville in Cumberland County also administers a Stormwater Program encompassing the Fayetteville metropolitan area. Under the requirements of the Stormwater Phase II regulations, the City of Fayetteville independently maintains its stormwater utility to fund its program activities.

Robeson County is not under the jurisdiction of the NPDES Stormwater Phase II Final Rule. However, a delineation process is underway to add the towns of Lumberton and Red Springs as Phase II Designation Candidates. If these areas are delineated, post-construction stormwater and other Phase II requirements would apply (NCDEQ, 2017a).

Robeson, Johnston, and Cumberland County are all participants in the North Carolina Water Supply Watershed Protection Program. The Program applies to areas within the designated Public Water Supply Watersheds with the purpose of protecting the state's drinking water supplies through inventorying and establishing critical areas, protected areas, and creating buffering requirements for protecting surface waters. The Environmental Management Commission gives authority to local administrators to issue Watershed Protection Permits and Watershed Protection Occupancy Permits according to the provisions of the ordinance.

ACP and all other developments occurring within the jurisdiction of the aforementioned stormwater permitting authorities in North Carolina are required to conform with ordinances and regulations adopted at the state and local level. The provisions of the stormwater permitting

ordinances anticipate and mitigate stormwater impacts for a variety of development sizes and types. Based on the comprehensive stormwater permitting regulations in place in North Carolina, Atlantic anticipates that cumulative impacts would result in minimal adverse impacts on the affected watersheds.

NOTABLE WATER RESOURCES

Johnston, Cumberland, and Robeson Counties include portions of 6 major watersheds in the State of North Carolina:

- Upper Cape Fear and Lumber Watersheds (Robeson and Cumberland Counties);
- Little Pee Dee Watershed (Robeson County);
- Upper Neuse Watershed (Johnston County);
- Contentnea Watershed (Johnston County);
- Black Watershed (Johnston and Cumberland Counties); and
- Lower Cape Fear Watershed (Cumberland County).

The major rivers flowing through the counties include the middle or lower reaches of the Neuse, Cape Fear, and Lumber rivers and their tributaries.

Table 4 summarizes the wetlands and waterbodies in Johnston, Cumberland, and Robeson Counties based on National Wetlands Inventory data and the National Hydrography Dataset (USGS, 2017; U.S. Fish and Wildlife Service [USFWS], 2017).

TABLE 4

Waterbodies and Wetlands By County

	Johnston County	Cumberland County	Robeson County
Waterbody Classifications	Miles of Waterbodies		
Canal/Ditch	13	192	414
Intermittent	1,286	499	965
Perennial	748	812	1,031
Waterbody Total	2,047	1,503	2,410
Wetland Classifications	Acres of Wetlands		
Open Water	7,538	7,241	3,306
Emergent	497	949	5,091
Scrub-Shrub	3,607	11,148	15,943
Forested	62,817	58,987	147,366
Wetland Total	74,459	78,325	171,706

The figures in Attachment 2 illustrate the wetland and waterbodies present in the three counties. Based on the amount of wetlands and waterbodies in Johnston, Cumberland, and Robeson Counties, this category is rated as **Moderately-Low**.

POTENTIAL IMPACT CAUSING ACTIVITIES

Waterbodies and Wetlands

Waterbodies are defined by the FERC as "any natural or artificial stream, river, or drainage with perceptible flow at the time of crossing, and other permanent waterbodies such as lakes and ponds." The term "waterbodies," as used here, is best understood as those water features – excluding wetlands – that are potentially subject to jurisdiction under the Clean Water Act. The U.S. Army Corps of Engineers (USACE) and Environmental Protection Agency jointly define wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions."

Atlantic corresponded with the USFWS to determine which streams are sensitive based on the presence, or anticipated presence of species protected under the Endangered Species Act (16 U.S. Code §1531 et seq.). The FERC (lead federal agency) and the USFWS determined that no North Carolina aquatic species would "likely be adversely affected" based on communication between the two agencies. A summary of waterbodies and wetlands delineated along the ACP in Johnston, Cumberland, and Robeson Counties is provided in Table 5. Figures illustrating the wetlands and waterbodies crossed by the ACP are included as Attachment 3.

TABLE 5

Waterbody and Wetlands Affected by the Atlantic Coast Pipeline By County

	Johnston County	Cumberland County	Robeson County
Waterbody Classifications	Waterbody Affected Bank Length (Feet)		
Ephemeral	560	2,205	540
Intermittent	2,215	5,055	1,813
Perennial	1,493	3,430	1,232
Waterbody Total	4,268	10,690	3,584
Wetland Classifications	Wetlands Affected (Acres)[a]		
Palustrine Emergent	1.2	4.6	2.6
Palustrine Forested	82.4	81.5	54.4
Palustrine Scrub-Shrub	4.5	21.2	18.0
Wetland Total	88.1	107.2	75.0

[a] Acreage of wetland within the construction footprint.

Cumulative effects on surface water resources impacted by construction and operation of the Project in Johnston, Cumberland, and Robeson Counties, North Carolina would be limited to waterbodies that are affected by other projects located within the same watershed (see Attachment 1). Atlantic would minimize impacts on waterbodies and wetlands by implementing its sediment and erosion control plan (S&ECP) and adhering to all applicable state and federal permit conditions. Atlantic has developed the S&ECP using the FERC Plan and Procedures[4], and the North Carolina Erosion and Sediment Control Planning and Design Manual. To further

[4] Refers to the 2013 versions of the FERC's Upland Erosion Control, Revegetation, and Maintenance Plan (Plan) and Wetland and Waterbody Construction and Mitigation Procedures (Procedures)

minimize impacts, USFWS identified sensitive waterbodies within the Project area. Atlantic would implement enhanced erosion and sediment control measures at these crossings.

INDIRECT EFFECTS CONCLUSION

Indirect Summary Statement

The North Carolina Administrative Code adopts the federal definition of indirect impacts as impacts that "are later in time or further removed in distance." (Council on Environmental Quality 1986, 40 Code of Federal Regulations [CFR] 1508.8). The majority of land development outside of the proposed Project is expected to occur within or near urban areas of Johnston, Cumberland, and Robeson Counties. The Project has been routed to avoid urban areas and areas with planned developments identified during the routing process. According to the counties' comprehensive plans, future development activities are anticipated for the areas around Selma, Pine Level, Fayetteville, and Lumberton, which the ACP largely avoids, but with additional infrastructure could be served by new sources of natural gas in the county.

Customers of the ACP in North Carolina have indicated that the majority of the gas would be used for power generation, with the remainder for commercial, industrial, and residential customers. Natural gas transported by the ACP would provide an alternate source of fuel, increased reliability, and support projected growth, and would be but one of several factors potentially contributing to growth in the study area. While it is not possible to identify specific growth or development that would be likely to result from the additional natural gas availability, it is assumed that the Project would support existing planned development in the study area and may induce growth in other areas. In Johnston County, ACP could increase development around communities such as Micro, Pine Level, Princeton, Selma, Smithfield and Clayton. Development can also be anticipated along the Highway 70 and I-95 corridors, areas crucial to the transportation of raw materials and finished goods. In Cumberland County, increased development may be seen in around Fayetteville, Eastover, Wade, Falcon, and Hope Mills. Robeson County could see more moderate development around Lumberton and specific site development at the North Carolina Certified Site locations in the county. In most cases, commercial and industrial development is anticipated which may spur growth in residential development. Depending on the availability of existing housing stock and potential increased demand of additional housing stock, ACP might encourage redevelopment of urban areas or encourage new construction in a more suburban setting.

The Project would have direct wetlands/waterbodies impacts on the areas crossed, and could have indirect impacts on wetlands/waterbodies outside of the immediate vicinity of the pipeline right-of-way, aboveground facilities, and access roads depending on the scale and location of development activities undertaken as a result of increased natural gas availability.

Atlantic has no commitment to potential customers or reasonably foreseeable plans to extend ACP beyond the current terminus. Because there is no planned expansion that can be scoped or analyzed, the potential for extension of the pipeline is not addressed in this report.

Water Quality Statement

Atlantic would avoid or minimize direct impacts on wetlands and waterbodies by implementing mitigation measures and requirements outlined in the federal, state, and local authorizations issued to the Project. This includes measures outlined in the USACE Section 404 permit and the S&ECP plan developed for the ACP that incorporates requirements from the FERC Plan and Procedures and the North Carolina General Permit to Discharge Stormwater under the National Pollutant Discharge Elimination System for Construction Activities, general permit NCG010000. The S&ECP plan review is being coordinated with NCDEQ staff out of the Raleigh and Fayetteville Regions. Atlantic would follow the requirements of the Section 404 permit, the general permit NCG010000, and the approved S&ECP plan to minimize potential impacts on wetlands and waterbodies.

The ACP would cross one 303(d) impaired water, Moccasin Creek in Johnston County, which is impaired for benthos. As noted above, Atlantic would follow the requirements of general permit NCG010000 and the approved S&ECP plan to minimize potential impacts on waterbodies, including Moccasin Creek.

It is unlikely that significant or permanent indirect effects to waterbodies would result from construction activities within the stream channels and adjacent banks of the waterbodies. Short term increases in sedimentation and turbidity could result from in-stream construction activities, trench dewatering, and storm water runoff from construction areas. These impacts are expected to primarily be limited to in-stream construction. Impacts are expected to be short-term, given that waterbody crossings would occur as quickly as possible and stabilization of the construction area would occur immediately after the crossing of each waterbody, so that conditions would be stabilized shortly after stream restoration activities are complete.

Direct impacts to the majority of affected wetlands are anticipated to be short-term. Temporary impacts on wetlands would occur within the construction limits of disturbance, with long-term conversion of forested and scrub-shrub to emergent wetlands due to maintenance of the pipeline right-of-way according to the FERC Procedures and U.S. Department of Transportation requirements. The majority of the impacts would be temporary as revegetation would occur through reseeding with and reestablishment of native vegetation after construction. As a result, Atlantic does not anticipate significant direct and indirect impacts to water quality.

Some proposed access roads associated with the ACP would be built within floodplains. Atlantic would implement design criteria based on the No-Rise Certification required for construction projects within a designated Special Flood Hazard Area. Floodplain management regulations (44 CFR Section 60.3 (d)(3)) prohibit any encroachment or modification of regulatory floodways unless hydrologic and hydraulic analysis can demonstrate that the action would not increase flood levels. This analysis must be reviewed and approved by a professional engineer. Review of the application and analysis would be conducted by either the county or deferred to the State. The proposed pipeline for the ACP Project would be buried underground. As a result, floodplains along the pipeline route would not be modified except temporarily during construction. Following the completion of construction activities, contours would be restored to preconstruction conditions to the extent practicable.

As noted in the sections above, there are various zoning restrictions, land use plans, and regulatory programs that serve to control impacts to water resources in the three impacted counties. These programs and instruments would apply to any direct or indirect development that would result from the proposed ACP.

Cumulative Effects Statement

As with most linear projects, water resources such as wetlands and streams cannot be completely avoided because of the extensive and reticulated nature of the waterbodies. Atlantic has worked with the FERC, USACE, USFWS, and North Carolina Wildlife Resources Commission staff to incorporate adjustments to the pipeline route or adopt alternative construction measures to avoid waters of the U.S. with special ecological value where feasible. In addition, Atlantic has incorporated dry crossing methods at each waterbody crossing in North Carolina at the request of the NCDEQ, with an option of coordinating review of site-specific conditions where dry or difficult construction conditions are present.

Loss of wetlands associated with the Project in the three Counties under review would be limited to 0.54 acre (0.17 acre in Johnston County and 0.37 acre in Cumberland County) which are all attributable to improvements to permanent access roads. Where a permanent loss of waters of the U.S. is unavoidable, Atlantic has proposed compensatory mitigation to offset impacts within the associated watershed and to mitigate impacts to a no more than minimal level. In addition, as part of the Section 404 review process, Atlantic has proposed compensatory mitigation for impacts that do not constitute a loss of waters of the U.S., but would result in a permanent conversion of forested or scrub/shrub wetlands (e.g., forested wetlands converted to emergent wetlands due to long term maintenance of the right-of-way).

The direct impacts associated with construction are planned to occur in an expedient and efficient manner such that impacts on the waterbody and in the case of streams, the impacts to its banks are temporary in nature. Based on the short duration and nature of the waterbody crossings, Atlantic anticipates that cumulative impacts would result in minimal adverse impacts on the waterbodies within the watershed basin and sub-basins crossed.

Atlantic has also identified other projects that are recent, underway, or planned within the three counties crossed by the ACP (Attachment 1). Among these projects, 4 proposed projects associated with Piedmont Natural Gas are connected to the ACP:

- Piedmont Natural Gas Facility Modifications at the Smithfield M&R Station in Johnston County;
- Piedmont Natural Gas Facility Modifications at the Fayetteville M&R Station in Cumberland County;
- Piedmont Natural Gas Facility Modifications at the Pembroke M&R Station in Robeson County; and
- Piedmont Natural Gas 26 miles of 20-in Diameter Pipeline in Robeson County.

The three Piedmont M&R station projects would involve modifications to piping associated with connections to the ACP delivery and measurement of natural gas. The proposed pipeline addition would provide a connection to an existing power plant. All of these projects are subject to federal and state regulatory review and approval, which would address any impacts to water resources.

It is expected that other projects, including housing, industrial, and commercial developments, Department of Transportation projects, and other energy projects would all be subject to state and federal regulatory review and approval. Any project affecting wetlands or waterbodies within the three counties would be required to obtain permits from the USACE and NCDEQ Division of Water Resources and adhere to the permit requirements. Projects would also be required to obtain and adhere to local floodplain permit requirements. Stormwater permitting in Johnston and Cumberland Counties is managed at the state level but development projects also need to adhere to applicable local programs, including the Johnston County Stormwater Management Program and the City of Fayetteville Stormwater Program. All three counties are participants in the North Carolina Water Supply Watershed Protection Program, which works to protect the States' drinking water supplies through inventorying and establishing critical areas, protected areas, and creating buffering requirements for protecting surface waters. Based on the permitting programs discussed above, the cumulative impacts on water resources from other projects would be adequately minimized.

Although Robeson County is not subject to the NPDES Stormwater Phase II Rule, the cumulative effects to wetlands, waterbodies, and water quality from Project-induced growth and development would likely be minimized for a number of reasons. First, the projected growth for Robeson County is lower than the other counties in the study area and does not contribute to the action forecast assumptions to the extent predicted in Johnston and Cumberland County. Second, the demographics and market for development suggest that any new development in Robeson County would leverage existing commercial and industrial sites located in and around Lumberton where the Water Supply Protection Program provides protection for surface water quality under Water Supply Watershed Rules and Statutes, specifically those governing WS-IV classified watersheds (Statute 15A NCAC 2B .0216). A map of Robeson County with the NCDEQ Watershed and High Quality or Outstanding Waters Classifications can be found in Attachment 3.

Aside from a few outlying commercial/industrial sites in unincorporated Robeson County, almost all of the properties currently for sale or lease are located in developed urban areas, especially in Lumberton. Because these are existing developed sites, many of which are lying vacant, it appears that Project-induced new development impacts would be limited, and new economic growth would be likely to occupy existing available developed commercial/industrial space before extending to greenfield sites. While the occupancy of these properties would be positive for economic growth, use of these sites would not impact wetlands or waterbodies or contribute substantially to the cumulative effects of the Project when compared to impacts caused by new development.

New development would most likely occur in the last remaining Certified Site in Robeson County – the Highway 72 Rail Site. This site is located within the Water Supply Watershed three miles northwest of Lumberton. The site is located on a CSX rail line, giving it

easy rail access, and has sewer service provided by the City of Lumberton. The certification process provides considerable attention to water quality protection. Certification of this site required a Phase I Environmental Site Assessment (ESA), Wetland Determination Report, Wetland Mitigation Plan, and a conceptual site plan. The conceptual site plan for the Highway 72 Rail Site demonstrates how the Certified Site criterion mitigates impacts to water quality (EDPNC, 2017a). As seen in Attachment 3, the existing wetlands are avoided and multiple onsite stormwater retention basins are provided to catch runoff and mitigate impacts to the watershed.

In summary, due to the need to comply with existing watershed protection regulations and programs, the implementation of specialized construction techniques, the relatively short construction timeframe at any one location and carefully developed resource protection and mitigation plans, minimal cumulative effects are anticipated when the impacts of the ACP are considered along with the projects identified in Attachment 1. The additional natural gas being brought to the area is expected to result in indirect development in Johnston, Cumberland, and Robeson County, particularly in areas where other utilities (i.e., municipal water and sewer) are already present. As with the ACP, these other projects would also be required to adhere to state and federal water quality regulations and permit requirements, limiting the potential for adverse cumulative impacts on water quality. In addition, many of the projects are spatially separated from the Project, reducing the likelihood of significant water quality impacts.

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North Carolina Department of Environmental Quality –
Response to Information Request Dated October 26, 2017

Item 7
Attachment 1

PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE PROJECTS IN JOHNSTON, CUMBERLAND, AND ROBESON COUNTIES, NORTH CAROLINA

ATTACHMENT 1

Past, Present, and Reasonably Foreseeable Future Projects in Johnston, Cumberland, and Robeson Counties, North Carolina

Project Name	Proponent	Common Counties	Description	Closest Distance and Direction From Project	Status	Potential Wetland / Waterbody Impacts?
Selma-Wake 230 kV Line	Duke Energy	Johnston	Construction of line tap	12.6 miles west of MP 78.0	In Progress - Summer 2015 through Winter 2017	Yes
I-40 Widening – Southeast Raleigh to Clayton Project	North Carolina Department of Transportation (NCDOT)	Johnston	Road widening	20.4 miles northwest of MP 86.5	Anticipated in Fall 2018	Yes
U.S. 70 Corridor	NCDOT	Johnston	Raleigh to Morehead City major road expansion from U.S. Highway to Interstate Highway	Intersects near MP 92.2	In development	Yes
Piedmont Facility Modifications	Piedmont Natural Gas	Johnston	Piping modifications and additions for interconnect at the Smithfield M&R Station	Intersects at the Smithfield M&R Station	Construction in Winter of 2018	No
Lee-Selma 115 kV Line	Duke Energy	Johnston	Line relocation	4.3 miles east of MP 95.0	Anticipated Spring 2016 through Summer 2017; status unknown	Yes
Erwin-Selma 230 kV Line	Duke Energy	Johnston	Line replacement	9.5 miles west of MP 103.0	Anticipated Summer 2015 through Winter 2016; status unknown	No
Complete 540	North Carolina Department of Transportation	Johnston	Completion of Highway 540 toll road	Location unknown	Anticipated Spring 2018 to Spring 2022	Yes
Solar Farm	Robert & Wellons Inc.	Johnston	New solar farm	Abutting Smithfield M&R Station	Completed 2015 -2017	Yes
R-3410 Road Widening	NCDOT	Johnston	Widening NC 42 from NC 50 to US 70	17 miles northwest	Right-of-way acquisition is not scheduled to begin before 2023	Yes
I-4739 Intersection Improvement	NCDOT	Johnston	Intersection Improvement at Cleveland Road and Cornwallis Road	15 miles west	In Development, Construction date unknown	No
I-5111	NCDOT	Johnston	Widening 1-40 from I-440 to NC42	18 miles West	2019	Yes

ATTACHMENT 1

Past, Present, and Reasonably Foreseeable Future Projects in Johnston, Cumberland, and Robeson Counties, North Carolina

Project Name	Proponent	Common Counties	Description	Closest Distance and Direction From Project	Status	Potential Wetland / Waterbody Impacts?
U-3334	NCDOT	Johnston	Extending Booker Dairy Road	4 miles West	In Development, Construction date unknown	Yes
Piedmont Facility Modifications	Piedmont Natural Gas	Cumberland	Piping modifications and additions for the interconnect at the Fayetteville M&R Station	Within the Fayetteville M&R Station	Construction in Winter 2018	No
Fayetteville Outer Loop	NCDOT	Cumberland	New road construction and existing road improvements	6.3 miles west of MP 133.0	In progress – 2016 through 2020	Yes
Fort Bragg Woodruff – Manchester	Duke Energy	Cumberland	Install reconductor line	12.8 miles west of MP 134.0	In progress – Fall 2014 through Spring 2017; status unknown	No
Erwin-Fayetteville 115 kV – Change and Relocate	Duke Energy	Cumberland	Relocate structures for NCDOT project	7.7 miles northwest of MP 142.0	Completed in Spring 2015	Yes
Fayetteville Fort Bragg 230 kV Line – I-295 Bypass	Duke Energy	Cumberland	Line relocation	15.0 miles west of MP 142.0	In progress – Winter 2014 through Spring 2016; status unknown	Yes
Fayetteville Vander 115 kV Line – Tap to Vander	Duke Energy	Cumberland	Install new tap line	2.7 miles west of MP 142.0	In progress – Summer 2014 through Spring 2016; status unknown	No
Fayetteville Dupont 115 kV Line – Cumberland Solar	Duke Energy	Cumberland	Install new tap line	6.8 miles west of MP 142.0	In progress – Winter 2014 through Spring 2016; status unknown	No
Fayetteville Dupont 115 kV Line – Grays Creek Tap	Duke Energy	Cumberland	Install new tap line	6.8 miles west of MP 142.0	Completed in Summer 2015	No
Fayetteville Dupont 115 kV Line – Line Switches	Duke Energy	Cumberland	Install line switches	6.8 miles west of MP 142.0	In progress – Winter 2014 through Winter 2016; status unknown	No
Fayetteville Fort Bragg 230 kV Line – Clifdale Road	Duke Energy	Cumberland	Line relocation	16.4 miles west of MP 142.0	Completed in Winter 2015	Yes

ATTACHMENT 1

Past, Present, and Reasonably Foreseeable Future Projects in Johnston, Cumberland, and Robeson Counties, North Carolina

Project Name	Proponent	Common Counties	Description	Closest Distance and Direction From Project	Status	Potential Wetland / Waterbody Impacts?
Richmond – Fort Bragg 230 kV	Duke Energy	Cumberland	Install transmission loop	21.8 miles west of MP 147.0	In progress – Summer 2015 through Fall 2018	Yes
U.S. 401 Corridor Study	NCDOT	Cumberland	Road expansion study	Unknown	Anticipated environmental impact statement date 2015; Not funded	Yes
McClauren Subdivision	McClauren Subdivision	Cumberland	36-lot residential development	Crossed	Construction schedule unknown	Yes
St. Pauls Johnson Brothers Facility	Johnson Brothers Utility and Paving Company	Robeson	New asphalt plant	2.2 miles southeast of MP166.6	In progress – Phase I completed in July 2014	Yes
Weatherspoon Plant – Fayetteville Solar Farm Tap	Duke Energy	Robeson	Install tap for solar facility	2.8 miles southeast of MP 167.0	In progress – Fall 2014 through Spring 2016; status unknown	Yes
Weatherspoon Plant – Solar Tap	Duke Energy	Robeson	Install tap for solar facility	2.3 miles southeast of MP 167.0	In progress – Fall 2014 through Summer 2016; status unknown	Yes
Weatherspoon Plant – LOF 115 kV Structure Replace	Duke Energy	Robeson	Replace existing structures	10.6 miles south of MP 170.0	Anticipated – Winter 2016 through Spring 2017; status unknown	No
Weatherspoon-Raeford 230 kV Line Relocate	Duke Energy	Robeson	Line relocation	11.6 miles northwest of MP 170.0	In progress – Summer 2015 through Fall 2018	Yes
Weatherspoon-Raeford 230 kV Line Replacement	Duke Energy	Robeson	Line replacement	May intersect near MP 170.0	In progress – Summer 2015 through Spring 2017; status unknown	Yes
I-95 Diverging Diamond Interchange in Lumberton	NCDOT	Robeson	Intersection improvement project	9.2 miles south-southeast of MP 178.0	In progress – anticipated completion in Spring 2016; status unknown	Yes

ATTACHMENT 1

Past, Present, and Reasonably Foreseeable Future Projects in Johnston, Cumberland, and Robeson Counties, North Carolina

Project Name	Proponent	Common Counties	Description	Closest Distance and Direction From Project	Status	Potential Wetland / Waterbody Impacts?
Weatherspoon – LOF 115 kV	Duke Energy	Robeson	Convert to remote control	3.2 miles south of MP 180.0	Complete – Spring 2014 through Fall 2015	No
Weatherspoon Plant – Delco	Duke Energy	Robeson	Replace structures	21.4 miles southeast of MP 180.0	In progress – Winter 2015 through Summer 2016; status unknown	No
Weatherspoon Plant – Marion 115 kV Structure Replace	Duke Energy	Robeson	Replace existing structures	14.2 miles south of MP 180.0	In progress – Winter 2015 through Spring 2016; status unknown	No
Piedmont Pipeline	Piedmont Natural Gas	Robeson	26 miles of 20-inch natural gas pipeline	Intersects at the Pembroke M&R Station	Anticipated Winter of 2018	Yes
Piedmont Aboveground Facilities	Piedmont Natural Gas	Robeson	Piping modifications and additions for the interconnect at the Pembroke M&R Station	Within the Pembroke M&R Station	Construction in Winter of 2018	No

North Carolina Department of Environmental Quality –
Response to Information Request Dated October 26, 2017

Item 7
Attachment 2

DEVELOPED AND UNDEVELOPED LAND IN JOHNSTON, CUMBERLAND, AND ROBESON COUNTIES, NORTH CAROLINA

North Carolina Department of Environmental Quality –
Response to Information Request Dated October 26, 2017

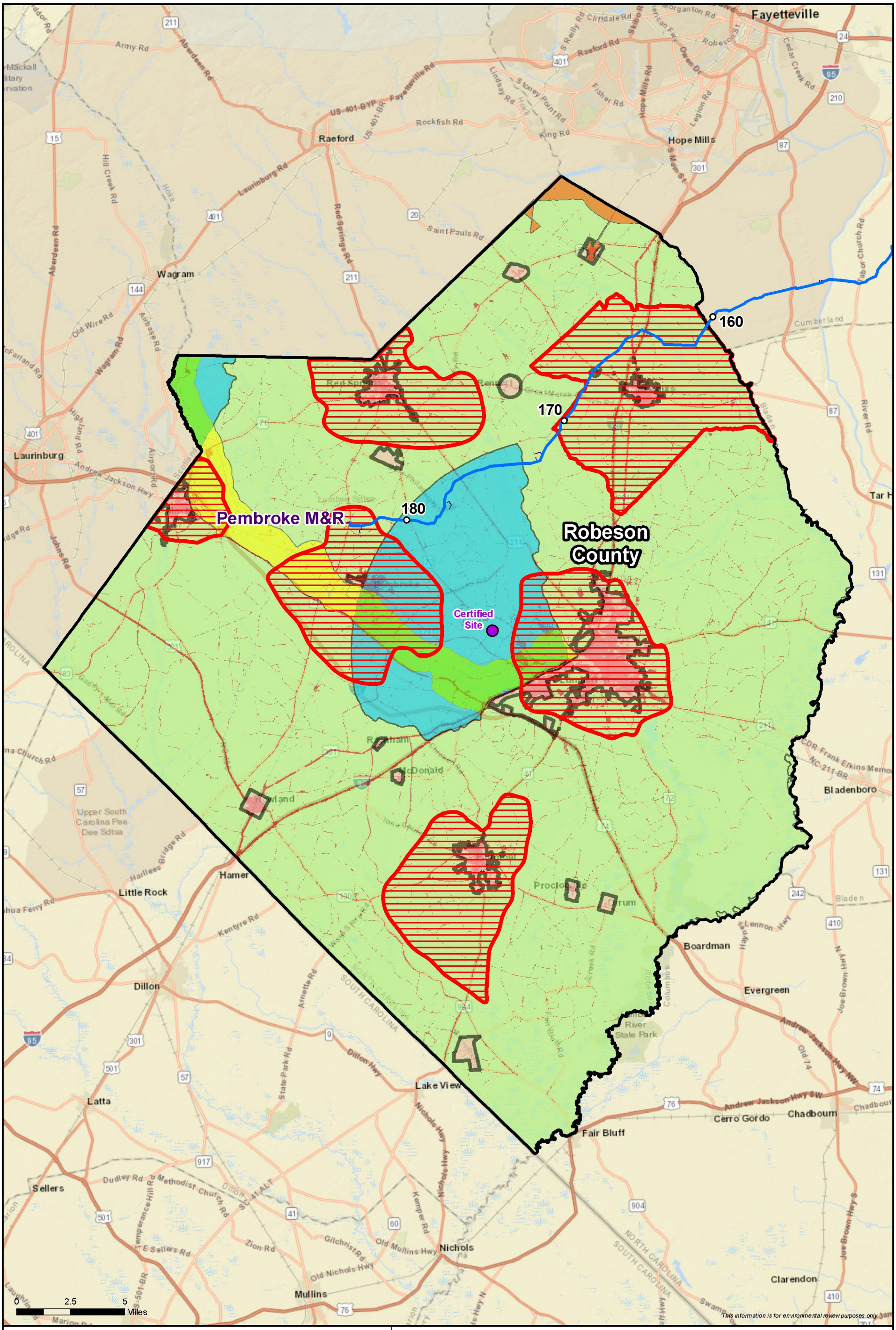
Item 7
Attachment 3

GENERAL EXTENT OF POTENTIAL GROWTH AREAS IDENTIFIED IN JOHNSTON, CUMBERLAND AND ROBESON COUNTIES, NORTH CAROLINA AND HIGHWAY 72 RAIL SITE CONCEPTUAL PLAN

North Carolina Department of Environmental Quality –
Response to Information Request Dated November 28, 2017

Item 7
Attachment 4

WETLANDS AND WATERBODIES CROSSED BY THE ATLANTIC CAOST PIPELINE IN JOHNSTON, CUMBERLAND, AND ROBESON COUNTIES, NORTH CAROLINA


Fayetteville
Raeford
Hope Mills
Wagram
Laurinburg
Pembroke M&R
160
170
180
Certified Site
Robeson County
Bladenboro
Boardman
Evergreen
Lake View
Fair Bluff
Chadbourn
Cerro Gordo
Nichols
Clarendon
Mullins
Dillon
Latta
Hamer
Little Rock
McDonald
Rowland
Proctorville
Sellers
Army Rd
Aberdeen Rd
Laurinburg Rd
Rockfish Rd
Raeford Rd
Cliffdale Rd
Fisher Rd
Stoney Point Rd
King Rd
Hope Mills Rd
Legion Rd
S Main St
Cedar Creek Rd
Owen Dr
Robeson St
Morganton Rd
Saint Pauls Rd
Red Springs Rd
Hill Creek Rd
Old Wire Rd
Wagram Rd
Airbase Rd
Andrew Jackson Hwy
Johns Rd
Kentyre Rd
Harllees Bridge Rd
Dillon Hwy
Nichols Hwy
Old Nichols Hwy
Old Mullins Hwy
Zion Rd
Gilchrist Rd
Dudley Rd
Methodist Church Rd
Temperance Hill Rd
E Sellers Rd
Kemper Rd
Lumber River State Park
Cumberland
Tabor Church Rd
River Rd
Hayes Lennon Hwy
Joe Brown Hwy S
Andrew Jackson Hwy NW
Andrew Jackson Hwy SW
Old 74
Upper South Carolina Pee Dee Sdtsa
NORTH CAROLINA
SOUTH CAROLINA
0 2.5 5 Miles
This information is for environmental review purposes only.
Milepost
Centerline
Construction Impact Footprint
Developed
Undeveloped
General Extent of Potential Growth Areas
Certified Site
Stormwater Permit Category
Water Supply Watershed
HQW/ORW Area and Water Supply
High Quality or Outstanding Waters
Phase II MSI or UA
Municipality Boundaries
N
Atlantic Coast Pipeline
Atlantic Coast Pipeline
General Extent of Potential Growth Areas
Robeson County, North Carolina
ERM
FILE: M:\Clients\D-F\DOM\SRPP_ArcGIS\2017\12\07_Potential_Growth_Areas_NC_ACP_Robeson_PGA_v2.mxd | REVISED: 12/20/2017 | SCALE: 1:263,000 when printed at 11x17
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This information is for environmental review purposes only.

ACCESS OFF FRONTAGE ROAD PARKING

1

2

3

4

5

6

75,000 K

230,000 K

100,000 K

260,000 K

200,000 K

36 K

25 K

280,000 K

300,000 K

200,000 K

BMP

LOWE ROAD

Lowe Rd

Magna Blvd

"Historical Buffer" No development in this area

TYNER ROAD

Tyner Rd

Homeland Dr

Tribe Ln

Hadassah Dr

Mallard Dr

OAKGROVE CHU

72

0 250 500 Feet

Building Footprint
Road/Parking Area
Stormwater Pond
Site Boundary
Parcel Boundary
Delineated Wetland
Wetland/Waterbody/Ditch Buffer
Proposed Rail Spur
Existing Railroad
Waterbody/Ditch

N

Atlantic Coast Pipeline

Atlantic Coast Pipeline
Highway 72 Rail Site Conceptual Plan
Robeson County, North Carolina

ERM

FILE: M:\Clients\D-F\DOM\SRPP_ArcGIS\2017\12\19_NCDEQ_Map_Request_ACP_Robeson_NCDEQ_Cert_Site.mxd | REVISED: 12/20/2017 | SCALE: 1:6,000 when printed at 11x17 DRAWN BY: 0239