DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Jeff Staples

Address: 1453 Boxwood Dr.
Chesapeake, VA. 23323

Phone: 757 - 647 - 0410

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

Crossing a 128 water bodies is enough of a red flag that this proposed pipeline will cause all kinds of trouble for the Management Program. The proximity of the route is next to wetlands and even the Great Dismal Swamp Wildlife Refuge. A negative impact just from the construction and years of intrusion, will ensure that this project, if developed, will have a lasting toxic legacy.

They should explore other alternatives, such as off shore wind. They have already leased the Va. windfield from the Federal Government.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Martha C. Wilson

Address: 1613 A Lee Ave
Va B VA 23455

Phone: 310-430-2306

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

SCREW THE PIPELINE. NO ACP!
It would [illegible] (a circle [illegible])
And it threatens the GREAT DISMAL SWAMP!
I am 100% AGAINST THE ACP.
NO! NO! NO! NO! NO!
There are alternatives -
WIND and SOLAR ALTERNATIVES!!
Build the coastline wind Towers.

Martha C. Wilson

SAVE THE ENVIRONMENT.
SAVE THE PLANET!

3

DEQ FAX COMMENT SHEET

Submit to: 804 698 4319

Name:
RACHEL SILVER

Address:
904 SPOTSWOOD AVE. #3A
NORFOLK VA 23517

Phone:
757-288-2697

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The ACP will intersect 148 waterways in Chesapeake and Suffolk alone. The construction of the pipeline itself will irrevocably change our wetlands, and indeed, our way of life.
Please oppose the ACP.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Jennifer Sleeper

Address:
254 La Valette Ave
Norfolk VA 23504

Phone:
757-270-9191

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

There is no way the ACP can move forward without causing a negative impact on the 128 bodies of water it is planned to cross.

The construction of the ACP is in direct opposition to the policies that protect our coastal resources

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Fred Denn

Address: 102 Barberry Lane
Yorktown VA 23693

Phone: 757 865 7518

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

I Think The risk of leaks From an unnecessary pipeline are To Great To Justify Building it.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Judith Doty

Address:

22 - I Tamarisk Quay

Hampton VA 23666

Phone:

757 827 3501

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

I do not think that the ACP ~~is~~ will have a good outcome for coastal Va as well as the rest of the ~~state~~ Virginia is known for it's natural beauty which this pipeline will destroy.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Shree Green

Address: 722 Teach Street
Hampton Va. 23661

Phone: 757-504-5788

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

There is no way this will not pollute the waterways + kill our fish (freshwater and salt.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Debra Persons

Address: 1116 Westover Ave
Norfolk Va 23507

Phone: 757 547 0658

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

Crossing 128 Water bodies ??? Are you kidding me?? I fear for the health of the Great Dismal Swamp Wildlife Refuge. Other alternatives should be explored!! I want to see more solar + wind power. I live in West Ghent and deal with coal dust daily. Please reconsider this decision!!!

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name: Denise Brown

Address:
7661 Gleneagles Rd
Norfolk VA 23505

Phone:
757-472-9201

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

There is NO compatibility of the Atlantic Coast Pipeline with the VA Coastal Zone Mgmt Program. The ACP will CLASH with the goals of the VA Coastal Zone Mgmt Program

I OPPOSE THE ACP.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name: Theresa S. Panique

Address: 1134 Westover Ave #5
Norfolk, Va. 23507

Phone: (757) 737-7238

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

There is no compatibility of the Atlantic Coast Pipeline with the Va. Coastal Zone Mgmt Program. The ACP will clash w/the goals of the Va. Coastal Zone Mgmt. Program

I OPPOSE the ACP!

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Elizabeth Slonaker

Address: 256 Lucile Ave
Norfolk, VA 23504

Phone:

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

It's time for wind energy.
No more fossil fuels.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : ELLIS W. JAMES

Address: 2021 KENLAKE PLACE

NORFOLK, VA. 23518-5305

Phone: 757-8532950

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

Concerned with creeks being polluted by constuction and wetlands displacement.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Chandler Parker

Address:

4722 Winchester Drive

Portsmouth, Virginia 23707

Phone:

(757) 208-3881

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The proposed ACP is slated to cross some 155 waterways in Virginia, specifically, the Cities of Chesapeake and Suffolk. The potential for spills and the pollution of said waterways is a massive risk to the ecology of Virginia. I oppose construction of the ACP on these and other grounds.

14

DEQ FAX COMMENT SHEET
Submit to: 804-698-4319
Name:
Mary Lou Burke
Address:
945 Hollywood Dr.
Chesapeake, VA 23320
Phone:
757-286-9266
Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The Atlantic Coast Pipeline will run through over 128 waterways in Suffolk and Chesapeake, VA, only. It will go through wetlands and along the historic Great Dismal Swamp. We need to prevent leaks and pollution into our waterways and groundwater.

The best prevention is never to build this pipeline in the first place. It is not needed and residents here do not want it.

-Mary L. Burke

15

DEQ FAX COMMENT SHEET
Submit to: 804-698-4319
Name: SUSAN M. LANG
Address:
1000 WOODWIND WAY
CHESAPEAKE, VA 23320
Phone: 757-621-5622
Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The Pipeline would be an investment tied to fossil fuels for many years to come. THIS IS SHORT SIGHTED BECAUSE ALTERNATIVE ENERGY is becoming more efficient and cost-effective every year.

Methane gas, oil pipe leakage, erosion from pipeline trenching will all degrade in Virginia Coastline & quality of life.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :
Emily Debo-Trasclair

Address:
1634 Pocahontas St
Norfolk, VA 23511

Phone:
(804) 427-7915

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

Did you know that the proposed Atlantic Coast Pipeline will cross 128 waterways in Suffolk + Chesapeak alone? What will happen in your backyard if and when there is a leak?

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Connie Campbell

Address:

3488 Bertha Ct

norfolk VA 23513

Phone:

757 214-7880

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

I am opposed to this pipe line. the unnecessary destroying of the state of Virginia A shameful thing to do. Transco already has pipeline and would only need a small amount of work to complete any need to our areas.

the environment needs help now, not more destruction. the water, land, wildlife and homes. no jobs will really be started only temp. work. the information given is not accurate - tell the truth -

Connie Campbell

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Gloria Haislip

Address:

1106 Woodenshoe Ct

Virginia Beach, VA 23453

Phone:

757-478-3729

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The ACP will cross 128 waterways in Suffolk and Chesapeake alone. There is no way that it will not cause sedimentation in these waterways.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name : Philippina Wijtmans

Address: 908 Orchard trail rd
Chesapeake Va 23322

Phone: 757-482-8152

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

I am concerned about the sediment, waterquality and wild life due to the planned pipeline. Also, we do not need it and it will cost ratepayers.

Thanks

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Susan M. Shaw

Address:

309 Plaza Trail Ct

Virginia Beach, VA 23452

Phone:

757 617 4258

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

We cannot afford to contaminate 128 waterways in the Suffolk/Chesapeake area. Of course, the groundwater in that area and the Great Dismal Swamp are at risk. Please stop the ACP!

21

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Carol L Warren

Address:

3033 Yakima Rd.
Chesapeake, VA 23325

Phone:

757-439-6418

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

The potential for disaster is enormous due to crossing so many waterways. There is no way to guarantee that the pipes won't leak. The Dismal Swamp is a real treasure. We cannot afford to ruin it. Damage to our water supply, commercial & recreational fishing & tourism would damage our health and economy.

DEQ FAX COMMENT SHEET

Submit to: 804-698-4319

Name :

Bonnie Kassebaum

Address:

1683 Powhatan St
Norfolk, VA 23511

Phone:

858-880-6475

Comment on the compatibility of the ACP with the Virginia Coastal Zone Management Program

I oppose the construction of the Atlantic Coast Pipeline - it will cross 129 waterways in our area. This will affect hundreds of spiecies of marine animals and our public sources of clean water. The threat to our water sources is too great - the profits are not worth it. We should be moving towards cleaner sources of energy - not doubling down on archaic energy sources.

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

January 9, 2017

Spencer Trichell
Environmental Consultant - Atlantic Coast Pipeline
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

RE: Dominion Transmission Inc.: Atlantic Coast Pipeline
DEQ Project No. 15-161F
Federal Consistency Certification, Stay of Six-Month Review Period

Dear Mr. Trichell,

As you know, DEQ Office of Environmental Impact Review (OEIR) initiated its review of your federal consistency certification for the Atlantic Coast Pipeline project on October 6, 2015. This started a six month review period ending on April 1, 2016. On November 13, 2015, the Federal Energy Regulatory Commission (FERC) issued a request for additional comments on proposed route changes including changes in Virginia's coast management zone resulting in a stay of the federal consistency review starting on December 9, 2015. Since that time, Dominion and DEQ have agreed to seven additional stays, the last through January 12, 2017.

The Federal Consistency Regulations allow the State and the applicant for a federal license or permit to mutually agree to extend the six-month review period (15 CFR Part 930, section 930.60(b).

Dominion and DEQ have mutually agreed to another stay of the consistency time clock to allow adequate time to coordinate and review the additional information. We have agreed that the stay will begin on January 12, 2017 and end on February 13, 2017, with a revised six-month review date of June 8, 2017. Additional stays may be required if adequate information is not received by February 13, 2017 or if additional route changes affecting Virginia's coastal management zone are proposed.

Please sign the attached timeline indicating Dominion's agreement of the dates of the stay and return to me by January 12, 2017. If you have any questions, please feel free to call me at 804-698-4204.

Sincerely,

Bettina Sullivan

Bettina Sullivan, Manager
Office of Environmental Impact Review

CC: Julia Wellman, DEQ OEIR

By signature below, the Virginia Department of Environmental Quality and Dominion Transmission, Inc. mutually agree to a stay in the federal consistency review in accordance with the following dates:

1. Date the state's 6-month review period commenced: October 6, 2015

2. Date the 6-month period was to end: April 1, 2016

3. Date during the 6-month review period that the first stay began: December 9, 2015

4. Date that the first stay ended: January 4, 2016

5. Date during the 6-month review period that the second stay began: January 4, 2016

6. Date that the second stay ended: February 15, 2016

7. Date during the 6-month review period that the third stay began: February 15, 2016

8. Date that the third stay ended: March 31, 2016

9. Date during the 6-month review period that the fourth stay began: March 31, 2016.

10. Date that the fourth stay ended: June 30, 2016.

11. Date during the 6-month review period that the fifth stay began: June 30, 2016.

12. Date that the fifth stay ended: August 28, 2016.

11. Date during the 6-month review period that the sixth stay began: August 28, 2016.

12. Date that the sixth stay ended: October 31, 2016.

13. Date during the 6-month review period that the seventh stay began: October 31, 2016.

14. Date that the seventh stay ended: January 12, 2017.

15. Date during the 6-month review period that the eighth stay begins: January 12, 2017.

16. Date that the eighth stay ends: February 13, 2017.

Bettina Sullivan

Virginia Department of Environmental Quality — Date: 1/9/17

Robert M Bish

Dominion Transmission, Inc. — Date: 1/9/2017

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
Street address: 629 East Main Street, Richmond, Virginia 23219
Mailing address: P.O. Box 1105, Richmond, Virginia 23218
www.deq.virginia.gov

Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4000
1-800-592-5482

March 9, 2017

Spencer Trichell
Environmental Consultant - Atlantic Coast Pipeline
Dominion Resources Services, Inc.
5000 Dominion Boulevard
Glen Allen, Virginia 23060

RE: 90-Day Federal Consistency Certification Status: Atlantic Coast Pipeline, DEQ Project No. 15-161F

Dear Mr. Trichell,

The Department of Environmental Quality (DEQ) is responsible for coordinating the review of Federal Consistency Certifications (FCCs) and responding to appropriate agencies on behalf of the Commonwealth. Pursuant to the Coastal Zone Management Act of 1972 (CZMA), as amended, all activities located within Virginia's designated coastal management area requiring a federal permit, license or approval must be consistent with the Virginia Coastal Zone Management (CZM) Program. The Virginia CZM Program is comprised of a network of environmental policies administered by several agencies of the Commonwealth. DEQ is coordinating the review of the portions of the Atlantic Coast Pipeline (ACP) project within the cities of Suffolk and Chesapeake, which are within the coastal zone, with agencies administering the enforceable policies of the Virginia CZM Program. Atlantic Coast Pipeline, LLC (Atlantic) is seeing authorization from the Federal Energy Regulatory Commission for construction and operation of the pipeline.

In accordance with the provision of CZMA federal consistency regulation § 930.62(a), at the earliest practicable time, DEQ shall notify the federal agency and the applicant whether the state concurs with or objects to a consistency certification. If DEQ has not issued a decision within three months following commencement of the review, it shall notify the applicant and the federal agency of the status of the matter and the basis for further delay (§ 930.62(b)). This letter constitutes the 90-day notification of the status of the consistency review of the proposed project.

As you know, the DEQ Office of Environmental Impact Review (OEIR) initiated its review of the FCC on October 6, 2015. This started the original six month review period. However on November 13, 2015, the Federal Energy Regulatory Commission (FERC)

issued a request for additional comments on proposed route changes including changes in Virginia's coast management zone resulting in a stay of the federal consistency review starting on December 9, 2015. Since that time, Dominion and DEQ have agreed to eight additional stays, the last through February 13, 2017. The 90-day date is March 10, 2107, and the six-month due date is June 8, 2017.

Upon receipt of the updated FCC, detailing the route and project changes that have occurred since 2015, DEQ OEIR distributed the document the affected state agencies, localities and the planning district commission for review. In accordance with 15 CFR §930.2 and §930.61, the public comment period for the project is March 5 through April 4. After the public comment period, DEQ will consider all comments it received and will respond to the FCC on or before June 8, 2017.

If you have questions, please call me at (804) 698-4204.

Sincerely,

Bettina Sullivan, Manager
Office of Environmental Impact Review

ec: Kevin Bowman, FERC
Spencer Trichell, Dominion
Julia Wellman, DEQ

Wellman, Julia (DEQ)

From: Ewing, Amy (DGIF)
Sent: Thursday, March 16, 2017 1:15 PM
To: Wellman, Julia (DEQ)
Cc: Fernald, Ray (DGIF)
Subject: ESSLog#34825_15-161F_ACPFedConsistency_DGIF_AME20170316

Julia,
I have reviewed the additional information provided to inform our federal consistency determination. We had requested that the applicant provide us with a table that includes all stream and wetland crossings within the Coastal Zone associated with the project. This information has been provided and is located in Appendix 4 and 5 of the certification document provided. We also had requested information about the locations, methods, and quantities of temporary surface water intakes necessary for HDDs, dust suppression, and hydrostatic testing of the pipeline. That information was not included in the recent submission. According to the DEIS for the project, the following water quantities (approximate) are needed across the Atlantic Coast Pipeline (mulit-state): 16-20 million gallons for HDD construction, 38.2 million gallons for dust suppression, and 83.7 million gallons for hydrostatic testing. We are unable to discern, from the information provided, what percentage of these expected quantities are located in the coastal zone of Virginia. We understand that Atlantic has agreed not to withdraw water from designated anadromous fish use areas and to use municipal water sources in those areas.

Currently, there are no designated Threatened and Endangered Species Waters located in the coastal zone areas crossed by the ACP and attendant facilities. However, we are finalizing an update of this dataset and may provide additional information based on that update.

We recommend the following regarding the stream and wetland crossings depicted in Appendix 4 and 5: We recommend that the applicant avoid and minimize impacts to undisturbed forest, wetlands, and streams to the fullest extent practicable. We recommend adherence to the TOYR listed for protection of anadromous fishes. We recommend that all instream work associated with the project be conducted during low- or no-flow conditions, using non-erodible cofferdams or turbidity curtains to isolate the construction area, blocking no more than 50% of the streamflow at any given time, stockpiling excavated material in a manner that prevents reentry into the stream, restoring original streambed and streambank contours, revegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures. To minimize harm to the aquatic environment and its residents resulting from use of the Tremie method to install concrete, installation of grout bags, and traditional pouring of concrete, we recommend that such activities occur only in the dry, allowing all concrete to harden and cure prior to contact with open water. Due to future maintenance costs associated with culverts, and the loss of riparian and aquatic habitat, we prefer stream crossings to be constructed via clear-span bridges. However, if this is not possible, we recommend countersinking any culverts below the streambed at least 6 inches, or the use of bottomless culverts, to allow passage of aquatic organisms. We also recommend the installation of floodplain culverts to carry bankfull discharges. We recommend maintaining undisturbed naturally vegetated buffers at least 100 feet in width around all on-site wetlands and on both sides of all perennial and intermittent streams. We recommend use of HDD to cross sensitive waters, where appropriate, in accordance with required BMPs and with a frac-out plan in place. We recommend adherence to the Fish Relocation Plan.

We recommend the following regarding the temporary water intakes, about which we have very little information: we recommend the applicant provide water intake locations, once they are known. We recommend, as does the USFWS, that water intakes not be placed in waters known to support sensitive species. We recommend, as does NOAA Fisheries Service, that water intakes not be placed in designated Anadromous Fish Use Areas. Our typical recommendations regarding surface water intakes are that to protect resident aquatic species from impingement and entrainment, we recommend that the intake be fitted with a 1mm mesh screen and that the intake velocity not exceed 0.25 fps. In addition, to ensure continued access to necessary instream habitats, we recommend that the intake not withdraw more than 10% instantaneous flow. These recommendations may not be appropriate or necessary to apply to the proposed surface water intakes, but without any information about the intakes, we cannot make that determination. We recommend reliance upon municipal water supplies for water uses along the entire pipeline, including the coastal zone, where appropriate and available.

Assuming adherence to BMPs to avoid and minimize impacts upon the aquatic environment to the greatest extent practicable, we find this project consistent with the fisheries enforceable policy of the CZMA.

Thanks, Amy

Amy M. Ewing

Environmental Services Biologist/FWIS Program Manager
Chair, Team WILD (Work, Innovate, Lead and Develop)
VA Department of Game and Inland Fisheries
7870 Villa Park Dr., Suite 400, PO Box 90778, Henrico, VA 23228
804-367-2211 ☯ *www.dgif.virginia.gov*

"That land is a community is the basic concept of ecology, but that land is to be loved and respected is an extension of ethics" **Aldo Leopold, 1948**

Molly Joseph Ward
Secretary of Natural Resources

Clyde E. Cristman
Director

COMMONWEALTH of VIRGINIA

DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of Administration and Finance

David C. Dowling
Deputy Director of Soil and Water Conservation and Dam Safety

Thomas L. Smith
Deputy Director of Operations

MEMORANDUM

DATE: March 15, 2017

TO: Julia Wellman, DEQ

FROM: Roberta Rhur, Environmental Impact Review Coordinator

SUBJECT: DEQ 15-161F, Atlantic Coast Pipeline Project, Coastal Zone

Division of Natural Heritage

The Department of Conservation and Recreation's Division of Natural Heritage's (DCR-DNH) mission is conserving Virginia's biodiversity through inventory, protection, and stewardship. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

DCR-DNH previously provided comments on the Atlantic Coast Pipeline Project under FERC Docket PF15-6-000 on June 5, 2015 (Accession number 20150605-5037) and September 4, 2015 (Accession number 20150904-5192); and under FERC Docket CP15-554-000 on October 9, 2015 (Accession number 20151009-5088), December 15, 2015 (Accession number 20151215-5207), June 9, 2016 (Accession number 20160609-5237), July 27, 2016 (Accession number 20160727-5064), and January 30, 2017 (Accession number 20170130-5221)

The following comments are provided by 1:24,000 quadrangles for the Atlantic Coast Pipeline footprint (Rev 11b) within the Cities of Suffolk and Chesapeake (Coastal Zone Management Area): DCR-DNH considers the pipeline footprint to include the construction right-of-way, access roads, and associated infrastructure.

Franklin Quad

According to infrared aerials, potential exists for Coastal Plain/Piedmont Bottomland Forest and Bald Cypress-Tupelo Swamp (old-age stands) in the bottomlands of the Blackwater River, and DCR-DNH recommended a survey for these significant natural communities in April, 2015 and again in May, 2016.
DCR-DNH staff reviewed the limited community information contained in the wetland delineations data forms and photographs submitted as a part of the coastal zone document and does not anticipate impacts to significant wetland communities as designated by DCR-DNH from the proposed project.

Holland Quad

The Eastern Big eared bat (*Corynorhinus rafinesquii macrotis*, G3G4/S2/NL/LE) has been documented in proximity to the pipeline footprint. The Eastern Big-eared bat, named for its enormous ears twice the length of its head, is extremely rare in Virginia and is currently known only from the southeastern portion of the state. Although widespread throughout the southeast, they are never found in large numbers. These bats roost singly or

in small groups in hollow trees or abandoned buildings. They forage only after dark primarily in mature forests of both upland and lowland areas along permanent bodies of water (NatureServe, 2009). The details of this bat's feeding behavior and much of its natural history remain a mystery. Lack of information regarding the ecology of the eastern big-eared bat, and their sensitivity to disturbance, make them particularly vulnerable to destruction of roost sites and feeding areas where their presence goes undetected (Handley and Schwab 1991, Harvey 1992).

Threats to this species include forest destruction, particularly hollow tree removal, decreasing availability of abandoned buildings, and possibly, insecticides. Please note that this species is currently classified as endangered by the Virginia Department of Game and Inland Fisheries (VDGIF).

Due to the legal status of the Eastern big-eared bat DCR recommends continued coordination with the VDGIF.

According to infrared aerials, potential exists for Coastal Plain Depression Wetlands (G1G3/S1S2/NL/NL) northeast of Rt. 613, and DCR-DNH recommended a survey for these significant natural communities in April, 2015 and again in May, 2016. DCR-DNH staff reviewed the limited community information contained in the wetland delineations data forms and photographs submitted as a part of the coastal zone document and does not anticipate impacts to significant wetland communities as designated by DCR-DNH from the proposed project.

Buckhorn Quad

There is the potential for Eastern big-eared bat, Southeastern myotis (*Myotis austroriparius,* G3G4/S2/NL/NL), Fine-lined emerald (*Somatochlora filosa*, G5/S2/NL/NL), and Robust baskettail (*Epitheca spinosa*, G4/S2/NL/NL) in Quaker Swamp. DCR recommends a survey for these natural heritage resources and due to the legal status of the Eastern big-eared bat, DCR recommends continued coordination with VDGIF.

Rare plant surveys conducted by ACP have documented Raven's seedbox *(Ludwigia ravenii*, G1G2/S1/NL/NL) and Big gallberry *(Ilex coriacea,* G5/S1/NL/NL*)* within and in close proximity to the project footprint. Raven's seedbox is a globally rare species (G1G2), and therefore one of the most significant discoveries of the plant surveys conducted for this project. The population is small, and as with the other extant Virginia populations, is found in an artificial habitat (ditch). The road the ditch runs along is access road. The rare plant form associated with the occurrence states, "Because the population is located within a drainage ditch alongside a dirt road, this population could be at risk if upgrades to the road or drainage system occurs." DCR-DNH emphasizes the need to avoid impacts to this population during construction due to road improvements, drainage changes and staging associated with the construction of the pipeline.

To minimize impacts to the Big gallberry occurrence, DCR-DNH recommends that staging of equipment/materials and clearing of the right-of-way avoid the newly discovered population located barely south of the actual pipeline. DCR-DNH requests further information in regards to the logistics of clearing over a 30ft area rather than the standard width of impact.

Windsor Quad

DCR-DNH historically documents the presence of natural heritage resources in proximity to the pipeline footprint. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Chuckatuck Quad

The Great Dismal Swamp: Northwest Section Conservation Site is located within the pipeline footprint and has been given a biodiversity significance ranking of B5, which represents a site of general significance. The natural heritage resources of concern at this site are:

Crotalus horridus	Canebrake rattlesnake	G4/S1/NL/LE

Limnothlypis swainsonii	Swainson's warbler	G4/S2B/NL/NL
Ludwigia pilosa	Hairy seedbox	G5/S1/NL/NL
Solidago latissimifolia	Elliott's goldenrod	G5/S2/NL/NL
Paspalum dissectum	Walter's paspalum	G4?/S2/NL/NL

Rare plant surveys conducted by ACP have documented Hairy Seedbox *(Ludwigia pilosa,* G5/S1/NL/NL), Walter's Paspalum (*Paspalum dissectum,* G4?/S2/NL/NL*),* and Fringed Yellow-eyed Grass *(Xyris fimbriata,* G5/S1/NL/NL) within and in close proximity to the pipeline footprint. DCR-DNH recommends further coordination in regards to avoidance of impacts to the documented populations within the project footprint and impacts associated with staging of equipment and materials.

DCR-DNH continues to recommend avoidance of the Great Dismal Swamp: Northwest Section Conservation Site and associated natural heritage resources. Due to the legal status of the Canebrake rattlesnake, DCR also recommends continued coordination with VDGIF to ensure compliance with protected species legislation.

According to the infrared aerials, potential exists for Non-Riverine Wet Hardwood Forest (Embayed Region Type, G2/S1/NL/NL) in the Great Dismal Swamp National Wildlife Refuge (NWR), between US13/58/460 and the North Ditch, and DCR-DNH recommended a survey for these significant natural communities in April, 2015 and again in May, 2016. DCR-DNH staff reviewed the limited community information contained in the wetland delineations data forms and photographs submitted as a part of the coastal zone document and does not anticipate impacts to significant wetland communities as designated by DCR-DNH from the proposed project.

Bowers Hill Quad

The Great Dismal Swamp: Northwest Section Conservation Site is located within the pipeline footprint within the Bowers Hill Quad (see Chuckatuck Quad for associated natural heritage resources).

The Great Dismal Swamp Conservation Site is located within the pipeline footprint and has been given a biodiversity significance ranking of B2, which represents a site of very high significance. The natural heritage resources of concern at this site are:

	Peatland Atlantic White-Cedar Forest	G2/S1/NL/NL
	Non-Riverine Wet Hardwood Forest (Southern Coastal Plain Type)	G2/S1/NL/NL
	Pond Pine Woodland / Pocosin	G2?/S1/NL/NL
	Southern Coastal Plain Mesic Mixed Hardwood Forest	G3/S2S3/NL/NL
Protodeltote sp. 1	A Noctuid moth	G1G3/S1S2/SOC/NL
Myotis austroriparius	Southeastern myotis	G3G4/S2/NL/NL
Callophrys hesseli	Hessel's hairstreak	G3G4/S1/NL/NL
Euphyes dukesi	Dukes' skipper	G3/S2/NL/NL
Carex lupuliformis	False Hop sedge	G4/S2/NL/NL
Paspalum dissectum	Walter's paspalum	G4?/S2/NL/NL
Limnothlypis swainsonii	Swainson's warbler	G4/S2B/NL/NL
Acrapex relicta	Cane Boring moth	G4/S2S3/NL/NL
Cleistesiopsis divaricata	Large spreading pogonia	G4/S1/NL/NL
Enallagma pallidum	Pale bluet	G4/S1S2/NL/NL
Sphagnum torreyanum	Torrey's peatmoss	G4/S2/NL/NL
Ilex coriacea	Big gallberry	G5/S2/NL/NL
Solidago latissimifolia	Elliott's goldenrod	G5/S2/NL/NL
Ophioglossum petiolatum	Long-stem adder's tongue	G5/S1/NL/NL
Ludwigia pilosa	Hairy seedbox	G5/S1/NL/NL
Xyris fimbriata	Fringed yellow-eyed grass	G5/S1/NL/NL

Tillandsia usneoides	Spanish-moss	G5/S1S2/NL/NL
Utricularia purpurea	Purple bladderwort	G5/S2/NL/NL
Trillium pusillum var. *virginianum*	Virginia least trillium	G3T2/S2/SOC/NL
Coryhinus rafinesquii macrotis	Eastern Big-eared bat	G3G4T3/S2/NL/LE
Setophaga virens waynei	Wayne's Black-throated green warbler	G5T3/S1?B/NL/NL
Crotalus horridus	Canebrake rattlesnake	G4T4/S1/NL/LE

Rare plant surveys conducted by ACP have also documented Tall Yellow-eyed Grass (*Xyris platylepis,* G5/S2/NL/NL) in close proximity to the project footprint. DCR-DNH recommends further coordination in regards to avoidance of impacts from pipeline construction and operations.
DCR continues to recommend avoidance of the Great Dismal Swamp: Northwest Section Conservation Site and the Great Dismal Swamp Conservation Sites with associated natural heritage resources.

According to infrared aerials, potential exists for Non-Riverine Wet Hardwood Forest (Embayed Region Type, G2/S1/NL/NL) in the Great Dismal Swamp NWR, east of the East Ditch, and DCR-DNH recommended a survey for these significant natural communities in April, 2015 and again in May, 2016. DCR-DNH staff reviewed the limited community information contained in the wetland delineations data forms and photographs submitted as a part of the coastal zone document and does not anticipate impacts to significant wetland communities as designated by DCR-DNH from the proposed project.

Norfolk South Quad

DCR-DNH documents the presence of natural heritage resources in the proximity of the project footprint. However, due to the scope of the activity and the distance to the resources, we do not anticipate that this project will adversely impact these natural heritage resources.

Forest Fragmentation
DCR, working with other Virginia state agencies, has developed an analysis of forest fragmentation for the ACP, and recommended mitigation activities. These activities would more adequately compensate for the degradation of interior forest and decreased forest values that are not accounted for via other regulatory requirements (e.g. wetland impacts, impacts to threatened & endangered species). This analysis will be provided to Atlantic and FERC to address forest fragmentation including in the coastal zone.

ACP Plant Surveys

- DCR-DNH requests shapefiles for rare plant locations from 2016 plant surveys. Plant locations are currently plotted on aerial photos and are difficult to locate on a map due to differences in aerial photo year, quality, resolution, etc. (e.g. the new location for *Ludwigia ravenii*). DCR-DNH requests the results of any 2017 plant surveys.

- DCR-DNH recommends rare plant populations clearly be identified and flagged with orange fencing in the field prior to construction using GPS based coordinates and shapefiles. For all of documented natural heritage resources, populations should be closely monitored during construction to avoid impacts.

- Please note for rarity ranks for plant species, the DCR Rare Plant List was most recently updated in November 2016 and is on the DCR-DNH website at http://www.dcr.virginia.gov/natural-heritage/document/plantlist17.pdf

Section 2.3 Construction and Restoration Procedures
DCR-DNH recommends mowing of the pipeline corridor as the preferred right-of-way maintenance method over the use of herbicide.

DCR-DNH supports not using lime or fertilizer within 100' of wetlands as stated in the Restoration and Rehabilitation Plan.

DCR-DNH requests detailed plans for monitoring of restoration success in areas that are allowed to naturally revegetate and areas where plantings or seed mixes are used for restoration. If plans deviate from the proposed revegetation and monitoring plans referenced in Section 2.3, DCR-DNH recommends re-coordination with this office.

DCR-DNH supports the implementation of an Invasive Species Management Plan, and the use of the Virginia Department of Agriculture and Consumer Services (VDACS) Noxious Weed List. However, DCR-DNH also recommends use of the Virginia Invasive Plant Species List (http://www.dcr.virginia.gov/natural-heritage/invsppdflist). The Virginia Invasive Plant Species List comprises species that are established or may become established in Virginia, cause economic and ecological harm, and present ongoing management issues. To be included on the list, there must be demonstrable evidence that a species poses a threat to Virginia's forests, native grasslands, wetlands or waterways. The Virginia Department of Conservation and Recreation's Invasive Species Assessment Protocol, approved by the Virginia Invasive Species Working Group, May 2015, was used to conduct a risk assessment for each listed species. Species were ranked as exhibiting high, medium or low levels of invasiveness based on their threat to natural communities and native species

The Virginia Invasive Plant Database Tool can be found at http://www.dcr.virginia.gov/natural-heritage/ip. The Virginia Invasive Plant Database Tool provides information about invasive species based on a variety of inputs, such as geographic region, soil moisture and light requirements, VA invasiveness rank, or common and scientific names.

Please note that special concern exists for the spread of Wavyleaf grass (*Oplismenus undulatifolius)* during construction and maintenance of the pipeline and the pipeline right-of-way. It is likely that Wavyleaf grass exists in the vicinity of the route crossing of the Blue Ridge Parkway and the adjacent George Washington National Forest lands. Wavyleaf grass has a VA Invasiveness rank of high, can be found in the mountain and piedmont regions, and prefers shade and mesic soils. It produces an abundance of small, sticky seeds which are readily carried on clothes, shoes, and construction equipment, thus aiding its spread to new sites. Considering the anticipated soil disturbance and vegetation structure alterations along the long, linear project footprint which would span mountains to piedmont to coastal plain, this project has great potential to promote a range expansion of this aggressive invasive species, invading forests, to dominate and permanently change understory forest composition and habitat, therefore impacting forest regeneration throughout the project area. The capability of this species to have this drastic impact is evidenced in parts of Virginia and Maryland where Wavyleaf grass has invaded in recent years.

DCR-DNH supports sanitization of all construction equipment daily to prevent the spread and introduction of invasive species. DCR-DNH suggests pre- construction, during construction, and post-construction monitoring for invasive species with the post-construction monitoring completed after the end of the first complete growing season following the completion of a project. DCR-DNH recommends that disturbed areas be inspected for invasive species twice during each growing season for a period of not less than five years after project completion, and that when observed, invasive species be eradicated as appropriate for species and setting, per coordination with the DCR-DNH.

Biological Assessment

An updated biological assessment was filed with FERC and USFWS on January 27, 2017 as referenced on page 32 of this document. DCR recommends continued coordination with state and federal agencies to ensure compliance with protected species legislation.

Included as part of the biological assessment are proposed seed mixes for re-vegetation of the pipeline right-of-way within the coastal zone (see below in *italics*).

2.2.4 Dinwiddie, Greensville, and Southampton Counties, and Chesapeake and Suffolk Cities (Coastal Plain Region)

The following seed mixtures, site preparation, seeding techniques, and amendments recommendations are for Dinwiddie, Greensville, Suffolk, Southampton, and Chesapeake Counties. These recommendations are based on information provided by Mr. Robert Glennon. NRCS Conservationists in these counties referred to Mr. Robert Glennon's recommendations.

5.7.5.4 Coastal Plain Physiographic Region Seed Mixes

Excessively to Moderately Well Drained Sites

Virginia

The proposed Coastal Plain Seed Mix P-VACSDGS01 (Tables 5.7.5-9 and 5.7.5-10) was designed to be compatible with the Coastal Plain Physiographic Region RU in areas with slopes of 15 percent or less. The mix is based on selected native grass and forb species suitable for restoration in excessively to moderately well drained coastal areas in Virginia.

Somewhat Poorly to Very Poorly Drained Sites

Virginia

The proposed Coastal Plain Seed Mix P-VACSDGS02 (Tables 5.7.5-13 and 5.7.5-14) was designed to be compatible with the Coastal Plain Physiographic Region RU in areas with slopes of 15 percent or less. The mix is based on selected native grass and forb species suitable for restoration in somewhat poorly to very poorly drained coastal areas in Virginia.

DCR-DNH continues to coordinate with Dominion on the re-vegetation of the right-of-way for the pipeline including the proposed seed mixtures for the coastal plain region.

There are no State Natural Area Preserves under DCR's jurisdiction within the pipeline footprint in the coastal zone.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. New and updated information is continually added to Biotics, DCR's database of rare, threatened and endangered species and natural communities and their known locations. Please re-submit project information and map(s) for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

The VDGIF maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

Thank you for the opportunity to comment on the federal consistency certification for the coastal zone portion of the Atlantic Coast Pipeline.

CC: Amy Ewing, VDGIF
Troy Andersen, USFWS

Wellman, Julia (DEQ)

From: Warren, Arlene (VDH)
Sent: Friday, March 17, 2017 3:35 PM
To: Wellman, Julia (DEQ)
Subject: RE: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Importance: High

Project Name: ATLANTIC COAST PIPELINE 15-161F REVISED
Project #: **15-151 F**
UPC #: N/A
Location: **Cities of Chesapeake and Suffolk**

VDH – Office of Drinking Water has reviewed the above project. Below are our comments as they relate to proximity to **public drinking water sources** (groundwater wells, springs and surface water intakes). Potential impacts to public water distribution systems or sanitary sewage collection systems **must be verified by the local utility.**

The following public groundwater wells are located within a 1 mile radius of the project site:

PWS ID Number	City/County	System Name	Facility Name
3800830	SUFFOLK	TIDEWATER AGRI RESEARCH & EXT CTR	DRILLED WELL
3800629	SUFFOLK	FARMER FRANKS	DRILLED WELL
3800694	SUFFOLK	PRUDEN CNTR FOR INDUSTRY & TECH	WELL
3710100	NORFOLK	NORFOLK, CITY OF	WELL NO. 2
3710100	NORFOLK	NORFOLK, CITY OF	WELL NO. 1
3800800	SUFFOLK	SPSA REGIONAL LANDFILL-SUFFOLK	DRILLED WELL
3550051	CHESAPEAKE	CITY OF CHESAPEAKE - NORTHWEST RIVER SYS	WESTERN BRANCH WELL NO. 1
3550051	CHESAPEAKE	CITY OF CHESAPEAKE _ NORTHWEST RIVER SYS	WB #3
3550800	CHESAPEAKE	SUNRAY WATER CO., INC.	DRILLED WELL #2
3550705	CHESAPEAKE	PLANTATION MOBILE HOME PARK	WELL NO. 2

The following surface water intakes are located within a 5 mile radius of the project site:

PWS ID Number	System Name	Facility Name
3710100	NORFOLK, CITY OF	LAKE PRINCE
3710100	NORFOLK, CITY OF	WESTERN BRANCH
3740600	PORTSMOUTH, CITY OF	PITCHKETTLE RAW WATER
3740600	PORTSMOUTH, CITY OF	LAKE MEADE
3740600	PORTSMOUTH, CITY OF	LAKE KILBY
3800805	SUFFOLK, CITY OF	CRUMPS MILL POND

The project is within the watershed of the following public surface water sources (facilities where the project falls within 5 miles of the intake **and** is within the intake's watershed are formatted in **bold**):

PWS ID Number	System Name	Facility Name
3710100	**NORFOLK, CITY OF**	**LAKE PRINCE**

3710100	NORFOLK, CITY OF	WESTERN BRANCH
3740600	PORTSMOUTH, CITY OF	PITCHKETTLE RAW WATER

Best Management Practices should be employed, including Erosion & Sedimentation Controls and Spill Prevention Controls & Countermeasures on the project site.

Materials should be managed while on site and during transport to prevent impacts to nearby surface water.

- ***Comments received from Radiological Health, Mr. Steven Harrison, Director were, "The Office of Radiological Health does not have any questions or comments relating to this project."***
- ***No comments received from OEHS Division of Shellfish Sanitation, Mr. Eric Aschenbach.***
- ***No comments received from Environmental Epidemiology, Mr. Dwight Flammia.***
- ***No comments received from Environmental Epidemiology, Caroline Holsinger.***

Best Regards,

Arlene Fields Warren
GIS Program Support Technician
Office of Drinking Water
Virginia Department of Health
109 Governor Street
Richmond, VA 23220
(804) 864-7781

The Virginia Department of Health – Office of Drinking Water appreciates the opportunity to provide comments. If you have any questions, please let me know.

From: Fulcher, Valerie (DEQ)
Sent: Tuesday, February 14, 2017 3:20 PM
To: dgif-ESS Projects (DGIF); Tignor, Keith (VDACS); Rhur, Robbie (DCR); odwreview (VDH); Kirchen, Roger (DHR); Spears, David (DMME); MASON@VIMS.EDU; Evans, Gregory (DOF); Watkinson, Tony (MRC); Owen, Randy (MRC); Cromwell, James R. (VDOT); Jordan, Elizabeth (VDOT); Deem, Angel N. (VDOT); Ben McFarlane; jmcbride@hrpdcva.gov; Tim Howlett; PlanningEmail@suffolkva.us; Harrington, Rusty N. (DOAV); Denny, S. Scott (DOAV); Sterling, Bruce (VDEM); Openshaw, Cheryl (DRPT); impactreview@vofonline.org
Cc: Wellman, Julia (DEQ); Sullivan, Bettina (DEQ)
Subject: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Good afternoon - this is a new OEIR review request/project:

Document Type: Federal Consistency Certification
Project Sponsor: Federal Energy Regulatory Commission
Project Title: Atlantic Coast Pipeline Project
Location: Cities of Chesapeake and Suffolk
Project Number: DEQ #15-161F

The document is available at www.deq.virginia.gov/fileshare/oeir in the FERC Atlantic Coast Pipeline folder.

The due date for comments is MARCH 15, 2017. You can send your comments either directly to Julia by email (Julia.Wellman@deq.virginia.gov), or you can send your comments by regular interagency/U.S. mail to the Department of Environmental Quality, Office of Environmental Impact Review, 629 E. Main St., 6th Floor, Richmond, VA 23219.

NOTE: The Federal Consistency Certification and shapefiles are on Fileshare at FERC Atlantic Coast Pipeline/15-161F Coastal Zone Review ACP. The shapefiles include the entire route. However, only the portion in Chesapeake and Suffolk is the subject of this review. This project was reviewed in 2015. Since then, a new route has been proposed.

If you cannot meet the deadline, please notify the project coordinator prior to the comment due date. Arrangements may be made to extend the deadline for comments if possible. An agency will be considered to have no concerns if comments are not received (or contact is made) within the review period. However, it is important that agencies consistently participate in accordance with Virginia Code Section 10.1-1192.

REVIEW INSTRUCTIONS:

A. Please review the document carefully. If the proposal has been previously reviewed (e.g. as a draft EIS or a Part 1 EIR), please consider whether your earlier comments have been adequately addressed.

B. Prepare your agency's comments in a form which would be acceptable for responding directly to a project proponent agency (agency stationary or email) and include the project number on all correspondence.

If you have any questions, please email Julia.

Thanks!

Valerie

Valerie A. Fulcher, CAP-OM, Environmental Program Specialist
Department of Environmental Quality
Environmental Enhancement - Office of Environmental Impact Review
629 E. Main St., 6th Floor
Richmond, VA 23219
804/698-4330
804/698-4319 (Fax)
email: Valerie.Fulcher@deq.virginia.gov
http://www.deq.virginia.gov/Programs/EnvironmentalImpactReview.aspx

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DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF AIR PROGRAM COORDINATION

ENVIRONMENTAL REVIEW COMMENTS APPLICABLE TO AIR QUALITY

TO: Julia H. Wellman **DEQ - OEIA PROJECT NUMBER: DEQ #15-161F**

PROJECT TYPE: ☐ STATE EA / EIR **X FEDERAL EA / EIS** ☐ SCC

X CONSISTENCY CERTIFICATION

PROJECT TITLE: Atlantic Coast Pipeline Project

PROJECT SPONSOR: Federal Energy Regulatory Commission

PROJECT LOCATION: **X OZONE ATTAINMENT AND EMISSION CONTROL AREA FOR NOX & VOC**

REGULATORY REQUIREMENTSMAY BE APPLICABLE TO: **X CONSTRUCTION**
☐ OPERATION

STATE AIR POLLUTION CONTROL BOARD REGULATIONS THAT MAY APPLY:

1. ☐ 9 VAC 5-40-5200 C & 9 VAC 5-40-5220 E – STAGE I
2. ☐ 9 VAC 5-45-760 et seq. – Asphalt Paving operations
3. **X 9 VAC 5-130 et seq. – Open Burning**
4. **X 9 VAC 5-50-60 et seq. Fugitive Dust Emissions**
5. ☐ 9 VAC 5-50-130 et seq. - Odorous Emissions; Applicable to_____
6. ☐ 9 VAC 5-60-300 et seq. – Standards of Performance for Toxic Pollutants
7. ☐ 9 VAC 5-50-400 Subpart_____, Standards of Performance for New Stationary Sources, designates standards of performance for the_____
8. ☐ 9 VAC 5-80-1100 et seq. of the regulations – Permits for Stationary Sources
9. ☐ 9 VAC 5-80-1605 et seq. Of the regulations – Major or Modified Sources located in PSD areas. This rule may be applicable to the _____
10. ☐ 9 VAC 5-80-2000 et seq. of the regulations – New and modified sources located in non-attainment areas
11. ☐ 9 VAC 5-80-800 et seq. Of the regulations – State Operating Permits. This rule may be applicable to _____

COMMENTS SPECIFIC TO THE PROJECT:

All precautions are necessary to restrict the emissions of volatile organic compounds (VOC) and oxides of nitrogen (NO_X).

K. S. Narasimhan

(Kotur S. Narasimhan)
Office of Air Data Analysis **DATE: February 16, 2017**

Wellman, Julia (DEQ)

From: Ballou, Thomas (DEQ)
Sent: Thursday, March 23, 2017 9:32 AM
To: Wellman, Julia (DEQ)
Cc: Narasimhan, Kotur (DEQ)
Subject: RE: 15-161F ATLANTIC COAST PIPELINE PROJECT

Provided below are the air program comments for the federal consistency review of the ACP.

Construction: Construction activities associated with the ACP project in Virginia are subject to the Air Pollution Control Regulations regarding such activities including open burning (9 VAC 5-130 et seq.) and fugitive dust (9 VAC 5 -50-60 et seq.). The project sponsor should ensure that construction activities comply with these and any other applicable state regulations. While not required, additional mitigation of construction related air pollutants could be achieved through the use of cleaner construction and related equipment.

Operations: A portion of this project goes through Suffolk and Chesapeake Cities which are part of a VOC and NOx emissions control area and therefore would be subject to any applicable existing source regulations related to its control area status.

These requirements appear to be adequately addressed in the Dominion FCC document in **3.1.8 – Air Pollution Control.**

Thomas R. Ballou
Air Data Analysis & Planning Manager
VA Department of Environmental Quality
629 E. Main Street, Richmond, VA 23219
(804) 698-4406
thomas.ballou@deq.virginia.gov
www.deq.virginia.gov

From: Wellman, Julia (DEQ)
Sent: Wednesday, March 22, 2017 11:45 AM
To: Ballou, Thomas (DEQ)
Cc: Narasimhan, Kotur (DEQ)
Subject: RE: 15-161F ATLANTIC COAST PIPELINE PROJECT

Tom, Comments on the federal consistency review for the ACP in Chesapeake and Suffolk were due on March 15. Please let me know when you plan to respond to my attached email for planning purposes.

From: Wellman, Julia (DEQ)
Sent: Thursday, February 16, 2017 11:54 AM
To: Narasimhan, Kotur (DEQ); Ballou, Thomas (DEQ)
Subject: RE: 15-161F ATLANTIC COAST PIPELINE PROJECT

Thank you, Kotur.

Will you and Tom please review the project and respond in terms of federal consistency under the US Coastal Zone Management Act?

I have attached the original review request which contains additional information.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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From: Narasimhan, Kotur (DEQ)
Sent: Thursday, February 16, 2017 7:22 AM
To: Wellman, Julia (DEQ)
Subject: 15-161F ATLANTIC COAST PIPELINE PROJECT

Review attached.

Kotur

Wellman, Julia (DEQ)

From: Davenport, Melanie (DEQ)
Sent: Monday, May 15, 2017 10:54 AM
To: Hardwick, Steven (DEQ)
Cc: Wellman, Julia (DEQ)
Subject: RE: ACP FCC statement

Good to me

Melanie D. Davenport, Director
Water Permitting Division
(804) 698-4038

From: Hardwick, Steven (DEQ)
Sent: Monday, May 15, 2017 10:24 AM
To: Davenport, Melanie (DEQ)
Cc: Wellman, Julia (DEQ)
Subject: FW: ACP FCC statement

Melanie,

Here's our current federal consistency statement for ACP for your review.

The DEQ Office of Wetlands and Stream Protection states that provided the work is conducted in accordance with any required Clean Water Act Section 404 or Section 401 permits, certificates or individual Section 401 conditions, the project will be consistent with the VWP regulation.

Thanks,

Steve Hardwick
VWP Permit Coordinator

Department of Environmental Quality
Office of Wetlands and Stream Protection
629 East Main Street
Richmond, VA 23219

804.698.4168

steven.hardwick@deq.virginia.gov
www.deq.virginia.gov

From: Wellman, Julia (DEQ)
Sent: Monday, May 15, 2017 8:33 AM
To: Hardwick, Steven (DEQ)
Subject: ACP FCC statement

Hi Steve,

Yes, My question is in reference to the Atlantic Coast Pipeline in the cities of Suffolk and Chesapeake.

This is the current statement:

The DEQ Office of Wetlands and Stream Protection states that provided the work is conducted in accordance with any required Clean Water Act Section 404 or Section 401 permits, certificates or individual Section 401 conditions, the project will be consistent with the VWP regulation.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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Wellman, Julia (DEQ)

From: Gavan, Larry (DEQ)
Sent: Monday, April 24, 2017 3:48 PM
To: Wellman, Julia (DEQ)
Subject: RE: UPDATED REVIEW REQUEST - (ACP) ATLANTIC COAST PIPELINE 15-161F

No

From: Wellman, Julia (DEQ)
Sent: Monday, April 24, 2017 3:44 PM
To: Gavan, Larry (DEQ)
Subject: RE: UPDATED REVIEW REQUEST - (ACP) ATLANTIC COAST PIPELINE 15-161F

Thank you.

Does General Permit for Stormwater Discharges from Construction Activities (VAR10) apply to the proposed ACP?

From: Gavan, Larry (DEQ)
Sent: Monday, April 24, 2017 3:41 PM
To: Wellman, Julia (DEQ)
Cc: Cunningham, Frederick (DEQ); Leach, Benjamin (DEQ); Zegler, Hannah (DEQ)
Subject: RE: UPDATED REVIEW REQUEST - (ACP) ATLANTIC COAST PIPELINE 15-161F

"Natural Gas Transmission Projects that result in regulated land-disturbing activities equal to or greater than 1 acre (2,500 square feet in Chesapeake Bay Preservation Areas) must comply with the most current version of the Stormwater Management (SWM) and Erosion and Sediment Control (ESC) Annual Standards and Specifications approved by DEQ. This regulated land-disturbing activity must have a DEQ approved project specific SWM/ESC plan developed in accordance with the DEQ approved Annual Standards and Specifications. Annual Standards and Specifications must be prepared in accordance with the Virginia Stormwater Management Act (VSMA) and the Virginia Stormwater Management Program (VSMP) Permit Regulations and the Virginia Erosion and Sediment Control Law and the Virginia Erosion and Sediment Control Regulations. Open wet trench live watercourse crossings are generally discouraged. The three open wet trench live watercourse crossings proposed in this project will be reviewed on a specific case basis during the individual project plan review."

From: Wellman, Julia (DEQ)
Sent: Monday, April 24, 2017 3:15 PM
To: Gavan, Larry (DEQ)
Subject: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

From: Wellman, Julia (DEQ)
Sent: Tuesday, February 14, 2017 3:50 PM
To: Nicol, Craig (DEQ); Williams, Justin (DEQ); Dowd, Michael (DEQ); Davenport, Melanie (DEQ); Schneider, Jutta (DEQ)
Cc: Sullivan, Bettina (DEQ); Baxter, Sharon (DEQ); Dacey, Katy (DEQ); Narasimhan, Kotur (DEQ); Gavan, Larry (DEQ); Sepety, Holly (DEQ); Moore, Daniel (DEQ); Cario, Anthony (DEQ); Hardwick, Steven (DEQ); Robinson, Cindy (DEQ)
Subject: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Good afternoon - this is an updated OEIR review request/project:

Wellman, Julia (DEQ)

From: Gavan, Larry (DEQ)
Sent: Thursday, May 11, 2017 4:47 PM
To: Wellman, Julia (DEQ)
Subject: RE: non-point pollution control enforceable policy of the Va Coastal Zone Management Program ACP

Follow Up Flag: Follow up
Flag Status: Flagged

We propose the highlighted text further below in lieu of the highlighted text immediately below.

Existing Text: To minimize impacts on soils, Atlantic will implement the best management measures outlined in the 2013 versions of FERC's Plan and Procedures. In addition, Atlantic will develop a site-specific Erosion and Sediment Control Plan and Stormwater Pollution Prevention Plan utilizing DTI's Annual Standards and Specifications, which will be reviewed and approved by DEQ. The Annual Standards and Specifications will be compared with FERC's Plan and Procedures to determine the appropriate (i.e., whichever is more stringent) best management practices.

Proposed Text: Atlantic will be adhering to 'FERC's Wetland and Waterbody Construction and Mitigation Procedures', 'FERC's Upland Erosion Control, Revegetation, and Maintenance Plan', and 'US Forest Service Publications'. Atlantic may utilize these procedures and publications during construction in Virginia. However, should the state of Virginia's DEQ approved plan and specifications differ, the more stringent requirement shall be followed.

Thx Julia
Regards
Larry

From: Wellman, Julia (DEQ)
Sent: Wednesday, May 10, 2017 4:46 PM
To: Gavan, Larry (DEQ)
Subject: non-point pollution control enforceable policy of the Va Coastal Zone Management Program

The attached is the section from Atlantic's federal consistency certification. It is just over two pages long. The paragraph in question is highlighted.

Thank you.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY
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Molly Joseph Ward
Secretary of Natural Resources

David K. Paylor
Director

(804) 698-4020
1-800-592-5482

MEMORANDUM

TO: Daniel Moore

FROM: Shawn Smith, Chesapeake Bay Local Assistance

DATE: March 10, 2017

SUBJECT: DEQ 15-161F ACP Pipeline– City of Chesapeake and City of Suffolk

We have reviewed the portions of the proposed ACP Pipeline project that will occur within the cities of Chesapeake and Suffolk. Both the City of Chesapeake and the City of Suffolk's local CPBA programs include designated Chesapeake Bay Preservation Areas in portions of their respective localities. According to the information provided, the project is located within both locally designated CBPA and includes both Resource Protection Areas and Resource Management Areas. Development of a natural gas lines is conditionally exempted under Section 9 VAC 25-830-150 B 1 of the Regulations provided that appropriate erosion and sediment control and stormwater management requirements are met.

As this activity would be considered as exempt from the Regulations, provided it adheres to the above criteria, there are no Bay Act program requirements.

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

June 7, 2017

PROJECT NUMBER: 15-161F

PROJECT TITLE: Atlantic Coast Pipeline Project (Updated)

As Requested, TRO staff has reviewed the supplied information and has the following comments:

Petroleum Storage Tank Cleanups:
CO OSRR will provide specific comments on storage tank pollution complaint cases within the proposed pipeline footprint.

Petroleum Storage Tank Compliance/Inspections:
No comments.

Virginia Water Protection Permit Program (VWPP):

Air Permit Program :
The following air regulations may be applicable: Virginia Administrative Code 9 VAC 5-50-60 *et seq.* which addresses the abatement of visible emissions and fugitive dust emissions, and Virginia Administrative Code 9 VAC 5-130-10 et *seq.* which addresses open burning. For additional information, contact Wayne Franklin, DEQ-TRO at (757) 518-2155.

Water Permit Program :
No comments.

Waste Permit Program :
All construction, demolition and debris waste, including excess soil and dredge spoil, must be characterized in accordance with the Virginia Hazardous Waste Management Regulations prior to management at an appropriate facility. For additional information, contact Sean Priest, DEQ-TRO at (757) 518-2141 or jonathan.priest@deq.virginia.gov.

Storm Water Program:
CO Stormwater staff are reviewing plans and providing specific comments of stormwater management and erosion and sediment control.

DEPARTMENT OF ENVIRONMENTAL QUALITY
TIDEWATER REGIONAL OFFICE
ENVIRONMENTAL IMPACT REVIEW COMMENTS

June 7, 2017

PROJECT NUMBER: 15-161F

PROJECT TITLE: Atlantic Coast Pipeline Project (Updated)

The staff from the Tidewater Regional Office thanks you for the opportunity to provide comments.

Sincerely,

Cindy Robinson

Cindy Robinson
Environmental Specialist II
5636 Southern Blvd.
VA Beach, VA 23462
(757) 518-2167
Cindy.Robinson@deq.virginia.gov

Wellman, Julia (DEQ)

From: Spencer Trichell (Services - 6) <Spencer.Trichell@dominionenergy.com>
Sent: Friday, May 12, 2017 4:59 PM
To: Wellman, Julia (DEQ)
Cc: Richard B Gangle (Services - 6)
Subject: RE: [External] ACP FCC: points source pollution control question

Julia, our standard practice is to take the excess drilling fluid to an approved disposal facility. However, there may be cases where beneficial reuse is possible. In these instances, Atlantic would sample and analyze the material and ensure that any applicable federal, state, and local approvals are received, if needed. One potential beneficial reuse is as a soil amendment for agricultural purposes. FERC allows this beneficial reuse so long as it doesn't have an adverse environmental impact and is in compliance with all applicable survey, landowner or land management agency approval and permit requirements.

Regards,

Spencer

From: Wellman, Julia (DEQ) [mailto:Julia.Wellman@deq.virginia.gov]
Sent: Friday, May 12, 2017 4:15 PM
To: Spencer Trichell (Services - 6)
Subject: RE: [External] ACP FCC: points source pollution control question

My reviewer picked up on the phrase from the FCC that states, "excess drilling fluid will be collected and incorporated into the soil in an upland area."

Based on your explanation, I assume that what is written is meant to state that any excess clean water (that was not mixed with bentonite clay) will be "incorporated in the soil in an upland area" and that any excess drilling fluid/mud (water that was mixed with bentonite clay) will be "disposed of at an appropriate facility."

Will you please confirm? Thank you.

From: Spencer Trichell (Services - 6) [mailto:Spencer.Trichell@dominionenergy.com]
Sent: Friday, May 12, 2017 2:25 PM
To: Wellman, Julia (DEQ)
Cc: Richard B Gangle (Services - 6)
Subject: RE: [External] ACP FCC: points source pollution control question

Julia, see our responses (in red) to your questions below.

Regards,

Spencer

From: Wellman, Julia (DEQ) [mailto:Julia.Wellman@deq.virginia.gov]
Sent: Friday, May 12, 2017 11:14 AM
To: Spencer Trichell (Services - 6)
Subject: RE: [External] ACP FCC: points source pollution control question

Thank you, Spencer. I've received other questions:

Will there be a discharge of a liquid from the HDD drilling operations? Will the water in the final recycling process be discharged? Water used in the drilling process will be hauled off as it will essentially become "drilling mud" once it is mixed w/ bentonite clay. Any clean water, in other words, water that has been stored on site but not mixed w/ bentonite could potentially be discharged into an upland area given the proper permits are obtained, but this quantity would be minimal as it would just be the water hauled into the site but not used. The "recycling process" primarily removes cuttings from the drill mud and recycles it back into the drilling process. This water would still contain bentonite and would be hauled off-site when no longer needed.

Will you please clarify the difference between the fluid mixture with clay (presumably the mud), the "water left over from the drilling process" and "drilling fluid"? Will the leftover water have been mixed with clay at any time? Drilling fluid is the result of water with bentonite clay mixed in..."drilling fluid" and "drilling mud" are synonymous. "Water left over from the drilling process" is just clean, unused water. Any drilling fluid (drill mud) will be hauled off site to an approved landfill.

I think the issue is that the use of the term drilling fluid makes it sound like water with bentonite clay or water that has been mixed with bentonite clay will be discharged to upland areas.

In the description of HDD, the FCC states "The fluid and cuttings will be pumped from the pits to an on-site recycling unit where the fluid will be processed for reuse." In addition, it states, "As the pipeline is being installed, excess drilling fluid will be collected and incorporated into the soil in an upland area or disposed of at an appropriate facility. If water is left over from the drilling process, it will be discharged in accordance with the Plan and Procedures and applicable permits into a well-vegetated upland area or an energy dissipation/sediment filtration device, such as a geotextile filter bag or straw bale dewatering structure, at the site."

Thank you

From: Spencer Trichell (Services - 6) [mailto:Spencer.Trichell@dominionenergy.com]
Sent: Thursday, May 11, 2017 12:21 PM
To: Wellman, Julia (DEQ)
Cc: Richard B Gangle (Services - 6)
Subject: RE: [External] ACP FCC: points source pollution control question

Julia, the mud would be hauled offsite for disposal at an approved landfill.

Thanks,

Spencer

From: Wellman, Julia (DEQ) [mailto:Julia.Wellman@deq.virginia.gov]
Sent: Thursday, May 11, 2017 12:13 PM
To: Spencer Trichell (Services - 6)
Subject: [External] ACP FCC: points source pollution control question

I have received a question about the proposed disposal of the HDD drill mud that is mentioned in Section 3.1.6 of the FCC. How does Atlantic propose to dispose of the HDD drill mud?

Thank you.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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Wellman, Julia (DEQ)

From: Zahradka, Neil (DEQ)
Sent: Monday, May 15, 2017 1:26 PM
To: Wellman, Julia (DEQ)
Cc: Brockenbrough, Allan (DEQ); Richardson, Matthew (DEQ); Cunningham, Frederick (DEQ)
Subject: RE: Atlantic Coast Pipeline Federal Consistency Certification

Land application of excess drilling fluid as a soil amendment may require a VPA permit for land application of industrial residuals. At a minimum, DEQ would require submittal of the information included in the *Virginia Pollution Abatement Permit Application Form C Industrial Waste*:
http://leg5.state.va.us/reg_agent/frmView.aspx?Viewid=38646001248~11&typ=40&actno=001248&mime=application/pdf

DEQ may require less information if the material is registered as an industrial coproduct with the Virginia Department of Agriculture and Consumer Services.

Neil Zahradka
Manager - Office of Land Application Programs
Virginia Department of Environmental Quality
629 E. Main St.
P.O. Box 1105
Richmond, VA 23218-1105
Phone: (804) 698-4102
E-mail: neil.zahradka@deq.virginia.gov
Website: www.deq.virginia.gov
VPA Program: http://www.deq.virginia.gov/Programs/Water/LandApplicationBeneficialReuse.aspx
Agricultural Programs: http://www.deq.virginia.gov/Programs/Water/LandApplicationBeneficialReuse/Agriculture.aspx

Neil

From: Wellman, Julia (DEQ)
Sent: Monday, May 15, 2017 11:04 AM
To: Zahradka, Neil (DEQ); Cunningham, Frederick (DEQ)
Cc: Brockenbrough, Allan (DEQ); Richardson, Matthew (DEQ)
Subject: RE: Atlantic Coast Pipeline Federal Consistency Certification

Through coordination with Dominion and Matt Richardson, it was pointed out that Dominion would occasionally incorporate drilling fluid (with the bentonite clay) into an upland area if requested by the landowner instead of disposing of it at a landfill.

Dominion states, "Julia, our standard practice is to take the excess drilling fluid to an approved disposal facility. However, there may be cases where beneficial reuse is possible. In these instances, Atlantic would sample and analyze the material and ensure that any applicable federal, state, and local approvals are received, if needed. One potential beneficial reuse is as a soil amendment for agricultural purposes. FERC allows this beneficial reuse so long as it doesn't have an adverse environmental impact and is in compliance with all applicable survey, landowner or land management agency approval and permit requirements."

Does this information change DEQ's comments that there will not be a need for VPA provisions? Or does DEQ want to make a comment or recommendation about this practice?

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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From: Zahradka, Neil (DEQ)
Sent: Friday, May 12, 2017 9:33 AM
To: Wellman, Julia (DEQ)
Cc: Brockenbrough, Allan (DEQ); Davenport, Melanie (DEQ); Cunningham, Frederick (DEQ)
Subject: RE: Atlantic Coast Pipeline Federal Consistency Certification

Julia,
I believe Fred's response covers your questions to me yesterday. Since discharge permits will be required, there won't be a need for VPA provisions.

Neil

From: Cunningham, Frederick (DEQ)
Sent: Thursday, May 11, 2017 5:26 PM
To: Wellman, Julia (DEQ)
Cc: Brockenbrough, Allan (DEQ); Davenport, Melanie (DEQ); Zahradka, Neil (DEQ)
Subject: RE: Atlantic Coast Pipeline Federal Consistency Certification

Julia,

See response below. Any questions let me know.

Fred

Fred K. Cunningham, Director
Office of Water Permits
Virginia Department of Environmental Quality
phone: 804.698.4285

From: Wellman, Julia (DEQ)
Sent: Wednesday, May 10, 2017 5:24 PM
To: Cunningham, Frederick (DEQ); Brockenbrough, Allan (DEQ)
Subject: Atlantic Coast Pipeline Federal Consistency Certification

Wellman, Julia (DEQ)

From: Cunningham, Frederick (DEQ)
Sent: Wednesday, May 31, 2017 8:37 AM
To: Wellman, Julia (DEQ)
Subject: RE: Atlantic Coast Pipeline FCC

If there is a discharge to surface waters a VPDES permit is required. If there is no discharge to surface waters a VPDES permit is not required.

Fred

Fred K. Cunningham, Director
Office of Water Permits
Virginia Department of Environmental Quality
phone: 804.698.4285

From: Wellman, Julia (DEQ)
Sent: Wednesday, May 31, 2017 8:34 AM
To: Cunningham, Frederick (DEQ)
Subject: Atlantic Coast Pipeline FCC

Is the Petroleum Contaminated Sites and Hydrostatic Tests VPDES General Permit (9VAC25-120) applicable to the Atlantic Coast Pipeline project?

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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Wellman, Julia (DEQ)

From: Spencer Trichell (Services - 6) <Spencer.Trichell@dom.com>
Sent: Monday, March 27, 2017 11:25 AM
To: Wellman, Julia (DEQ)
Cc: Owen, Randy (MRC); Richard B Gangle (Services - 6)
Subject: RE: RE: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

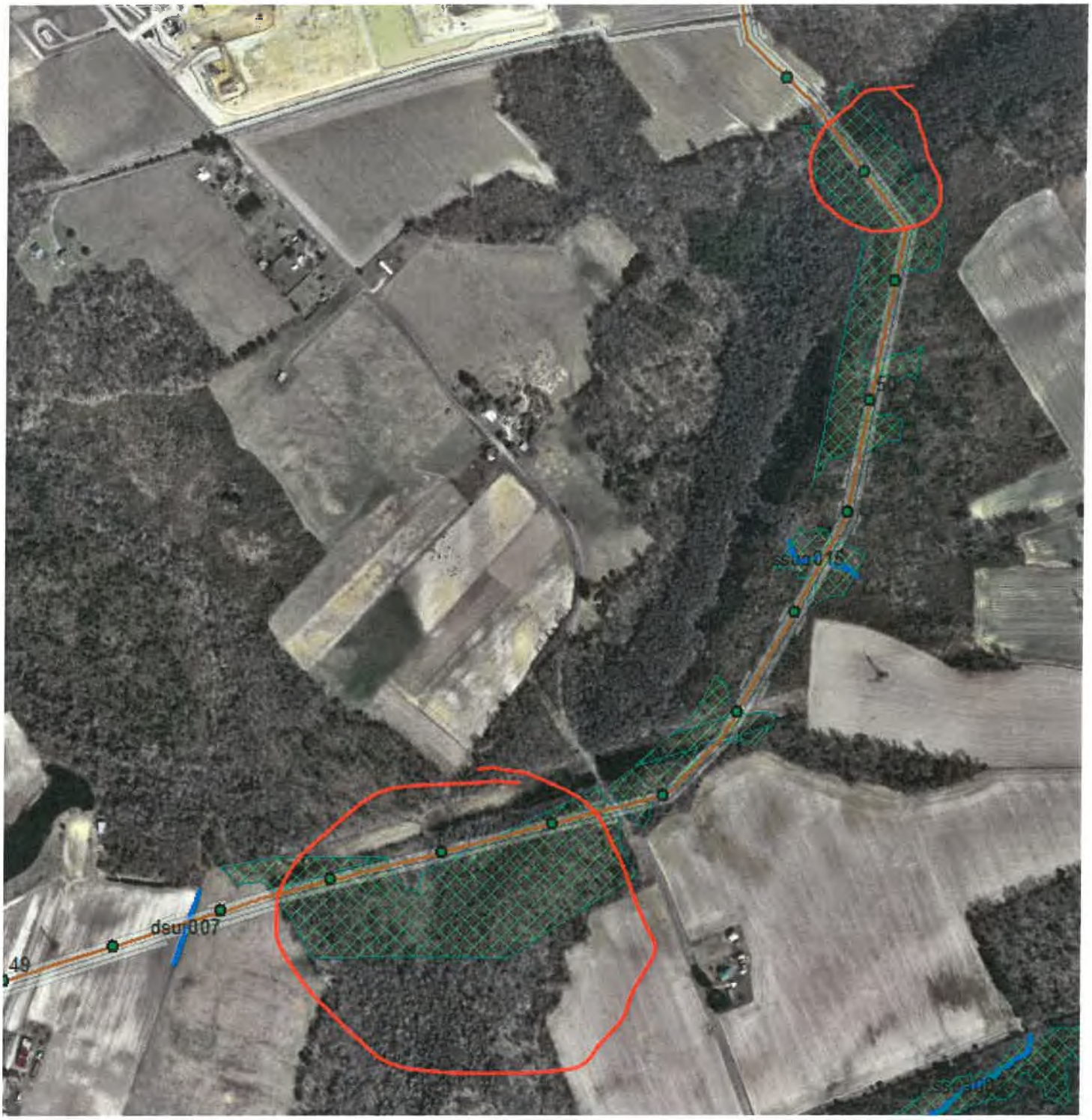
Follow Up Flag: Follow up
Flag Status: Flagged

Julia and Randy, the CZMA report (Table in Appendix 4) shows 3 waterbodies that are proposed as open cut in the coastal zone. They include two branches of Quaker Swamp (mileposts 49.5 and 50.2) and a crossing of Cohoon Creek (milepost 56.1). These do not have discernible channels at the crossing location so they were categorized as wetlands crossings in the field and not waterbody crossings (although they show up in the waterbody table due to the fact that they are named tributaries on USGS maps and NHD data), however the drainage area of these do exceed 5 sq mi. Any type of dry crossing would not be feasible due to the fact that there are trees that would require removal and creating a seal on the bottom of the wetland (given wetlands soils) a coffer dam is not likely to be successful. Obstructing flow in this type of wetland so that the work could be done in the dry is not practical, thus we are proposing wetland crossing methods, best described as "open cut". The previous discussions we have had about open cut related to VMRC regulated streams, as I recall.

I am providing screen shots of the areas below (wetlands in green hatch and delineated channels in blue as delineated in the field):

Cohoon Creek

Quaker Swamp crossings circled in red



From: Wellman, Julia (DEQ) [mailto:Julia.Wellman@deq.virginia.gov]
Sent: Friday, March 24, 2017 2:42 PM
To: Spencer Trichell (Services - 6)
Cc: Owen, Randy (MRC)
Subject: [External] RE: RE: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Spencer,

Please provide clarification to Randy (with copy to me).

Thank you.

Julia Wellman
Environmental Impact Review Coordinator
Department of Environmental Quality
629 E Main Street
Richmond, VA 23219
(804) 698-4326
Julia.Wellman@deq.virginia.gov
www.deq.virginia.gov

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From: randy.owen@mrc.virginia.gov [mailto:randy.owen@mrc.virginia.gov]
Sent: Friday, March 24, 2017 2:37 PM
To: Wellman, Julia (DEQ)
Cc: spencer.trichell@dom.com
Subject: RE: RE: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Julia,

The federal consistency document outlines the open-cut method as one of several waterbody crossing methodologies that may be undertaken by Atlantic. This contradicts our previous dialogue and agreement with Dominion that the open cut methodology would not be utilized in Virginia. By copy to Spencer, I would like clarification on this issue. I will be back in the country March 27th.

-----Original Message-----
From: julia.wellman@deq.virginia.gov
Sent: 03/23/17 12:38 PM
To: randy.owen@mrc.virginia.gov
Subject: RE: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Thanks, Randy. I'm sorry for your loss.

Next week should be OK.

From: randy.owen@mrc.virginia.gov [mailto:randy.owen@mrc.virginia.gov]
Sent: Wednesday, March 22, 2017 5:53 PM
To: Wellman, Julia (DEQ)
Subject: RE: FW: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F

Hi Julia,

I will prepare a draft as soon as possible. I had it on my list to discuss with the Chief, but let it slip past. We still have questions on the timing of CZM comments prior to the completion of the NEPA process, but will likely submit comments that closely mirror our comments on the DEIS. I had to go out of town for a death in the family. I aplogize, but it will be next week before I can submit our comments. I hope that doesn't create a problem.
-----Original Message-----

Wellman, Julia (DEQ)

From:	Spencer Trichell (Services - 6) <Spencer.Trichell@dom.com>
Sent:	Thursday, April 13, 2017 4:38 PM
To:	Wellman, Julia (DEQ); Owen, Randy (MRC); Gavan, Larry (DEQ); Sullivan, Bettina (DEQ)
Cc:	Richard B Gangle (Services - 6); Robert M Bisha (Services - 6); Robert P Hare (Generation - 6); Hypes, Rene (DCR); Ewing, Amy (DGIF)
Subject:	ACP - FCC Open Cut Memorandum
Attachments:	20170413 FCC Open Cut Memo - Out.pdf

Julia, per our meeting on April 5, 2017, at your office, I am providing the memorandum that describes the use of turbidity curtains at the subject streams in the Coastal Zone and the commitments we discussed. Please let me know if you have any questions.

Regards,

Spencer Trichell
Environmental Consultant - Atlantic Coast Pipeline
Dominion Resources Services, Inc.
O:(804)-273-3472
M:(804)-263-5980
5000 Dominion Blvd, Glen Allen, VA 23060
spencer.trichell@dom.com

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Dominion Resources Services, Inc.
5000 Dominion Boulevard,
Glen Allen, VA 23060

April 13, 2017

BY E-FILE

Ms. Julia Wellman
Virginia Department of Environmental Quality
Office of Environmental Impact Review
629 East Main Street
Richmond, VA 23219

Re: Dominion Transmission, Inc., Atlantic Coast Pipeline
Virginia Coastal Zone Management Program
Federal Consistency Certification - Information Response

Dear Ms. Wellman:

Thank you again for meeting with Atlantic Coast Pipeline (Atlantic) last week on Wednesday, April 5, 2017 to discuss Atlantic's proposed pipeline crossings of the Quaker and Cohoon Swamps located in Suffolk County, Virginia which require Federal Consistency Certification. As discussed during our meeting, attached please find a memo from Environmental Resource Management (ERM), our environmental consultant for this project that contains the results of a hydraulic watershed flow analysis for the drainage basins associated with both of these wetland complexes. The results of these analyses indicate the predicted depth and flow of water across the construction right-of-way area in the vicinity of the drainage channels. ERM used local LiDAR data, GIS technologies, USGS digital elevation models and various other hydraulic models to predict the peak water depth and flow within these wetlands during a 1-year and a 2-year storm event to determine flow conditions if these events were to occur during construction.

As stated during our meeting and reiterated here, Atlantic will time the crossing of these tributaries such that the work would be carried out during low flow conditions, as feasible. Should weather forecasts indicate that heavy rainfall is predicted, the trenching would not occur until the threat of rain has passed. Atlantic expects that the crossing of each of these would not take more than 3 to 5 days to install from trench excavation through backfilling, at which time restoration would begin immediately.

Atlantic also agrees to improve sediment control measures in these areas to account for the concentrated flows during heavy rain events that occur within these wetland tributaries by using a combination of silt fence and turbidity barriers along the edges of the right-of-way commensurate with micro-site conditions. The erosion and sediment control plans will include the details of such commitments and the attached memo describes the potential flows that could occur during the storm events describe above.

Dominion appreciates the coordination to date and looks forward to continuing to work with you on this project. Please contact Richard Gangle at (804) 273-2814 or Richard.B.Gangle@dom.com, if there are questions regarding this submittal.

Please direct written responses to:

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

Sincerely,

Robert Bisha
Technical Advisor, Atlantic Coast Pipeline

cc: Randy Owen, VMRC
Larry Gavan, VDEQ

Memorandum

ERM

Refer to File: Document3

Date: April 13, 2017

To: Spencer Trichell, Dominion

From: Steve Holden, ERM

Cc: Robert Hare, Dominion

Subject: **RE: Construction within Select Forest Wetlands in Virginia**

1. BACKGROUND

Atlantic Coast Pipeline (Atlantic) is proposing to install a 20-inch-diameter natural gas pipeline lateral across three forested wetlands located within the coastal plain of Suffolk County, Virginia. The wetland crossings include Quaker Swamp, an un-named tributary to Quaker Swamp, and Cohoon Creek; all three of these locations can be described as bottomland hardwood forested wetlands (see Attachment 1). These wetlands are periodically inundated, and have little or no discernable flow through them under normal conditions. Atlantic has determined that the use of an open-cut crossing method is most appropriate for these situations in order to expedite the crossings and minimize impacts to the floodplain ecosystems.

Open-cut pipeline crossings of low wetland and floodplain systems where high water tables, fine, silty soils, and/or areas of standing water are encountered have the potential, without control or containment, to introduce sediment into the wetland system and to move sediment-laden water off right-of-way. Environmental Resources Management (ERM) understands that the Virginia Department of Environmental Quality (DEQ) and Virginia Marine Resources Commission (VMRC) have expressed concerns over Atlantic's ability to manage open trench construction through these floodplains and prevent the movement of sediment downgradient of the pipeline crossings. Specific agency concerns included:

i. control of unconsolidated trench spoil and preventing movement off right-of-way;

ii. control of turbidity and preventing downstream movement off right-of-way;

iii. functionality of both floating turbidity curtains and staked belted silt retention fence (BSRF) to control solids movement;

iv. potential for BSRF and turbidity curtains to continue containing trench spoil and turbidity off right-of-way during storm events; and

v. Duration of trenching, laying, backfilling in each wetland.

ERM has conducted Wetland and Waterbody field surveys of all wetlands and waterbodies being crossed by the project, including the pipeline crossing locations of Cohoon Creek and the waterbody draining into Quaker Swamp and have attached to this memo the figures showing the

channel cross-sections at the milepost (MP) locations for each wetland (see Attachment 2) and the field data sheets for each of these locations (see Attachment 3). The crossings are briefly described as follow:

a. Quaker Swamp – the crossing of Quaker Swamp at MP 49.5 is a hardwood floodplain comprised of swamp chestnut oak, red maple, and American Holly as the dominant tree species. A profile of the crossing shows a low, flat bottom approximately 180 feet across. The water table was observed to range from 15 inches below ground level to areas of standing water depending on microtopography.

b. Un-named Tributary to Quaker Swamp – this crossing of the Quaker Swamp at the point where an un-named waterbody and small wetland arm comes in at MP 50.2 is similar to the Quaker Swamp crossing noted above. Dominant overstory species include red maple, sweet gum American Holly, American Hornbeam, and bald cypress with a water table ranging from 16 inches below grade to standing water in some sections. The width of the inundation zone is approximately 170 feet in diagonal cross-section at the crossing milepost.

c. Cohoon Creek – the Cohoon Creek crossing involves the forested floodplain at MP 56.1, and includes a bottomland inundation zone of approximately 145 feet in width with a small streambed through it. Overstory tree species include bald cypress, swamp tupelo, sweet gum, and red maple. The water table was observed to occur at the ground surface, with areas of standing water.

2. MODELED HYDROLOGY

ERM has conducted watershed flow analyses at the three wetland crossing locations for two storm events, the 24-hour 1-year storm and the 24-hour 2-year storm, that may reasonably affect the water depth and flow velocity during construction. The water depths and the flow velocities at peak flow conditions were estimated using the anticipated peak flow rate for each storm event and the channel topography at each crossing location. These discussions are presented below.

Peak Flows

The peak flows were estimated using the Soil Conservation Service (SCS) graphical peak discharge method described in the U.S. Department of Agriculture Technical Release 55 (TR-55). The calculations were performed using the Watershed Modeling System (WMS 10.1) software[1]. Watershed characteristics were derived from the following data sources.

- The watershed topography was derived using Digital Elevation Model (DEM) data at 10-foot contour resolution publically available from the U.S. Geological Survey (USGS) National Elevation Dataset (NED).

[1] http://www.aquaveo.com/software/wms-watershed-modeling-system-introduction

- The land cover characteristics were derived from the National Land Cover Database 2011 publically available from the USGS Land Cover Institute. The Curve Numbers (CN)[2] were assigned using TR-55 Tables 2-2a-c.
- The Time of Concentration (Tc) was developed using the Watershed Lag method, described in the U.S. Department of Agriculture National Engineering Handbook, Part 630 Hydrology, Chapter 15.
- The precipitation depths were determined using NOAA's National Weather Service Precipitation Frequency Data Server.

The drainage areas that contribute stormwater runoff to each crossing locations are shown in Figures 1a, 1b, and 1c. Since the Unnamed Tributary to Quaker Swamp ultimately drains to Quaker Swamp, the drainage area contributing to the crossing at MP 49.5 (Quaker Swamp) includes the drainage area contributing to the crossing at MP 50.2 (Unnamed Tributary to Quaker Swamp).

The drainage area characteristics and corresponding peaks flows for the 24-hour 1-year storm are listed in Table 1-a and those for the 24-hour 2-year storm are listed in Table 1-b.

Table 1-a: Drainage Area Characteristics and Peak Flows for the 24-hour 1-year Storm

	Crossing Location		
Drainage Area Characteristics	**MP 49.5: Quaker Swamp**	**MP 50.2: UNT to Quaker Swamp**	**MP 56.1: Cohoon Creek**
Tc[3], hours	3.19	8.55	11.56
Drainage Area, acres	5,297	4,894	10,173
Precipitation Depth, in	3.0	3.0	3.0
CN	68	67	73
Peak Flow, cfs	651	276	658

CN= Curve Number; Tc= Time of concentration; cfs= cubic feet per second.

Table 1-b: Drainage Area Characteristics and Peak Flows for the 24-hour 2-year Storm

	Crossing Location		
Drainage Area Characteristics	**MP 49.5: Quaker Swamp**	**MP 50.2: UNT to Quaker Swamp**	**MP 56.1: Cohoon Creek**
Tc, hours	3.19	8.55	11.56
Drainage Area, acres	5,297	4,894	10,173
Precipitation Depth, in	3.7	3.7	3.7
CN	68	67	73
Peak Flow, cfs	1,141	471	1,033

2 CN is based on soils, plant cover, and amount of impervious areas, interception, and surface storage. High CN values cause most of the rainfall to appear as runoff while lower values correspond to an increased ability of the soil to retain rainfall, and will produce much less runoff.

3 Time of concentration is the time for runoff to travel from the hydraulically most distant point of the watershed to a point of interest within the watershed.

CN= Curve Number; Tc= Time of concentration; cfs= cubic feet per second.

Water Depths and Flow Velocities

The water depths and the flow velocities were estimated using the peak flow calculations (summarized in Section 3.1) and topographies of the channel cross-sections. The channel characteristics were derived from the following data sources.

- The topographies of the channel cross-sections were derived with ArcGIS from the Virginia LiDAR Dataset, project USGS Eleven County Virginia LiDAR - ARRA LiDAR, 2011, publically available from the Virginia Geographic Information Network (VGIN). The channel cross-sections are shown in Figures 2a, 2b, and 2c.
- Based on wetland and waterbody surveys (See Attachment 1), the water depth at each crossing location is considered to be negligible prior to each storm event.
- The channel slopes were derived from the publically available USGS National Hydrography Date Set and WMS.
- The Manning's "n", or the roughness factor of the channel, was chosen to be n=0.05 using hydrology of nearby streams (Flood Insurance Study, City of Suffolk, Virginia, Independent City, FEMA, 2015).

The cross-sectional areas of the channels were computed using Manning's equation for flow through rectangular channel as described by Equation 1.

Equation 1:

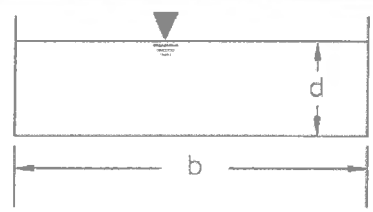
$$Q = Av$$

$$v = (1.486/n)R_h^{2/3}S^{1/2}$$

$$R_h = A/W_p$$

where,

Q: peak flow
A: cross-sectional area
v: velocity
n: Manning's "n" (roughness factor)
R_h: hydraulic radius
S: channel slope
W_p: wetted perimeter



b: channel width
d: channel depth

The calculations of water depths and flow velocities for the 24-hour 1-year storm are summarized in Table 2-a and those for the 24-hour 2-year storm are summarized in Table 2-b.

Table 2-a: Water Depth and Flow Velocity Calculations for the 24-hour 1-year Storm

Crossing Location	24-hr 1-yr Runoff Q, cfs	Approx. Q, cfs	d, ft	A, sf	W_p, ft	n	S, ft/ft	b, ft	R_h, ft	v, ft/s
MP 49.5: Quaker Swamp	651	652	**2.80**	504	185.60	0.05	0.0005	180	2.72	**1.29**
MP 50.2: UNT to Quaker Swamp	276	279	**1.33**	226	172.66	0.05	0.0012	170	1.31	**1.23**
MP 56.1: Cohoon Creek	658	660	**1.55**	225	148.10	0.05	0.0056	145	1.52	**2.94**

Table 2-b: Water Depth and Flow Velocity Calculations for the 24-hour 2-year Storm

Crossing Location	24-hr 2-yr Runoff Q, cfs	Approx. Q, cfs	d, ft	A, sf	W_p, ft	n	S, ft/ft	b, ft	R_h, ft	v, ft/s
MP 49.5: Quaker Swamp	1,141	1,143	**3.94**	709	187.88	0.05	0.0005	180	3.77	**1.61**
MP 50.2: UNT to Quaker Swamp	471	472	**1.83**	311	173.66	0.05	0.0012	170	1.79	**1.52**
MP 56.1: Cohoon Creek	1,033	1,039	**2.04**	296	149.08	0.05	0.0056	145	1.98	**3.51**

Conclusions

The stormwater runoff peak flows resulting from the 24-hour 1-year storm and the 24-hour 2-year storm are reasonably expected to impact construction by raising water depths and developing water flows through wetland channels crossed by pipeline construction at MP 49.5: Quaker Swamp, MP 50.2: UNT to Quaker Swamp, and MP 56.1: Cohoon Creek.

The water depths and flow velocities that are estimated to occur at peak flow conditions are summarized in Table 3.

Table 3: Estimated Water Depth and Flow Velocities at Peak Flow Conditions

	24-hour 1-year Storm		24-hour 2-year Storm	
Crossing Location	**Water Depth, ft**	**Flow Velocity, ft/s**	**Water Depth, ft**	**Flow Velocity, ft/s**
MP 49.5: Quaker Swamp	2.80	1.29	3.94	1.61
MP 50.2: UNT to Quaker Swamp	1.33	1.23	1.83	1.52
MP 56.1: Cohoon Creek	1.55	2.94	2.04	3.51

The 24-hour 1-year storm is estimated to raise the water depths approximately to 1-3 feet above ground surface and develop water velocities 1-3 feet/second at the evaluated crossing locations. The 24-hour 2-year storm is estimated to raise the waters depths approximately 2-4 feet above ground surface and develop water velocity 1.5-3.5 feet/second at the evaluated crossing locations.

3. CONSTRUCTION METHODS AND CONTROL MEASURES

ERM understands that Atlantic is proposing to construct during low flow times of the year and when weather forecasts do not predict storm events. Based on the field surveys conducted by ERM during January 2016, the water levels within these wetland areas during the low rainfall periods of the year are expected to be low, less than a few inches above ground surface level in inundated areas. However, should a 1-year or 2-year storm event occur during construction, ERM's analysis shows that water depths could rise between 1 and 4 feet in portions of the wetland crossing areas. Based on manufacturer's specifications and ERM's pipeline construction experience throughout the United States and along the east coast, the installation and proper maintenance of silt fence should be adequate to contain sediment within the construction workspace when constructing where the depth of water is less than 2 feet.

Construction and maintenance specifications outlined in the Virginia Erosion and Sediment Control Handbook, STD & SPEC 3.05 (Silt Fence) and 3.27 (Turbidity Curtain) must be adhered to if congruent with the manufacturer's recommended installation and use. In the event of conflicting specifications, the manufacturer's recommendations on proper installation and use of a product must be followed. ERM understands that the primary silt fence product planned for use on the Atlantic Coast Pipeline is a patented BSRF product. In wetlands and waterbodies, the Priority 1 (green band) BSRF will be used, which is a heavy-duty silt fence material constructed with a 36-inch, non-woven, spun-bond fabric with an internal scrim incorporated into the fabric for additional strength and durability. The system utilizes wood stakes spaced at 4-feet intervals and a specific method of attachment. The system is functionally equivalent to wire back and metal steel post silt fence and is designed for the protection of high priority areas, including wetlands and waterbodies. Proper installation and daily inspection and maintenance of the BSRF in accordance with installation locations depicted in the site-specific construction alignment sheets prior to and during trenching operations, stockpiling of saturated trench material, lowering-in or floating the pipeline into the trench, and during backfilling of the trench should adequately contain trench spoils and turbidity within the confines of the construction right-of-way.

Based on ERM's hydrologic flow analysis described in section 2 above, water depth during the peak water flow period for the 1-year storm event could possibly exceed 2.8 feet at the Quaker Swamp crossing location, with a corresponding peak flow velocity of only 1.29 feet per second. In the unlikely occurrence of an unexpected 2-year storm event, the deepest water would again occur at the Quaker Swamp crossing location with a potential peak depth of 3.9 feet, and a corresponding peak flow velocity of 1.6 feet per second. In these and other areas where the depth of inundated water exceeds 2 feet at initial BSRF installation or if, during construction, water levels are expected to rise above a 2-foot depth because of an unpredicted storm event, Type 2

turbidity curtains should be installed behind and in addition to the BSRF, if the BRSF was previously installed to contain sediment within the construction workspace. Peak flow velocities of 1.6 feet per second or less are not expected to affect the ability of the turbidity curtain to function as designed.

If sections of these wetlands contain waters deeper than 2 feet at initial installation, turbidity curtains would be deployed in place of, or in addition to, silt fence. In selecting and installing turbidity curtains, Atlantic should adhere to the construction and maintenance specifications outlined in the VESCH Std. & Spec. 3.27 (Turbidity Curtain). The type of curtain should be selected based on the anticipated flow conditions. The ends of the curtain should extend to the edge of the inundated areas containing, or expected to contain water depths greater than two feet to allow sediments to resettle in areas with limited flow. BSRF may be required at the ends of the curtains to direct suspended sediment into shallower, low-flow areas.

Throughout the construction process, Atlantic should also follow the Federal Energy Regulatory Commission (FERC) Wetland and Waterbody Construction and Mitigation Procedures to avoid or minimize impacts on water quality. Environmental Inspectors should perform daily inspections of all temporary erosion and sediment control measures in accordance with Atlantic's approved stormwater pollution prevention plan, FERC requirements, and associated regulations, where applicable.

Prepared by:

Steve Holden, CPSS, CPESC
ERM

ATTACHMENT 1

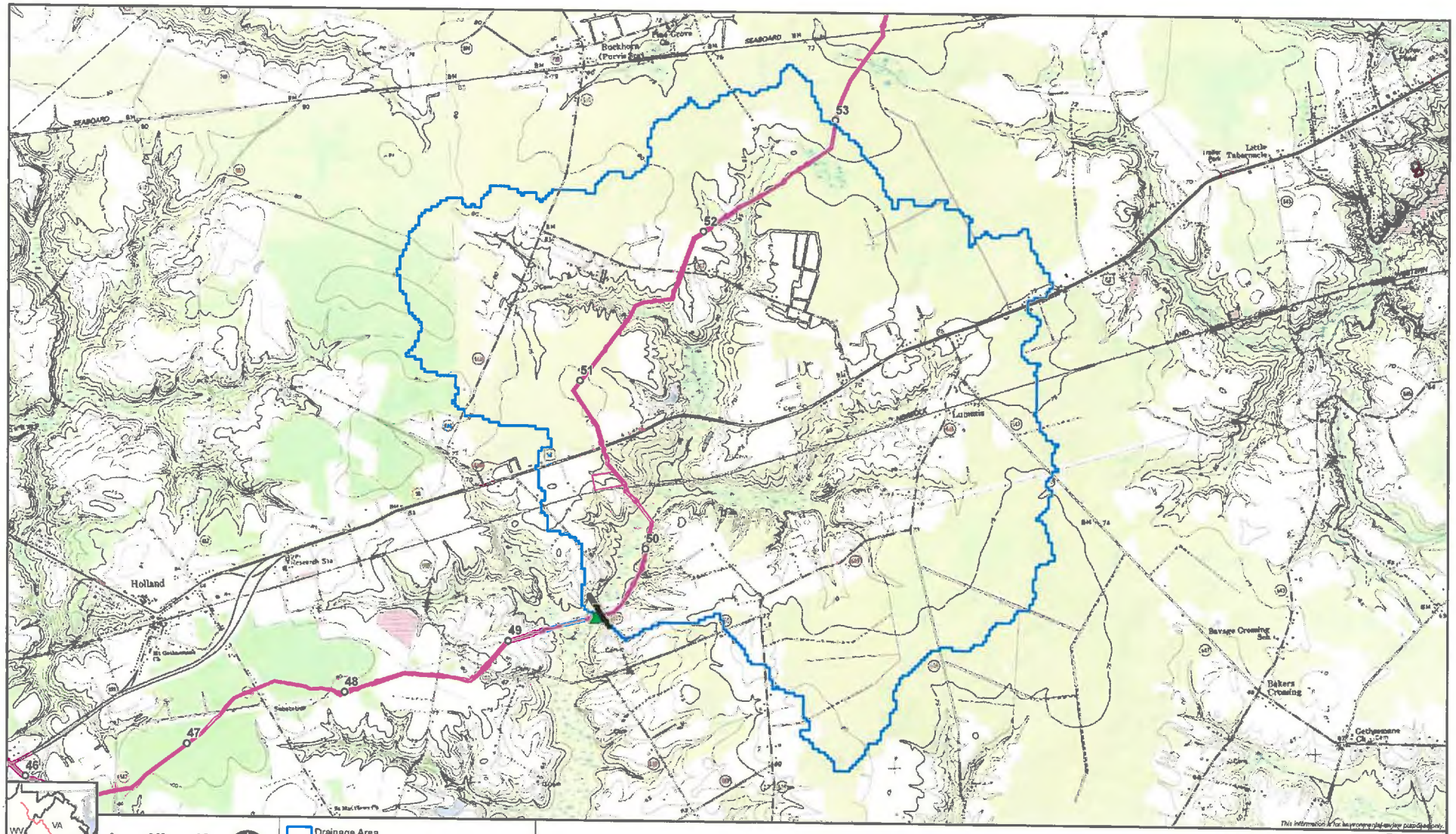


Figure 1-a MP 49.5: Quaker Swamp

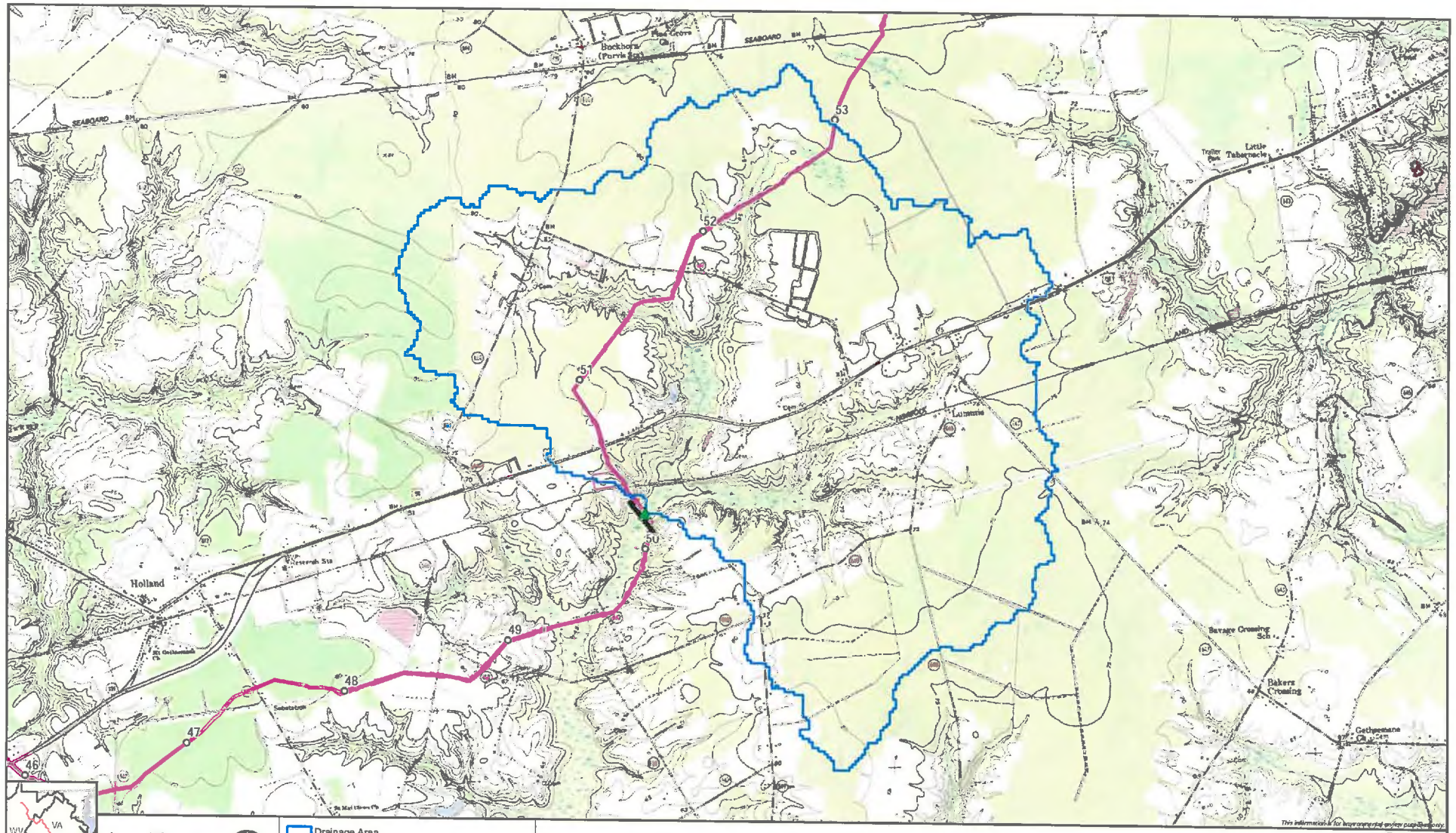


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Figure 1-b MP 50.2: Unnamed Tributary (UNT) to Quaker Swamp

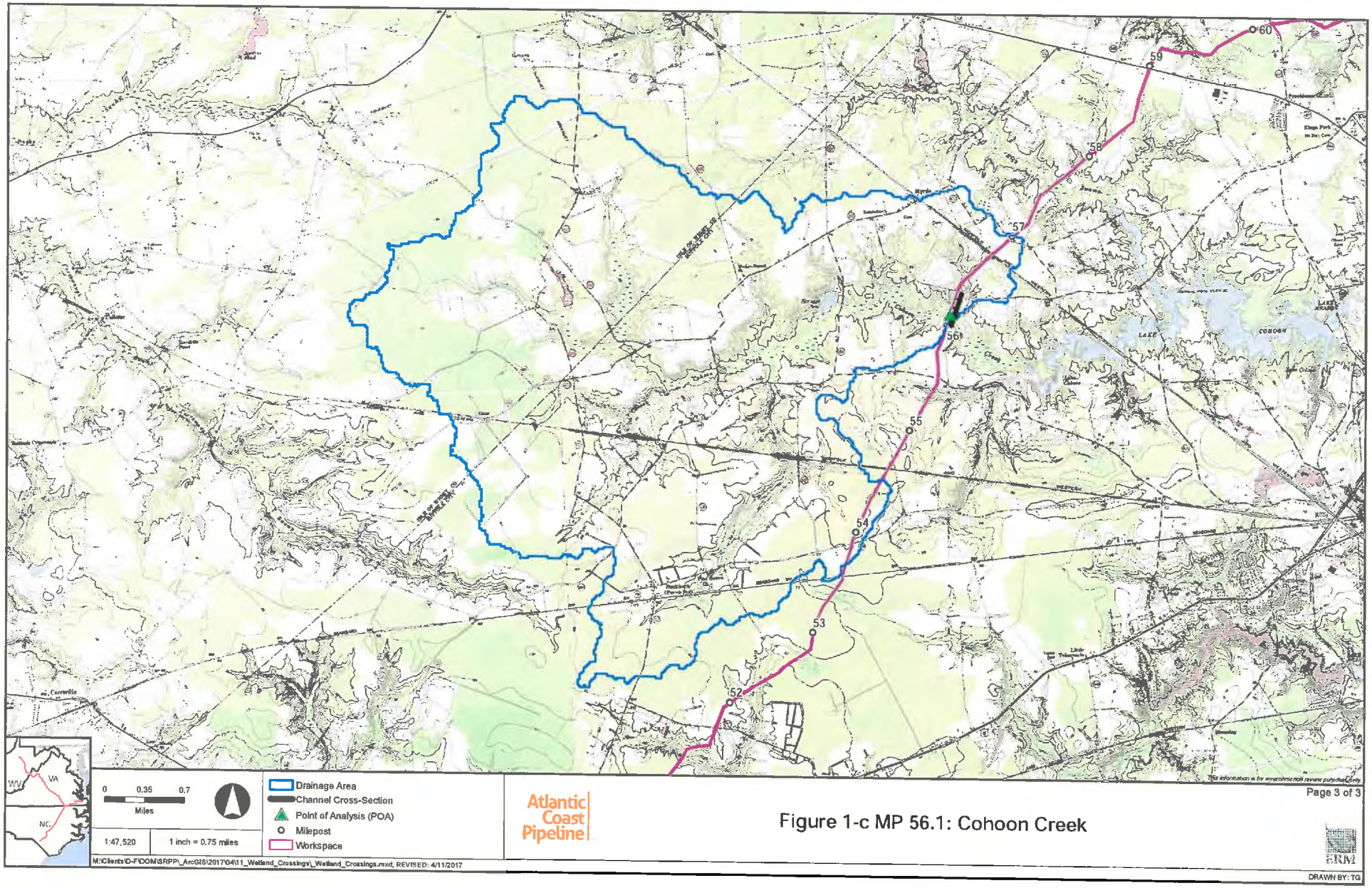

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Figure 1-c MP 56.1: Cohoon Creek

ATTACHMENT 2

Figure 2-a
MP: 49.5 Quaker Swamp

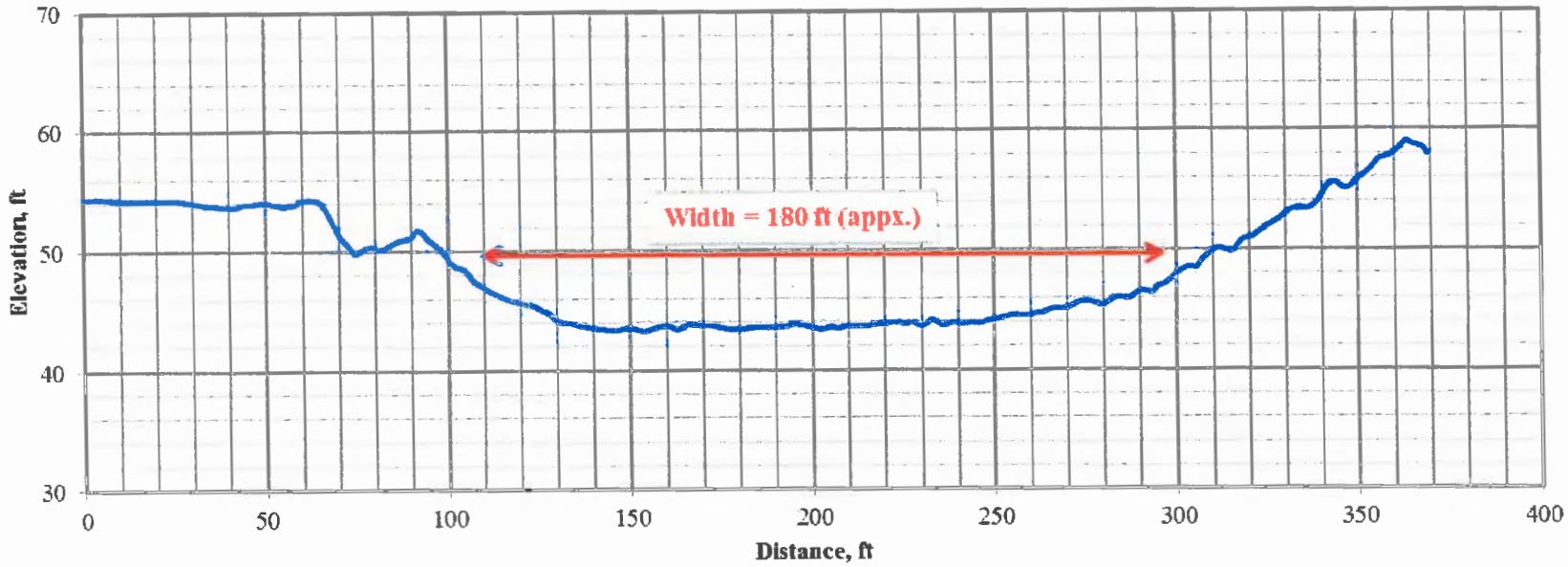


Figure 2-b
MP 50.2: UNT to Quaker Swamp

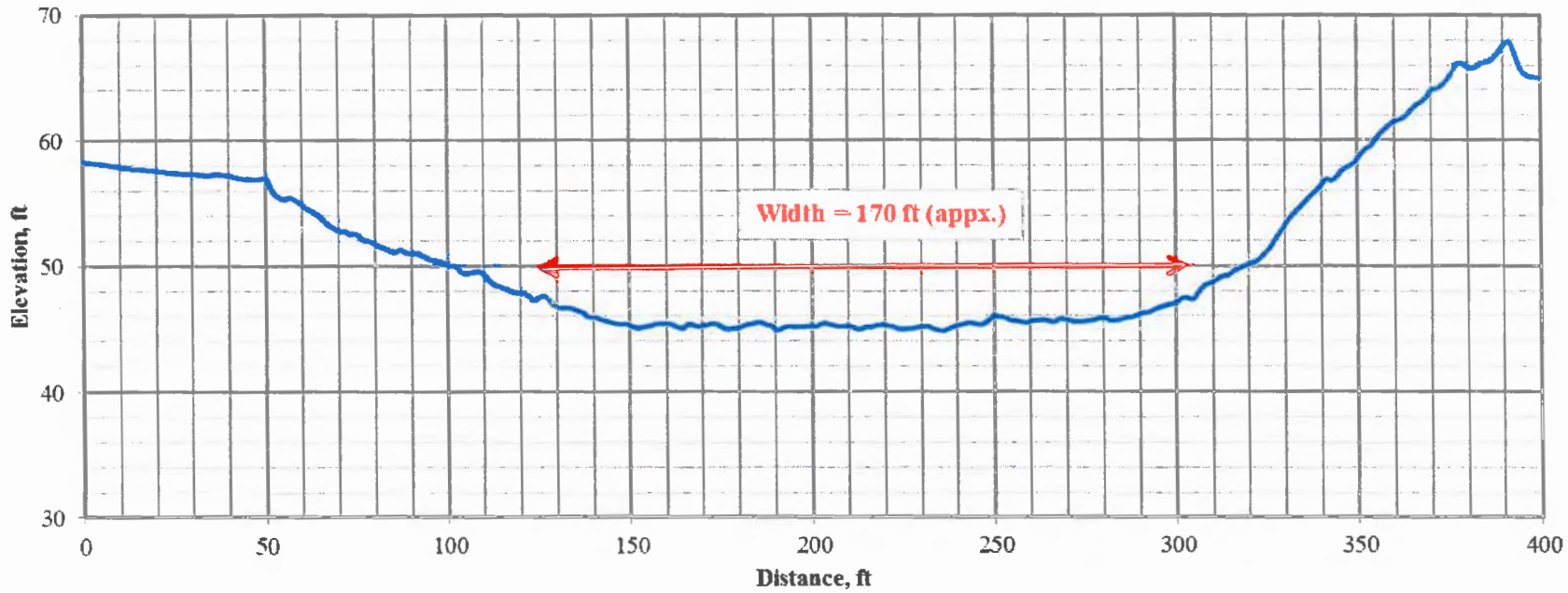
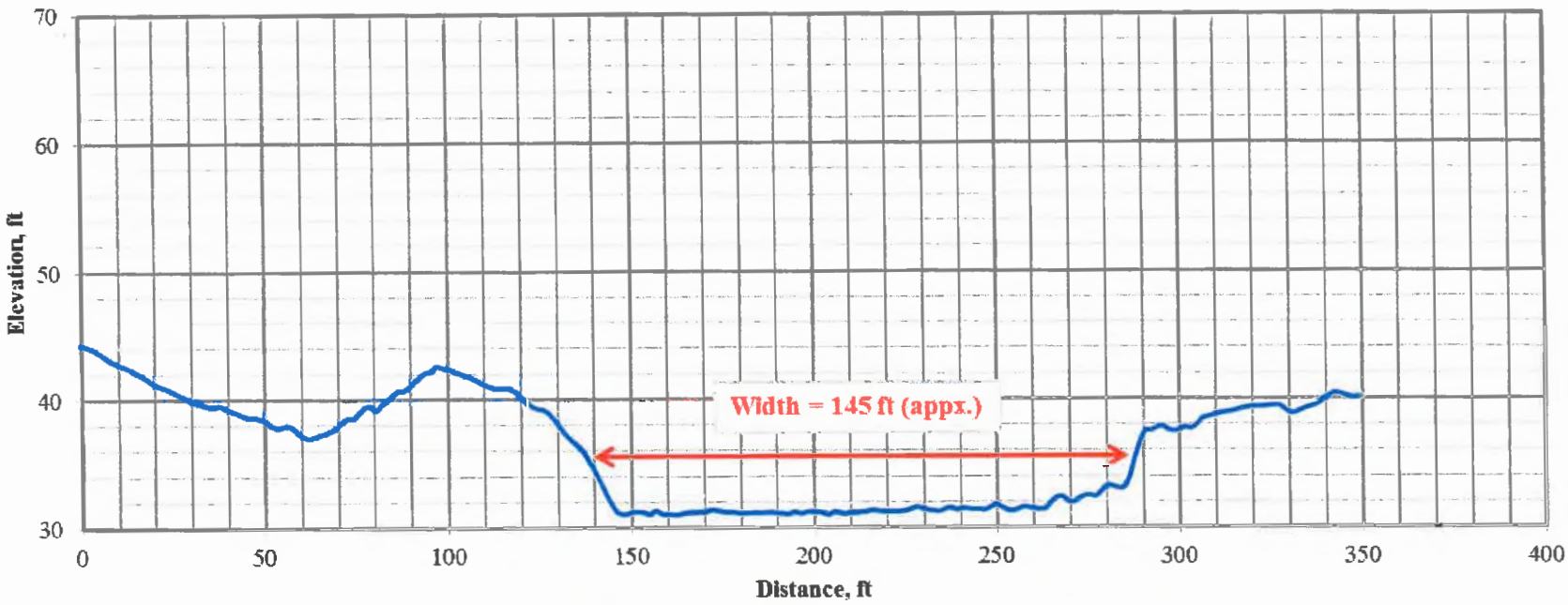


Figure 2-c
MP 56.1: Cohoon Creek



ATTACHMENT 3

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 1/13/16

Applicant/Owner: Dominion State: VA Sampling Point: WSUD 025F.W

Investigator(s): L. Roper S. Josefa Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Drainage Local relief (concave, convex, none): None Slope (%): N/A

Subregion (LRR or MLRA): LRRT Lat: 36.698843 Long: -76.732158 Datum: WGS84

Soil Map Unit Name: Levy silty clay loam NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____	Is the Sampled Area within a Wetland? Yes X No ____
Hydric Soil Present?	Yes X	No ____	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:

NCWAM: Bottomland Hardwood Forest

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Inundation Visible on Aerial Imagery (B7)
- X Water-Stained Leaves (B9)
- ____ Aquatic Fauna (B13)
- ____ Marl Deposits (B15) (LRR U)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Oxidized Rhizospheres along Living Roots (C3)
- ____ Presence of Reduced Iron (C4)
- ____ Recent Iron Reduction in Tilled Soils (C6)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Moss Trim Lines (B16)
- ____ Dry-Season Water Table (C2)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ____ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes X	No ____	Depth (inches): 1
Saturation Present? (includes capillary fringe)	Yes X	No ____	Depth (inches): 1

Wetland Hydrology Present? Yes X No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Portions of wetland are inundated

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: WSUO025F.W

Tree Stratum (Plot size: 30X30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus michauxii	10	Y	FACW
2. Acer rubrum	25	Y	FAC
3. Ilex opaca	10	Y	FAC
4.			
5.			
6.			
7.			
8.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		
Sapling/Shrub Stratum (Plot size: 30X30ft)			
1. Ilex opaca	10	Y	FAC
2. Acer rubrum	20	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		
Herb Stratum (Plot size: 30X30ft)			
1. Arundinaria gigantea	20	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		
Woody Vine Stratum (Plot size: 30X30ft)			
1. Smilax rotundifolia	15	Y	FAC
2.			
3.			
4.			
5.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (If observed, list morphological adaptations below).

WS40025f_W

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-15	10YR 3/1	100					LFS	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) (LRR P, T, U)
- ___ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ___ Muck Presence (A8) (LRR U)
- ___ 1 cm Muck (A9) (LRR P, T)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (MLRA 150A)
- ___ Sandy Mucky Mineral (S1) (LRR O, S)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- X Dark Surface (S7) (LRR P, S, T, U)
- ___ Polyvalue Below Surface (S8) (LRR S, T, U)
- ___ Thin Dark Surface (S9) (LRR S, T, U)
- ___ Loamy Mucky Mineral (F1) (LRR O)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (LRR U)
- ___ Depleted Ochric (F11) (MLRA 151)
- ___ Iron-Manganese Masses (F12) (LRR O, P, T)
- ___ Umbric Surface (F13) (LRR P, T, U)
- ___ Delta Ochric (F17) (MLRA 151)
- ___ Reduced Vertic (F18) (MLRA 150A, 150B)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR O)
- ___ 2 cm Muck (A10) (LRR S)
- ___ Reduced Vertic (F18) (outside MLRA 150A,B)
- ___ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes X No ____

Remarks:

could not auger below 15 inches, water table.

Wetland data point wsuo025f_w facing southwest.

Wetland data point wsuo025f_w facing southeast.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 01/13/16

Applicant/Owner: DOMINION State: VA Sampling Point: WSUO025-u

Investigator(s): L. Roper, S. Josefa Section, Township, Range: N/A

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): none Slope (%): N/A

Subregion (LRR or MLRA): LRRT Lat: 36.68850 Long: -76.73226 Datum: WGS84

Soil Map Unit Name: Levy silty clay loam NWI classification: UPLAND

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes X	No ____
Hydric Soil Present?	Yes ____	No X
Wetland Hydrology Present?	Yes ____	No X

Is the Sampled Area within a Wetland? Yes ____ No X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (LRR U)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ____	No X	Depth (inches): N/A
Water Table Present?	Yes ____	No X	Depth (inches): >20
Saturation Present? (includes capillary fringe)	Yes ____	No X	Depth (inches): >20

Wetland Hydrology Present? Yes ____ No X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WSuo025_u

Tree Stratum (Plot size: 30x30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	15	Y	FAC
2. Quercus rubra	5	N	FACU
3. Acer rubrum	20	Y	FAC
4. Ilex opaca	10	Y	FAC
5.			
6.			
7.			
8.			
	50 = Total Cover		
50% of total cover: 25	20% of total cover: 10		

Sapling/Shrub Stratum (Plot size: 30x30ft)			
1. Ilex opaca	5	Y	FAC
2. Acer rubrum	5	Y	FAC
3. Liriodendron tulipifera	5	Y	FAC
4.			
5.			
6.			
7.			
8.			
	15 = Total Cover		
50% of total cover: 7.5	20% of total cover: 3		

Herb Stratum (Plot size: 30x30ft)			
1. Ligustrum sinense	10	Y	FAC
2. Arundinaria gigantea	10	Y	FACW
3. Chasmanthium latifolium	10	Y	FAC
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	30 = Total Cover		
50% of total cover: 15	20% of total cover: 6		

Woody Vine Stratum (Plot size: 30x30ft)			
1. Smilax rotundifolia	15	Y	FAC
2. Vitis rotundifolia	5	Y	FAC
3.			
4.			
5.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 11 (A)

Total Number of Dominant Species Across All Strata: 11 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ___

Remarks: (If observed, list morphological adaptations below).

WS4025-4

SOIL

Sampling Point: _____

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/2	100					FS	>30% uncoated sand grains
10-20	10YR 5/6	100					SCL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) (LRR P, T, U)
- ___ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ___ Muck Presence (A8) (LRR U)
- ___ 1 cm Muck (A9) (LRR P, T)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (MLRA 150A)
- ___ Sandy Mucky Mineral (S1) (LRR O, S)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (LRR P, S, T, U)
- ___ Polyvalue Below Surface (S8) (LRR S, T, U)
- ___ Thin Dark Surface (S9) (LRR S, T, U)
- ___ Loamy Mucky Mineral (F1) (LRR O)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (LRR U)
- ___ Depleted Ochric (F11) (MLRA 151)
- ___ Iron-Manganese Masses (F12) (LRR O, P, T)
- ___ Umbric Surface (F13) (LRR P, T, U)
- ___ Delta Ochric (F17) (MLRA 151)
- ___ Reduced Vertic (F18) (MLRA 150A, 150B)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR O)
- ___ 2 cm Muck (A10) (LRR S)
- ___ Reduced Vertic (F18) (outside MLRA 150A,B)
- ___ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Upland data point wsuo025_u facing northwest.

Upland data point wsuo025_u facing northeast.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 11/2/16

Applicant/Owner: Dominion State: VA Sampling Point: [illegible]

Investigator(s): ESI- Benton, Roper Section, Township, Range: none

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 3-7

Subregion (LRR or MLRA): LRR T U Lat: 36.79319 Long: -76.73602 Datum: WGS84

Soil Map Unit Name: Nansemond loamy fine sand NWI classification: PFO

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓ No ____	Is the Sampled Area within a Wetland? Yes ✓ No ____
Hydric Soil Present?	Yes ✓ No ____	
Wetland Hydrology Present?	Yes ✓ No ____	

Remarks:

NCWAM: Riverine Swamp Forest

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✓ Saturation (A3)
- ✓ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (LRR U)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ✓ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ✓ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): NA
Water Table Present?	Yes ✓	No ____	Depth (inches): 16
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 8

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

portions of wetland inundated

Butressed Trees

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WSub 048f_W

Tree Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Ilex opaca	5	N	FAC
2. Carpinus caroliniana	10	N	FAC
3. Acer rubrum	15	Y	FAC
4. Liquidambar styraciflua	15	Y	FAC
5. Taxodium distichum	10	N	OBL
6.			
7.			
8.			
	55 = Total Cover		
50% of total cover: 27.5	20% of total cover: 11		

Sapling/Shrub Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Quercus michauxii	5	N	FACW
2. Carpinus caroliniana	10	Y	FAC
3. Acer rubrum	5	N	FAC
4. Liquidambar styraciflua	5	N	FAC
5. Ligustrum sinense	10	Y	FAC
6.			
7.			
8.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		

Herb Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Osmundastrum cinnamomeum	20	Y	FACW
2. Woodwardia areolata	10	N	OBL
3. Arundinaria gigantea	15	Y	FACW
4. Saururus cernuus	15	Y	OBL
5. Fraxinus pennsylvanica	10	N	FACW
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	70 = Total Cover		
50% of total cover: 35	20% of total cover: 14		

Woody Vine Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Smilax rotundifolia	10	Y	FAC
2.			
3.			
4.			
5.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WSW048E

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/3	100					L	
6-14	2.5Y 4/2	85	5YR 3/4	10	C	M	L	
			5YR 3/4	5	C	PL		
14-20	2.5Y 4/1	90	5YR 3/4	10	C	M	L	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) (LRR P, T, U)
- ___ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ___ Muck Presence (A8) (LRR U)
- ___ 1 cm Muck (A9) (LRR P, T)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (MLRA 150A)
- ___ Sandy Mucky Mineral (S1) (LRR O, S)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (LRR P, S, T, U)
- ___ Polyvalue Below Surface (S8) (LRR S, T, U)
- ___ Thin Dark Surface (S9) (LRR S, T, U)
- ___ Loamy Mucky Mineral (F1) (LRR O)
- ___ Loamy Gleyed Matrix (F2)
- ✓ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (LRR U)
- ___ Depleted Ochric (F11) (MLRA 151)
- ___ Iron-Manganese Masses (F12) (LRR O, P, T)
- ___ Umbric Surface (F13) (LRR P, T, U)
- ___ Delta Ochric (F17) (MLRA 151)
- ___ Reduced Vertic (F18) (MLRA 150A, 150B)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR O)
- ___ 2 cm Muck (A10) (LRR S)
- ___ Reduced Vertic (F18) (outside MLRA 150A,B)
- ___ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Wetland data point wsuo048f_w facing north.

Wetland data point wsuo048f_w facing south.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 11/2/16

Applicant/Owner: Dominion State: VA Sampling Point: wsuD4Bc-w

Investigator(s): ESI-Benton, Roper Section, Township, Range: none

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%): 3-7

Subregion (LRR or MLRA): LRR T U Lat: 36.67895 Long: -76.74141 Datum: WGS84

Soil Map Unit Name: Rains fine sandy loam NWI classification: PEM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____
Hydric Soil Present?	Yes ✓	No ____
Wetland Hydrology Present?	Yes ✓	No ____

Is the Sampled Area within a Wetland? Yes ✓ No ____

Remarks:
powerline easement

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ✓ Surface Water (A1)
- ✓ High Water Table (A2)
- ✓ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ✓ Inundation Visible on Aerial Imagery (B7)
- ✓ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (LRR U)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ✓ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ✓ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ✓	No ____	Depth (inches): 1"
Water Table Present?	Yes ✓	No ____	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): surface

Wetland Hydrology Present? Yes ✓ No ____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WSW0048e.w

Tree Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
50% of total cover: ____	20% of total cover: ____		
Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			
1. none			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
50% of total cover: ____	20% of total cover: ____		
Herb Stratum (Plot size: 30ft x 30ft)			
1. Saccharum giganteum	5	N	FACW
2. Fraxinus pennsylvanica	10	N	FACW
3. Rubus argutus	10	N	FAC
4. Woodwardia areolata	20	Y	OBL
5. Persicaria sagittata	80	Y	OBL
6. Arundinaria gigantea	20	Y	FACW
7.			
8.			
9.			
10.			
11.			
12.			
	115 = Total Cover		
50% of total cover: 57.5	20% of total cover: 23		
Woody Vine Stratum (Plot size: 30ft x 30ft)			
1. none			
2.			
3.			
4.			
5.			
	0 = Total Cover		
50% of total cover: ____	20% of total cover: ____		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species	____	x 1 = ____
FACW species	____	x 2 = ____
FAC species	____	x 3 = ____
FACU species	____	x 4 = ____
UPL species	____	x 5 = ____
Column Totals:	____ (A)	____ (B)

Prevalence Index = B/A = ____

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WS160048e-w

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100					SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) (LRR P, T, U)
- ___ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ___ Muck Presence (A8) (LRR U)
- ___ 1 cm Muck (A9) (LRR P, T)
- ___ Depleted Below Dark Surface (A11)
- ✓ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (MLRA 150A)
- ___ Sandy Mucky Mineral (S1) (LRR O, S)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (LRR P, S, T, U)
- ___ Polyvalue Below Surface (S8) (LRR S, T, U)
- ___ Thin Dark Surface (S9) (LRR S, T, U)
- ___ Loamy Mucky Mineral (F1) (LRR O)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (LRR U)
- ___ Depleted Ochric (F11) (MLRA 151)
- ___ Iron-Manganese Masses (F12) (LRR O, P, T)
- ___ Umbric Surface (F13) (LRR P, T, U)
- ___ Delta Ochric (F17) (MLRA 151)
- ___ Reduced Vertic (F18) (MLRA 150A, 150B)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR O)
- ___ 2 cm Muck (A10) (LRR S)
- ___ Reduced Vertic (F18) (outside MLRA 150A,B)
- ___ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✓ No ___

Remarks:

Wetland data point wsuo048e_w facing north.

Wetland data point wsuo048e_w facing south.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ALP City/County: Suffolk Sampling Date: 11/2/16

Applicant/Owner: Dominion State: VA Sampling Point: WSUC078.u

Investigator(s): ESI- Benton, Roper Section, Township, Range: none

Landform (hillslope, terrace, etc.): drainage Local relief (concave, convex, none): concave Slope (%) 3-7

Subregion (LRR or MLRA): LRR T U Lat: 36.67930 Long: -76.73592 Datum: WGS84

Soil Map Unit Name: Nansemond loamy fine sand NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

Are Vegetation ____, Soil ____, or Hydrology ____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No ____	Is the Sampled Area within a Wetland? Yes ____ No ✓
Hydric Soil Present?	Yes ____	No ✓	
Wetland Hydrology Present?	Yes ____	No ✓	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1)
- ___ Sediment Deposits (B2)
- ___ Drift Deposits (B3)
- ___ Algal Mat or Crust (B4)
- ___ Iron Deposits (B5)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Aquatic Fauna (B13)
- ___ Marl Deposits (B15) (LRR U)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Surface Soil Cracks (B6)
- ___ Sparsely Vegetated Concave Surface (B8)
- ___ Drainage Patterns (B10)
- ___ Moss Trim Lines (B16)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Geomorphic Position (D2)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)
- ___ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ____	No ✓	Depth (inches): NA
Water Table Present?	Yes ____	No ✓	Depth (inches): >20
Saturation Present? (includes capillary fringe)	Yes ✓	No ____	Depth (inches): 18

Wetland Hydrology Present? Yes ____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants.

Sampling Point: WSW048_u

Tree Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Liriodendron tulipifera	10	Y	FACU
2. Acer rubrum	5	N	FAC
3. Carpinus caroliniana	10	Y	FAC
4. Quercus michauxii	5	N	FACW
5. Ilex opaca	10	Y	FAC
6. Pinus taeda	5	N	FAC
7.			
8.			
	45 = Total Cover		
50% of total cover: 22.5	20% of total cover: 9		

Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			
1. Carpinus caroliniana	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Herb Stratum (Plot size: 30ft x 30ft)			
1. Arundinaria gigantea	25	Y	FACW
2. Ligustrum sinense	10	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	35 = Total Cover		
50% of total cover: 17.5	20% of total cover: 7		

Woody Vine Stratum (Plot size: 30ft x 30ft)			
1. Smilax rotundifolia	10	Y	FAC
2. Vitis rotundifolia	10	Y	FAC
3.			
4.			
5.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 8 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 87% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ___ 1 - Rapid Test for Hydrophytic Vegetation
- ✓ 2 - Dominance Test is >50%
- ___ 3 - Prevalence Index is ≤3.0[1]
- ___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ✓ No ___

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WG4-D048-ea

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/4	100					L	
4-16	2.5Y 5/1	70	10YR 5/6	30	C	M	L	
16-20	2.5Y 4/3	100	7.5YR 5/8	100	C	M	SL	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5)
- ___ Organic Bodies (A6) (LRR P, T, U)
- ___ 5 cm Mucky Mineral (A7) (LRR P, T, U)
- ___ Muck Presence (A8) (LRR U)
- ___ 1 cm Muck (A9) (LRR P, T)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Coast Prairie Redox (A16) (MLRA 150A)
- ___ Sandy Mucky Mineral (S1) (LRR O, S)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Dark Surface (S7) (LRR P, S, T, U)
- ___ Polyvalue Below Surface (S8) (LRR S, T, U)
- ___ Thin Dark Surface (S9) (LRR S, T, U)
- ___ Loamy Mucky Mineral (F1) (LRR O)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Marl (F10) (LRR U)
- ___ Depleted Ochric (F11) (MLRA 151)
- ___ Iron-Manganese Masses (F12) (LRR O, P, T)
- ___ Umbric Surface (F13) (LRR P, T, U)
- ___ Delta Ochric (F17) (MLRA 151)
- ___ Reduced Vertic (F18) (MLRA 150A, 150B)
- ___ Piedmont Floodplain Soils (F19) (MLRA 149A)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 149A, 153C, 153D)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (LRR O)
- ___ 2 cm Muck (A10) (LRR S)
- ___ Reduced Vertic (F18) (outside MLRA 150A,B)
- ___ Piedmont Floodplain Soils (F19) (LRR P, S, T)
- ___ Anomalous Bright Loamy Soils (F20) (MLRA 153B)
- ___ Red Parent Material (TF2)
- ___ Very Shallow Dark Surface (TF12)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland data point wsuo048_u facing north.

Upland data point wsuo048_u facing south.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 1/5/16

Applicant/Owner: Dominion State: VA Sampling Point: wsup032Ew

Investigator(s): ESI - M. Smith, N. Murphrey Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRRT Lat: 36.7578 Long: 76.6878 Datum: WGS84

Soil Map Unit Name: Kenansville loamy sand, 0-4% slopes NWI classification: PFO6F

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes ✓ No _____
Hydric Soil Present?	Yes ✓	No _____	
Wetland Hydrology Present?	Yes ✓	No _____	

Remarks:

NCWAM: Riverine Swamp Forest

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- [x] Surface Water (A1)
- [x] High Water Table (A2)
- [x] Saturation (A3)
- [x] Water Marks (B1)
- [ ] Sediment Deposits (B2)
- [ ] Drift Deposits (B3)
- [ ] Algal Mat or Crust (B4)
- [ ] Iron Deposits (B5)
- [ ] Inundation Visible on Aerial Imagery (B7)
- [x] Water-Stained Leaves (B9)
- [ ] Aquatic Fauna (B13)
- [ ] Marl Deposits (B15) (LRR U)
- [ ] Hydrogen Sulfide Odor (C1)
- [ ] Oxidized Rhizospheres along Living Roots (C3)
- [ ] Presence of Reduced Iron (C4)
- [ ] Recent Iron Reduction in Tilled Soils (C6)
- [ ] Thin Muck Surface (C7)
- [ ] Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- [ ] Surface Soil Cracks (B6)
- [ ] Sparsely Vegetated Concave Surface (B8)
- [x] Drainage Patterns (B10)
- [x] Moss Trim Lines (B16)
- [ ] Dry-Season Water Table (C2)
- [ ] Crayfish Burrows (C8)
- [ ] Saturation Visible on Aerial Imagery (C9)
- [x] Geomorphic Position (D2)
- [ ] Shallow Aquitard (D3)
- [x] FAC-Neutral Test (D5)
- [ ] Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes ✓	No _____	Depth (inches): 5
Water Table Present?	Yes ✓	No _____	Depth (inches): surface
Saturation Present? (includes capillary fringe)	Yes ✓	No _____	Depth (inches): surface

Wetland Hydrology Present? Yes ✓ No _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wsup052fw

Tree Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Taxodium distichum	10	N	OBL
2. Nyssa biflora	40	Y	OBL
3. Liquidambar styraciflua	30	Y	FAC
4. Acer rubrum	20	Y	FAC
5.			
6.			
7.			
8.			
	100 = Total Cover		
50% of total cover: 50	20% of total cover: 20		

Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			
1. Clethra alnifolia	5	Y	FACW
2. Ilex opaca	5	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
50% of total cover: 5	20% of total cover: 2		

Herb Stratum (Plot size: 30ft x 30ft)			
1. Boehmeria cylindrica	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Woody Vine Stratum (Plot size: 30ft x 30ft)			
1. Gelsemium sempervirens	5	Y	FAC
2.			
3.			
4.			
5.			
	5 = Total Cover		
50% of total cover: 2.5	20% of total cover: 1		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 7 (A)

Total Number of Dominant Species Across All Strata: 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:
OBL species		x 1 =
FACW species		x 2 =
FAC species		x 3 =
FACU species		x 4 =
UPL species		x 5 =
Column Totals:	(A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: WSUP032FW

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 2/2	100					organic	fibrous organic
5-20	10YR 3/1	100					loam	mucky

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- [ ] Histosol (A1)
- [ ] Histic Epipedon (A2)
- [ ] Black Histic (A3)
- [ ] Hydrogen Sulfide (A4)
- [ ] Stratified Layers (A5)
- [ ] Organic Bodies (A6) **(LRR P, T, U)**
- [x] 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- [ ] Muck Presence (A8) **(LRR U)**
- [ ] 1 cm Muck (A9) **(LRR P, T)**
- [ ] Depleted Below Dark Surface (A11)
- [ ] Thick Dark Surface (A12)
- [ ] Coast Prairie Redox (A16) **(MLRA 150A)**
- [ ] Sandy Mucky Mineral (S1) **(LRR O, S)**
- [ ] Sandy Gleyed Matrix (S4)
- [ ] Sandy Redox (S5)
- [ ] Stripped Matrix (S6)
- [ ] Dark Surface (S7) **(LRR P, S, T, U)**
- [ ] Polyvalue Below Surface (S8) **(LRR S, T, U)**
- [ ] Thin Dark Surface (S9) **(LRR S, T, U)**
- [ ] Loamy Mucky Mineral (F1) **(LRR O)**
- [ ] Loamy Gleyed Matrix (F2)
- [ ] Depleted Matrix (F3)
- [ ] Redox Dark Surface (F6)
- [ ] Depleted Dark Surface (F7)
- [ ] Redox Depressions (F8)
- [ ] Marl (F10) **(LRR U)**
- [ ] Depleted Ochric (F11) **(MLRA 151)**
- [ ] Iron-Manganese Masses (F12) **(LRR O, P, T)**
- [ ] Umbric Surface (F13) **(LRR P, T, U)**
- [ ] Delta Ochric (F17) **(MLRA 151)**
- [ ] Reduced Vertic (F18) **(MLRA 150A, 150B)**
- [ ] Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- [ ] Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- [ ] 1 cm Muck (A9) **(LRR O)**
- [ ] 2 cm Muck (A10) **(LRR S)**
- [ ] Reduced Vertic (F18) **(outside MLRA 150A,B)**
- [ ] Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- [ ] Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- [ ] Red Parent Material (TF2)
- [ ] Very Shallow Dark Surface (TF12)
- [ ] Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ____

Remarks:

Wetland data point wsup032f_w facing north.

Wetland data point wsup032f_w facing northwest.

WETLAND DETERMINATION DATA FORM – Atlantic and Gulf Coastal Plain Region

Project/Site: ACP City/County: Suffolk Sampling Date: 1/5/16

Applicant/Owner: Dominion State: VA Sampling Point: WSUP032_U

Investigator(s): ESI. M.Smith, N.Murphro Section, Township, Range: NA

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR or MLRA): LRR T Lat: 36.7577 Long: -76.6879 Datum: WGS84

Soil Map Unit Name: Kenansville loamy sand, 0-4% slopes NWI classification: NA

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✓ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✓	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✓
Hydric Soil Present?	Yes _____	No ✓	
Wetland Hydrology Present?	Yes _____	No ✓	

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ☐ Surface Water (A1)
- ☐ High Water Table (A2)
- ☐ Saturation (A3)
- ☐ Water Marks (B1)
- ☐ Sediment Deposits (B2)
- ☐ Drift Deposits (B3)
- ☐ Algal Mat or Crust (B4)
- ☐ Iron Deposits (B5)
- ☐ Inundation Visible on Aerial Imagery (B7)
- ☐ Water-Stained Leaves (B9)
- ☐ Aquatic Fauna (B13)
- ☐ Marl Deposits (B15) (LRR U)
- ☐ Hydrogen Sulfide Odor (C1)
- ☐ Oxidized Rhizospheres along Living Roots (C3)
- ☐ Presence of Reduced Iron (C4)
- ☐ Recent Iron Reduction in Tilled Soils (C6)
- ☐ Thin Muck Surface (C7)
- ☐ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ☐ Surface Soil Cracks (B6)
- ☐ Sparsely Vegetated Concave Surface (B8)
- ☐ Drainage Patterns (B10)
- ☐ Moss Trim Lines (B16)
- ☐ Dry-Season Water Table (C2)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Geomorphic Position (D2)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)
- ☐ Sphagnum moss (D8) (LRR T, U)

Field Observations:

Surface Water Present?	Yes _____	No ✓	Depth (inches): NA
Water Table Present?	Yes _____	No ✓	Depth (inches): >20
Saturation Present? (includes capillary fringe)	Yes _____	No ✓	Depth (inches): >20

Wetland Hydrology Present? Yes _____ No ✓

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

VEGETATION (Four Strata) – Use scientific names of plants. Sampling Point: wsupl32-u

Tree Stratum (Plot size: 30ft x 30ft)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fagus grandifolia	20	N	FACU
2. Liquidambar styraciflua	35	Y	FAC
3. Ilex opaca	25	Y	FAC
4. Prunus serotina	25	Y	FACU
5.			
6.			
7.			
8.			
	105 = Total Cover		
50% of total cover: 52.5	20% of total cover: 21		

Sapling/Shrub Stratum (Plot size: 30ft x 30ft)			
1. Ilex opaca	15	Y	FAC
2. Fagus grandifolia	5	N	FACU
3. Carya cordiformis	20	Y	FAC
4.			
5.			
6.			
7.			
8.			
	40 = Total Cover		
50% of total cover: 20	20% of total cover: 8		

Herb Stratum (Plot size: 30ft x 30ft)			
1. Euonymus americanus	15	Y	FAC
2. Allium canadense	5	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
	20 = Total Cover		
50% of total cover: 10	20% of total cover: 4		

Woody Vine Stratum (Plot size: 30ft x 30ft)			
1. Lonicera japonica	50	Y	FACU
2. Smilax rotundifolia	20	Y	FAC
3. Vitis rotundifolia	10	N	FAC
4.			
5.			
	80 = Total Cover		
50% of total cover: 40	20% of total cover: 16		

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata: 9 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

Hydrophytic Vegetation Indicators:

- ☐ 1 - Rapid Test for Hydrophytic Vegetation
- ☒ 2 - Dominance Test is >50%
- ☐ 3 - Prevalence Index is ≤3.0[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Four Vegetation Strata:

Tree – Woody plants, excluding vines, 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/Shrub – Woody plants, excluding vines, less than 3 in. DBH and greater than 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vine – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes X No ____

Remarks: (If observed, list morphological adaptations below).

SOIL

Sampling Point: wsupD32_u

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					loam	
4-20	10YR 6/6	100					loam	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ Organic Bodies (A6) **(LRR P, T, U)**
- ☐ 5 cm Mucky Mineral (A7) **(LRR P, T, U)**
- ☐ Muck Presence (A8) **(LRR U)**
- ☐ 1 cm Muck (A9) **(LRR P, T)**
- ☐ Depleted Below Dark Surface (A11)
- ☐ Thick Dark Surface (A12)
- ☐ Coast Prairie Redox (A16) **(MLRA 150A)**
- ☐ Sandy Mucky Mineral (S1) **(LRR O, S)**
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Dark Surface (S7) **(LRR P, S, T, U)**
- ☐ Polyvalue Below Surface (S8) **(LRR S, T, U)**
- ☐ Thin Dark Surface (S9) **(LRR S, T, U)**
- ☐ Loamy Mucky Mineral (F1) **(LRR O)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ Marl (F10) **(LRR U)**
- ☐ Depleted Ochric (F11) **(MLRA 151)**
- ☐ Iron-Manganese Masses (F12) **(LRR O, P, T)**
- ☐ Umbric Surface (F13) **(LRR P, T, U)**
- ☐ Delta Ochric (F17) **(MLRA 151)**
- ☐ Reduced Vertic (F18) **(MLRA 150A, 150B)**
- ☐ Piedmont Floodplain Soils (F19) **(MLRA 149A)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 149A, 153C, 153D)**

Indicators for Problematic Hydric Soils[3]:

- ☐ 1 cm Muck (A9) **(LRR O)**
- ☐ 2 cm Muck (A10) **(LRR S)**
- ☐ Reduced Vertic (F18) **(outside MLRA 150A,B)**
- ☐ Piedmont Floodplain Soils (F19) **(LRR P, S, T)**
- ☐ Anomalous Bright Loamy Soils (F20) **(MLRA 153B)**
- ☐ Red Parent Material (TF2)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Upland data point wsup032_u facing northwest.

Upland data point wsup032_u facing southeast.

COMMONWEALTH of VIRGINIA

Marine Resources Commission
2600 Washington Avenue
Third Floor
Newport News, Virginia 23607

Molly Joseph Ward
Secretary of Natural Resources

John M.R. Bull
Commissioner

April 24, 2017

Ms. Julia Wellman
Department of Environmental Quality
Office of Environmental Impact Review
629 E. Main Street, 6th Floor
Richmond, VA 23219

Re: Atlantic Coast Pipeline Project
Federal Consistency Determination

Dear Ms. Wellman:

This will respond to your agency's request for review of the Federal Consistency Determination for the above-referenced project. Atlantic Coast Pipeline, LLC (Atlantic) requests authorization to construct and operate an interstate natural gas transmission pipeline, known as the Atlantic Coast Pipeline (ACP), that would provide natural gas to electric generation, distribution, and end use markets in Virginia and North Carolina. Specifically, you have asked if the project is consistent with the enforceable policies administered by the Virginia Marine Resources Commission (Commission) within the Commonwealth's Coastal Zone Management Program.

The ACP proposes impacts to three tidal waterways in the Cities of Chesapeake and Suffolk. The Commission, as the custodian of Virginia's submerged lands, has the proprietary authority and responsibility to issue permits for activities that take place over, under, through and on all submerged lands throughout the Commonwealth. This authority is based on the Commonwealth's ownership of submerged lands, as provided for in Chapter 12 of Title 28.2 of the Code of Virginia.

The project will additionally impact approximately 67,954 square feet (1.56 acres) of tidal wetlands in the City of Chesapeake. The Commission is acting as the local wetlands board and will be required to issue a permit, pursuant to Chapter 13 of Title 28.2 of the Code of Virginia, for the proposed project since the City of Chesapeake rescinded its adoption of the Wetlands Ordinance. The pipeline is also proposed to be directionally bored beneath tidal wetland areas in the City of Suffolk. No impacts to tidal wetlands are anticipated with these crossings.

For all proposed temporary and permanent tidal wetland impacts, VMRC recommends that the Final Environmental Impact Statement contain a copy of the final wetland mitigation plans for consideration by Commission staff. Additionally, Atlantic should implement the measures identified in their *Invasive Plant Species Management Plan* to minimize the potential introduction of the invasive common reed, *Phragmites sp.*, for all wetland crossing sites except for site wChro002.

For the jurisdictional stream crossings proposed by ACP within the coastal zone of Virginia, tidal and non-tidal, appropriate construction methodologies for buried utilities routinely permitted by the Commission include directional drill, cofferdam construction, dam and pump or flume-around technology to reduce impacts to marine fishery resources. Most of these crossings will utilize the aforementioned construction methodologies and best management practices. The Commission currently views this component of the project as consistent with its Subaqueous Guidelines and further recommends adherence to the Commission's standard instream permit conditions listed below:

(1) A "frac-out" contingency plan must be provided for any crossings utilizing the directional drill method to address potential frac-outs or related spills associated with any directional drilling activities;
(2) The instream construction activities shall be accomplished utilizing dam and pump, flume around or within cofferdams constructed of non-erodible materials in such a manner that no more than half the width of the waterway is obstructed at any point in time. All areas of State-owned bottom and adjacent lands disturbed by this activity shall be restored to their original contours and natural conditions within thirty (30) days from the date of completion of the authorized work. All excess materials shall be removed to an upland site and contained in such a manner to prevent its reentry into State waters;
(3) Erosion and sediment control measures shall be in conformance with the 1992 Third Edition of the Virginia Erosion and Sediment Control Handbook and shall be employed throughout construction.

For the proposed open cut crossings of Quaker Swamp and Cohoon Creek, we recommend that the erosion and sediment control measures outlined in the April 13, 2017, memorandum, from Environmental Resources Management (ERP) to Dominion, be followed as well as the Federal Energy Regulatory Commission (FERC) Wetland and Waterbody Construction and Mitigation Procedures. Additionally, we recommend that any trench excavation for the subject waterways be initiated only after verifying that no significant rainfall events are forecasted for the time period necessary to complete the open cut trench, pipe installation and backfilling operations (3 to 5 days). Provided these measures are agreed to, VMRC staff has no objection at this time for the proposed open cut crossings proposed for Quaker Swamp and Cohoon Creek.

Please be advised that the Commission's eventual permit action and identification of specific permit conditions cannot be finalized until completion of the NEPA documentation and our public interest permit review process. Any permit decision reached by the Commission will clarify the permit conditions that are necessary to insure consistency with the submerged lands, tidal wetlands and marine fishery elements of Virginia's Coastal Zone Management Program.

Should you have any questions regarding this letter, please feel free to contact me at (757) 247-2200.

Sincerely,

Randal D. Owen
Environmental Engineer

RDO/lra
HM
cc: John M. R. Bull, Commissioner
Tony Watkinson, Chief Habitat Management
Suffolk Wetlands Board

COMMONWEALTH of VIRGINIA

Randall P. Burdette
Executive Director

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5702 Gulfstream Road
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March 2, 2017

Ms. Julia Wellman
Department of Environmental Quality
Office of Environmental Impact Review
629 E. Main Street
Richmond, Virginia 23219

Ms. Julia Wellman:

RE: Coastal Zone Consistency Review for the Atlantic Coastal Pipeline, **DEQ Project # 15-161F**

Dear Ms. Wellman:

Thank you for providing the information link for DEQ Project # 15-161F, the Coastal Zone Consistency Review for the Atlantic Coastal Pipeline. Based on our review of the latest proposed route, the Department has the following comments.

1. The project sponsor will be required to submit a 7460 form to the Federal Aviation Administration for any portion of the proposed project that will be constructed within 20,000' of a public-use airport in the Commonwealth. The purpose of this submission is to ensure the proposed development will not result in the creation of a hazard to air navigation to aircraft arriving or departing any of the Commonwealth's public-use airports.

2. Although this requirement is to complied with for the sections of this pipeline within the Coastal Zone and identified in DEQ Project 15-161F, it is also applicable for the entire Atlantic Pipeline project.

Please note that the Department does not support any project that would result in the creation of a hazard to air navigation to any of the public-use airports within the Commonwealth. Nor will the Department support any mitigation of any potential hazard to air navigation if the mitigation results in tan increase to any instrument approach minimums to any public-use airport.

If you have any questions regarding this matter, please contact me at (804) 236-3638.

Sincerely,

S. Scott Denny
Senior Aviation Planner
Virginia Department of Aviation

Wellman, Julia (DEQ)

From: Claire Jones <cljones@suffolkva.us>
Sent: Wednesday, March 22, 2017 3:39 PM
To: Wellman, Julia (DEQ)
Subject: UPDATED REVIEW REQUEST - ATLANTIC COAST PIPELINE 15-161F
Attachments: FERC comments_12.14.15- CP15-554-000.pdf

Ms. Wellman:

In response to the above noted request, I believe that the City's previous comments still apply (copy attached) to the proposed route of the Atlantic Coast Pipeline. We continue to discourage any proposed pipeline route that impacts the designated growth areas, existing residential subdivisions, existing schools, and regional reservoirs within the City of Suffolk. If you have additional questions, please let me know.

Thank you,

Claire Jones, AICP
Comprehensive Planning Manager
City of Suffolk
442 W. Washington Street
Suffolk, VA 23434
Main: 757.514.4060
Direct: 757.514.4063
Email: cljones@suffolkva.us

CITY OF SUFFOLK

442 W. WASHINGTON STREET, POST OFFICE BOX 1858, SUFFOLK, VIRGINIA 23439-1858
PHONE: (757) 514-4060 FAX: (757) 514-4099

December 14, 2015

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
Attn: Docket No. CP15-554-000
888 First St., NE, Room 1A
Washington, DC

Ms. Bose:

Having reviewed the Atlantic Coast Pipeline Great Dismal Swamp Major Route Modification submitted to the Federal Environmental Regulatory Agency, the City of Suffolk, Virginia offers the following comments for your consideration:

1) As proposed, the route appears to be within regional drinking water reservoir watersheds. Adverse impacts from construction and operation of the pipeline have regional context and should be avoided. Specifically, the proposed route is intended to be constructed within a ¼ to ½ mile of the Western Branch Reservoir at the northern edge of Suffolk's Central Growth Area.

2) Consideration should be given to avoiding locating the ACP in Suffolk's Designated Growth Areas or in proximity to future development projects as this will have an adverse impact on these locations and affect Suffolk's ability to grow responsibly.

3) The proposed route, as it meanders along the northern edge of the Central Growth Area, crosses numerous parcels that have been identified as potential future development locations within the context of the 2035 Comprehensive Plan. These areas fall within the Suburban Use District, which allows a density of up to 5 units per acre and is typified by conventional, residential subdivisions. Considering the location in the growth area, the proximity to a regional drinking water source, and proposed construction and post-construction easement necessitated by the pipeline's existence, future development potential in this area will likely be affected. The ability to conserve vital forestall lands and open space within this portion of the Central Growth Area, Suburban Use District will also likely be affected.

4) Two schools, King's Fork Middle and King's Fork High, are located within approximately ¼ mile from the pipeline's proposed crossing of U.S. Route 10 (Godwin

Blvd.). An elementary school, Nansemond Parkway Elementary, is also within a ½ mile of the proposed pathway, where the ACP is proposed to cross Nansemond Parkway. Additionally, a proposed residential development at the southwest corner of the intersection of U.S. Route 10 and King's Fork Road, lies within approximately a few hundred feet of the route and Bridlewood, a residential development currently under construction, also lies within a few hundred feet of this site as the ACP crosses Nansemond Parkway. This is important to consider as, according to the Pipeline Association for Public Awareness's Table of Recommended Minimum Evacuation Distances for Natural Gas Pipeline Leaks and Ruptures, a 20- inch natural gas pipeline with pressures between 1400 and 1500 psi necessitates approximately 1700-1800 feet of evacuation distance. The Atlantic Coast Pipeline through Suffolk, as proposed, is a 20-inch pipe with max pressure of 1440 psi. The table used does not replace a site specific risk analysis, and is for informational purposes only. Other locations throughout the proposed pipeline corridor should be evaluated for this consideration.

5) The ACP route appears to impact a number of tidal and non-tidal wetland areas in addition to potentially removing important habitat and stream buffers throughout the drinking water watersheds. An amended Joint Permit Application may be necessary given the route adjustment.

6) As previously stated, the installation of the ACP through Suffolk requires a conditional use permit through City Council unless the owners of the ACP can provide documentation detailing that the project is exempt from local land use regulations. This also is required for valve sites and any other appurtenances permanently located in Suffolk post-construction.

7) This route appears to require a number of waterbody crossings. It is imperative that viewsheds of the Nansemond River be maintained. While permanent aerial crossings do not appear to be the preferred post construction condition, directional drilling and temporary and permanent construction easements could adversely affect these viewsheds, as these methods could disturb or remove existing vegetation and stream bank structure. With long-term sea level rise a concern for the tidal areas within Suffolk, consideration should be given to re-vegetation in excess of existing condition or the prohibition of disturbance within these sensitive areas.

Sincerely,

Robert P. Goumas, AICP
Interim Director of Planning and
Community Development