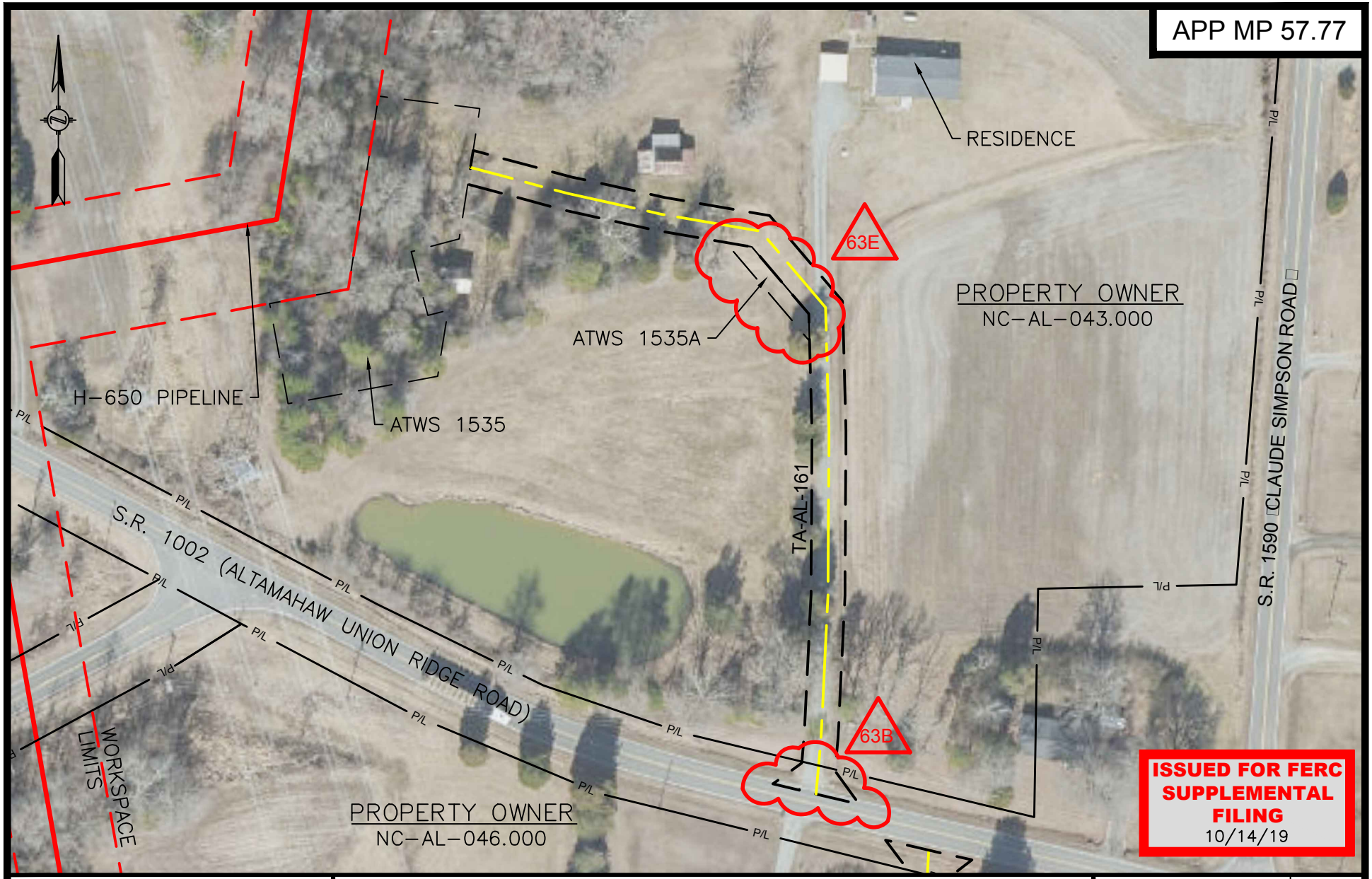
APP MP 57.77



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Results you can rely on

Mountain Valley PIPELINE LLC

CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: CCH	05/17/19
DRAFTING CK: SSL	05/14/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSD-H650-025**	
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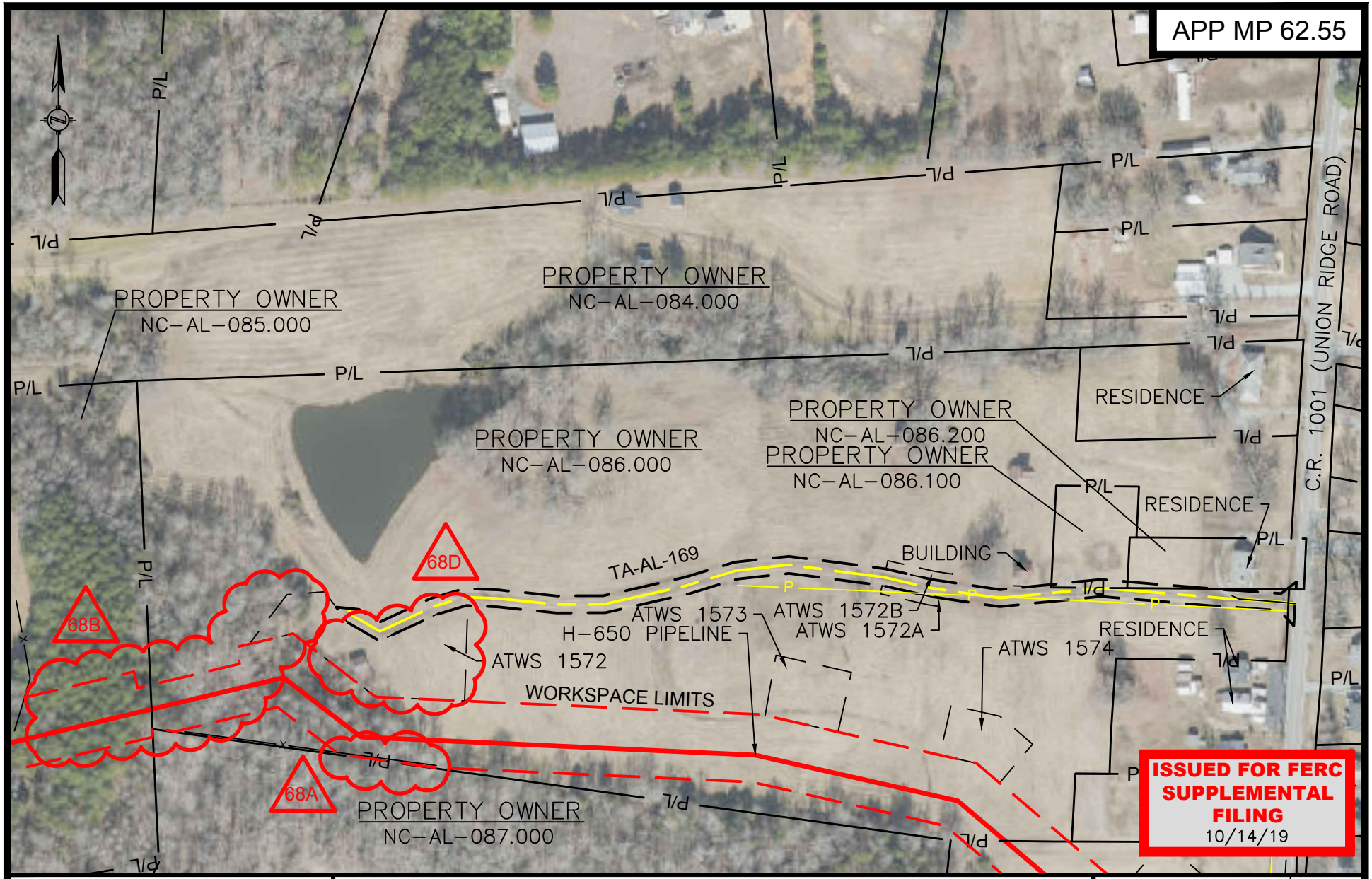
DATE OF PLOT: 5/16/2019 9:36 AM	

APP MP 62.55



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Mountain Valley PIPELINE LLC

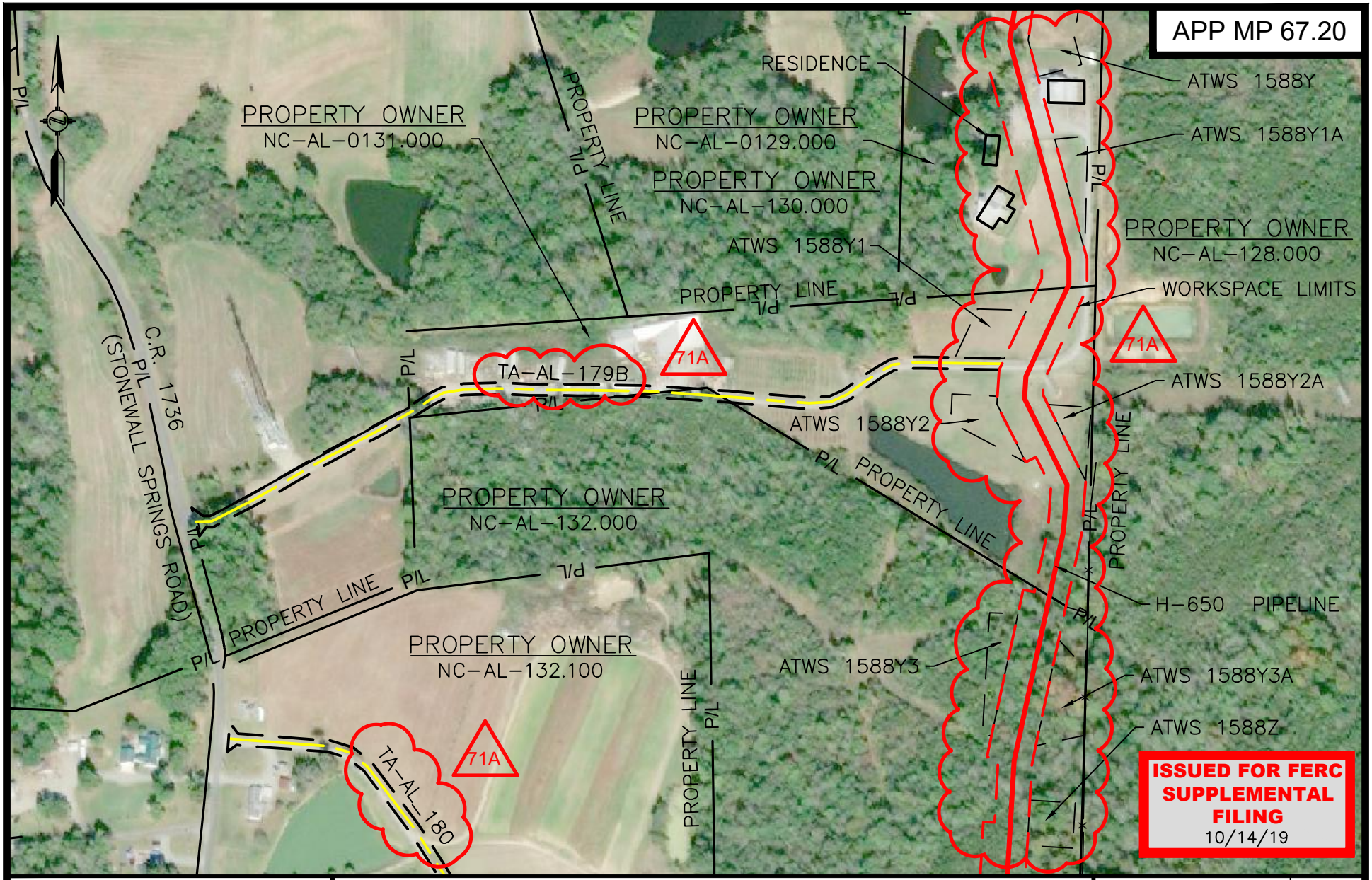
CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	CCH	05/17/19
DRAFTING CK:	SSL	05/17/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	**RSD-H650-026**	
SCALE: 1" = 200'		REV. P1
DATE OF PLOT: 5/16/2019 9:36 AM		

APP MP 67.20



ISSUED FOR FERC SUPPLEMENTAL FILING
10/14/19

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CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: KMB	05/14/19
DRAFTING CK: SSL	05/14/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSD-H650-027**	
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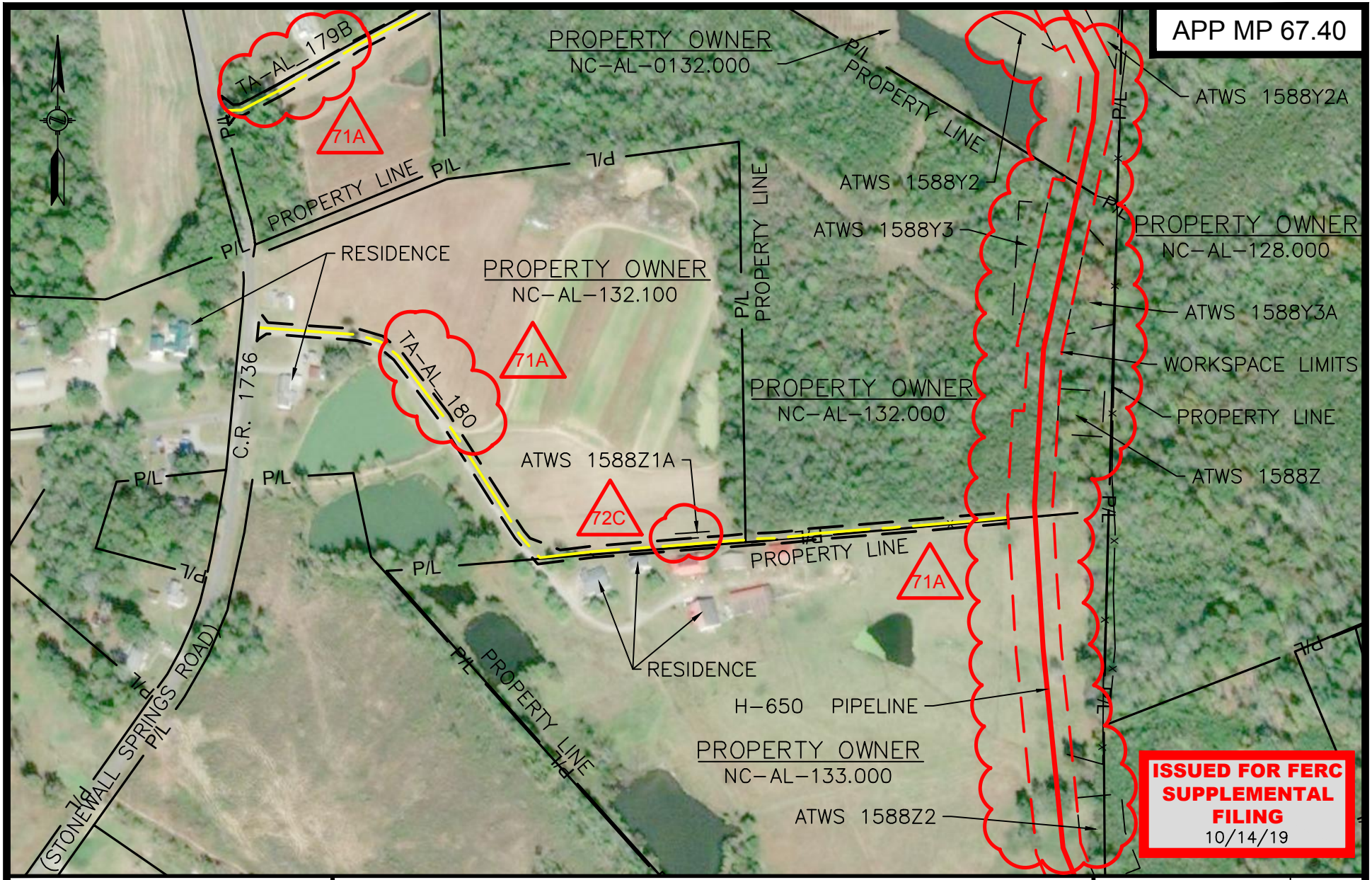
DATE OF PLOT: 5/17/2019 9:30 AM	



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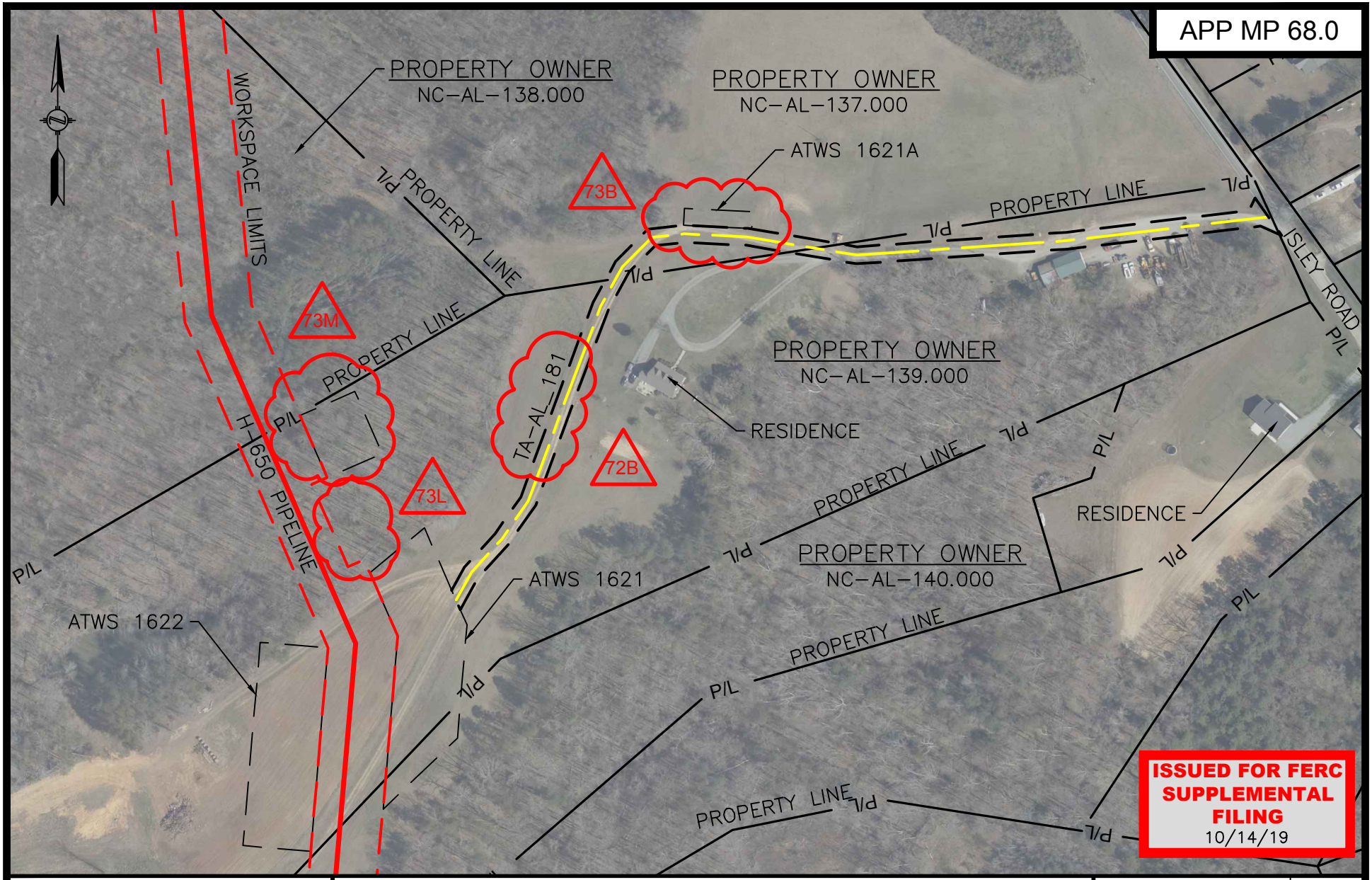
CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: KMB	05/14/19
DRAFTING CK: SSL	05/14/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSD-H650-028**	
SCALE: 1" = 300'	REV. P1
DATE OF PLOT: 5/17/2019 9:30 AM	

APP MP 68.0



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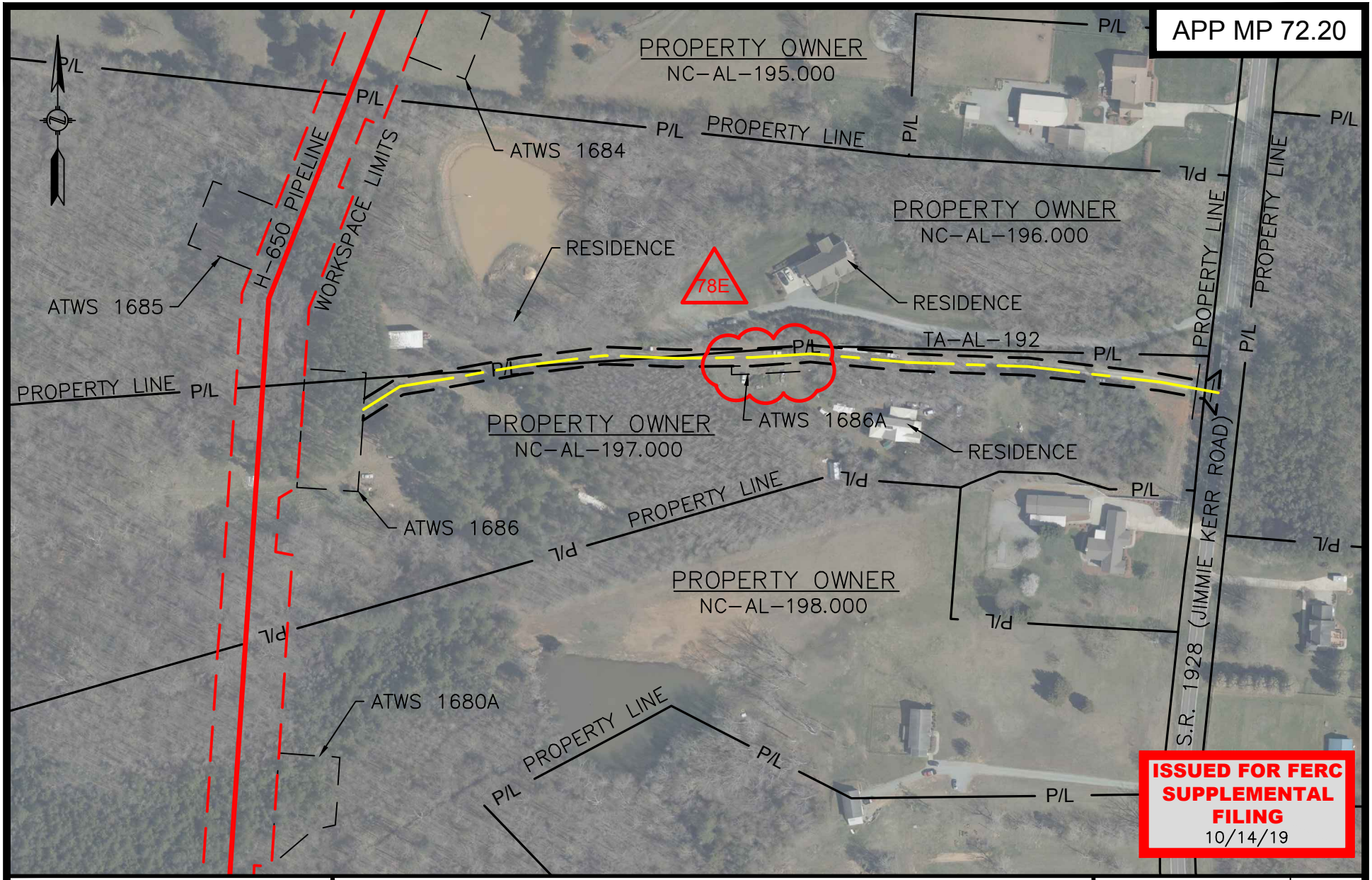
CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	KMB	05/14/19
DRAFTING CK:	SSL	05/14/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	**RSD-H650-029**	
SCALE: 1" = 200'		REV. P1
DATE OF PLOT: 5/17/2019 9:30 AM		

APP MP 72.20



ISSUED FOR FERC SUPPLEMENTAL FILING
10/14/19

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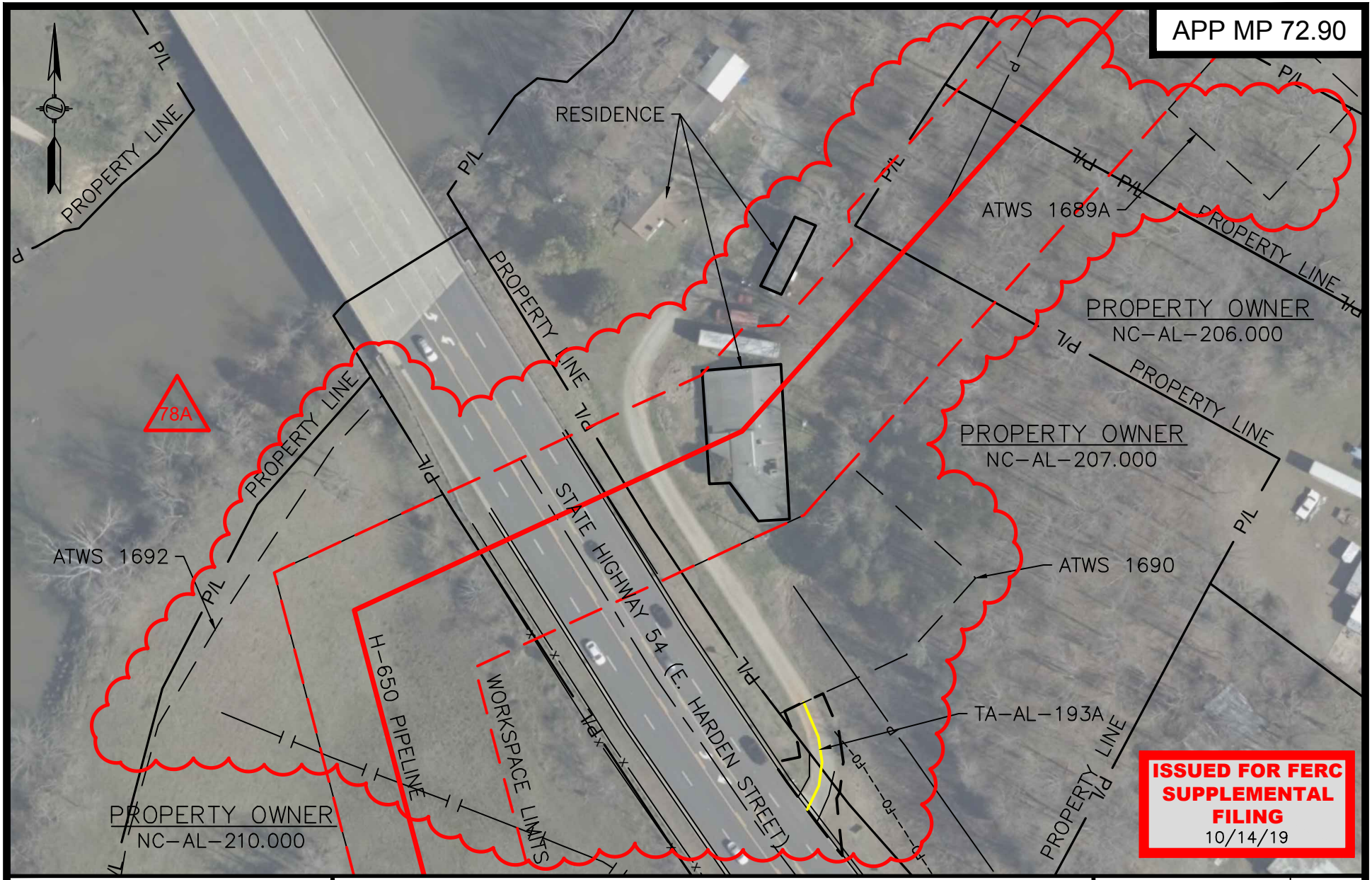
CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY: KMB	05/14/19
DRAFTING CK: SSL	05/14/19
ENVIRONMENTAL CK:	
ENGINEERING CK:	
DETAIL SHEET:	
DRAWING NO.: **RSD-H650-030**	
SCALE: 1" = 200'	REV. P1
DATE OF PLOT: 5/17/2019 9:30 AM	



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CONSTRUCTION DETAILS - PRIVATE DRIVE ACCESS ROAD

MVP SOUTHGATE PROJECT
PROPOSED H-650 PIPELINE
ALAMANCE COUNTY, NORTH CAROLINA

SHEET 1 OF 1

DRAWN BY:	KMB	05/14/19
DRAFTING CK:	SSL	05/14/19
ENVIRONMENTAL CK:		
ENGINEERING CK:		
DETAIL SHEET:		
DRAWING NO.:	**RSD-H650-031**	
SCALE: 1" = 80'		REV. P1
DATE OF PLOT: 5/17/2019 9:30 AM		

MVP Southgate Project

Docket No. CP19-14-000

September 2019 Supplemental Correspondence from May 23, 2019 to October 21, 2019

Correspondences considered sensitive in nature are labeled "*CUI//PRIV – DO NOT RELEASE*" in accordance with FERC procedures and 36 CFR Part 800.11(c)(1). These correspondences are provided under separate cover.

October 2019

MVP SOUTHGATE

Name	Type of Stakeholder	Business	Business Title	State	Contact Date	Type of Contact	Contact Comments
Paul Jenkins	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Regional Air Permitting Manager	VA			
					8/14/19	Meeting	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
Mike Johnson	VA Agencies	Virginia Marine Resources Commission (VMRC)	Habitat Management	VA			
					7/31/19	Phone Call	Discussion on project updates and proposed crossings.
Steve Carter	Local Government	Alamance County Board of Commissioners	Commissioner	NC			
					8/22/19	Email	August 22: Email with Steve Carter, Alamance County commissioner
					9/9/19	Email	Email with Steve Carter, Alamance County commissioner
					9/17/19	Meeting	Meeting with Steve Carter, Alamance County Board of Supervisors member.
John Mintz	Local Government,NC Agencies	North Carolina Office of State Archaeology	Archaeologist	NC			
					8/12/19	Phone Call	Discussion on recent Southgate submittals and FERC's DEIS issuance.
Maria R. Clark	Federal Agencies	U.S. Environmental Protection Agency (USEPA)	NEPA Program Office	GA			
					5/28/19	Email	Hello Ms. Clark: Please find the attached responses to your letter resubmitted on April 15, 2019 to the FERC docket regarding the MVP Southgate Project. Following your review, we would welcome a follow-up meeting to further discuss any outstanding questions/concerns. Thank you for your time, Alex Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					7/25/19	Phone Call	Phone call conversation about pipeline routing.
					8/6/2019	Email	Email discussion on MVP Southgate pipeline route.
					10/21/2019	Letter	MVP responses to comments received on the MVP Southgate Project DEIS by the EPA.
Julia Wellman	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Environmental Impact Review Coordinator	VA			
					7/30/19	Email	See attachment for more details.
					8/12/19	Email	See attachment for more details.
					8/22/19	Phone Call	Left voicemail to check in on DEIS review.
Frankie Maness	Local Government	City of Graham	City Manager	NC			
					6/4/19	Web Based Email	Email with Frankie Maness, Graham city manager, and Nathan Page, planning director
Michael Kiss	VA Agencies	VA Department of Environmental Quality (VA DEQ) - Central Office, Office of Air Quality Assessments	Manager	VA			
					7/16/19	Phone Call	Phone call with consultant (AECOM) to discuss air modeling pertaining to the Lambert Compressor station.
					8/14/19	Meeting- see attachment for Paul Jenkins	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
Matt Gantt	NC Agencies	NC Department of Environmental Quality (NC DEQ), Land Resources	Regional Environmental Engineer	NC			
					6/3/19	Email	See attachment for more details.
					6/19/19	Email	See attachment for more details.
					7/23/19	Email	See attachment for more details.
					7/23/19	Email	See attachment for more details.
					8/9/19	Phone Call	Discussed E&S specifics and plan to meet week of 8/19 to review and submit plans.
					8/13/19	Email	Hi Matt and Tamera, Would the two of you be available for an hour sometime tomorrow to review a page or two of E&S plans with myself and Geosyntec through Webex? We have a couple pages of E&S plans and would really appreciate being able to ask a few questions about our proposed designs so that we can finalize our plans. Whatever time is convenient for the both of you will work for us. Thanks so much for your time. Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
					8/19/19	Email	Hi Tamera, As discussed, public meetings to collect comment on the Southgate Project's DEIS will be held in each of the three counties along the proposed route: 5 p.m. - 8 p.m. Aug. 19, 2019 Rockingham Community College 215 Wrenn Memorial Road Wentworth, NC 27375 5 p.m. - 8 p.m. Aug. 20, 2019 Olde Dominion Agricultural Complex 19783 US Highway 29 South Chatham, VA 24531 5 p.m. - 8 p.m. Aug. 22, 2019 Vailtree Event & Conference Center 1567 Bakatsias Lane Haw River, NC 27258 Please let me know if you have any questions. Thanks, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com tamera.eplin@ncdenr.gov
					8/30/19	Email	See attachment for more details.
Tamera Thompson	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Manager, Office of Air Permitting	VA			
					7/10/19	Phone Call	Left a voicemail requesting a returned call to discuss revised permit application currently under review by the agency.
					7/11/19	Email	Hi Tamera, Thank you for reaching out to me to setup a meeting. Please let me know who I should coordinate the meeting with to discuss our air application. Have a great day, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					8/14/19	Meeting- see attachment for Paul Jenkins	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
Karen Higgins	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Water Resources Supervisor	NC			
					5/29/19	Email	Good afternoon Karen, Thank you again for meeting with us to review our draft buffer variance application and hope you had a great Memorial Day. I wanted to circle back with you on the proposed schedule that we discussed to make sure I accurately captured the timeframes through the end of the year. This schedule assumes that only one additional round of our application needs to occur and there will be a public hearing for 401 permit application. Please let me know if any corrections are needed. - July: DEIS issued by the FERC, MVP submittal of updated variance request and 401 application, DEQ completes review - August: MVP resubmits applications with updates to comments/discussion, DEQ completes review - September: 401 public hearing - October: MVP responds to public hearing comments - November: Water Quality Committee Presentation, MVP makes adjustments to application and resubmits (if necessary) - December 19, 2019: FERC issues Final Environmental Impact Statement (based on Notice of Schedule) Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					6/3/19	Phone Call	Ms. Higgins called MVP Southgate to deliver a status update concerning the buffer variance.
					6/6/19	Phone Call	Voicemail stated that she was out of the office.
					6/6/19	Email	Hi Karen, I believe that you are still on temporary detail away from the office. Please call me at 713-374-1599 at your earliest convenience. Thank you, Alex
					6/12/19	Phone Call	Attempted contact; voicemail said that she was still out of the office.
					6/12/19	Email- also cc homewood	MVP reached out to NCDEQ about the issuance of the 401 Application Denial letter.
					6/13/19	Phone Call	Karen called to discuss that the change confirm receipt of the 401 denial letter and confirm that this was procedural as the agency is no longer to "return an application" and has to either approve or deny.
					6/14/19	Email- also cc homewood	Email discussion to schedule a Jordan Lake Watershed site visit with NCDEQ and MVP Southgate members.
					6/14/19	Email- also cc homewood	Email Discussion To Schedule A Jordan Lake Watershed Site Visit With NCDEQ And MVP Southgate Members.
					6/24/19	Email- also cc homewood	Field trip scheduled for July 26th to assess Jordan Lake riparian buffer locations.
					8/9/19	Letter- also cc homewood, bailey	A Joint 404/401 Re-application for the MVP Southgate was submitted to NCDEQ and USACE.
					8/23/19	Letter- also cc homewood, bailey	Southgate submitted the August 2019 Buffer Variance Addendum to NCDEQ.
					8/29/19	Phone Call	Left a voicemail requesting call back to discuss 401 application.
					9/10/19	Phone Call	Left a voicemail to check on application review.
					9/11/19	Phone Call	Called Alex Miller to notify that she changed positions in the agency and Sue Homewood will be the primary contact moving forward for the state's 401 and buffer variance.
Bridget Munger	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Deputy Secretary	NC			

					9/24/19	Email- also cc renee kramer	To: "Kramer, Renee P" From: "Miller, Alex" Subject: Southgate DEIS Comments Date: 09/24/2019 Cc: "Munger, Bridget" , "Martin, Kyle" , "shawn@capresults.net" , "Salvador, Kathy" ReplyTo: "Miller, Alex" Body: Hi Renee, Thank you for reviewing the FERC's Draft Environmental Impact Statement for the Southgate Project. Do you have the availability to sit down and go through your comments together? This would be valuable so we can address your concerns and revise our community outreach plan as necessary. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] Renee.Kramer@ncdenr.gov
Michael Dowd	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Director	VA			
					8/14/19	Meeting- see meeting attachment for Paul jenkins	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
					9/6/19	Phone Call	Discussion regarding the Southgate air permit application.
Aaron Blair	Federal Agencies	U.S. Environmental Protection Agency (USEPA)	NEPA Reviewer	PA			
					5/28/19	Email	To: "Clark, Maria (Clark.Maria@epa.gov)" From: "Miller, Alex" Subject: MVP Southgate Project Response Date: 05/28/2019 Cc: "Blair, AaronM" , "Rudnick.Barbara@Epa.Gov" , "Lee.Matthew@Epa.Gov" , "Salvador, Kathy" ReplyTo: "Miller, Alex" Body: Hello Ms. Clark: Please find the attached responses to your letter resubmitted on April 15, 2019 to the FERC docket regarding the MVP Southgate Project. Following your review, we would welcome a follow-up meeting to further discuss any outstanding questions/concerns. Thank you for your time, Alex Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Todd Miller	Federal Agencies	U.S. Army Corps of Engineers (USACE), Norfolk District	Southern Section Chief	VA			
					5/23/19	Phone Call	Project update
					5/23/19	Email	See attachment for more details.
					8/12/19	Phone Call	Discussion on the FERC filing, comment period, outreach with tribes, and updating delineation report.
					8/12/19	Email	Hi David and Todd, Attached are the files that were submitted to the FERC docket on Friday (8/9). The FERC will be hosting DEIS Comment Meetings next week in each county with the comment period scheduled to end mid-September. The FEIS is scheduled for December 19th, 2019 based on the FERC's Notice of Schedule. We will continue to update our wetland delineation reports for your review. Please give me a call with any questions, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					8/13/19	Email	Hi David and Todd, My email was returned to me last night so I am trying again with just Attachment A from the filing and the latest KMZ of our route. The FERC will be hosting DEIS Comment Meetings next week in each county with the comment period scheduled to end mid-September. The FEIS is scheduled for December 19th, 2019 based on the FERC's Notice of Schedule. We will continue to update our wetland delineation reports for your review. Please give me a call with any questions, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					9/18/19	Email- Bailey cc	Email Regarding JPA/RAI Submittal Date.
					9/18/19	Email- Bailey cc	Email response from USACE to MVP Southgate regarding JPA submittal and One Federal Decision.
					9/19/19	Phone Call	Voicemail to discuss schedule for submitting PCN.
					9/20/19	Phone Call	Discussion on project schedule and revised application.
					9/20/19	Email- Bailey cc	Southgate notified USACE that a complete application is now forecasted to be submitted in the first quarter of 2020.
					9/20/19	Phone Call	Mr. Miller called MVP to discuss the PCN/application schedule.
Anita Walthall	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Air Permit Writer Senior	VA			
					6/24/19	Email	Ms. Walthall notified MVP Southgate that she is still working on the air application draft documents but has no changes to report on the Lambert Compressor Station at this time.
Stan Faggert	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Minor New Source Review Coordinator	VA			
					8/14/19	Meeting- see Paul Jenkins attachment	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
					8/22/19	Phone Call	Arranged meeting to discuss public outreach and environmental justice analysis for Lambert CS.
					8/22/19	Phone Call	Discussion on community outreach plans around the Lambert CS and air permit application process.
					9/24/19	Email	To: "sms@pipelineoutreach.com" From: "Miller, Alex" Subject: FW: Date: 09/24/2019 Cc: ReplyTo: "Miller, Alex" Body: From: Faggert, Stanley Sent: Tuesday, September 24, 2019 10:49 AM To: Miller, Alex Subject: CAUTION - EXTERNAL EMAIL In the past we've used the Chatham's "Star-Tribune" (chathamstartribune.com) that serves Pittsylvania County. -- Stanley M. Faggert Minor NSR Coordinator Virginia Department of Environmental Quality 804-698-4424 sms@pipelineoutreach.com,sms@pipelineoutreach.com
					9/24/19	Phone Call	Discussion on community outreach plan for the Lambert CS area.
Dante Desiderio	Tribes	Sapony Tribe	Executive Director	NC			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
W.A. (Tony) Hayes	Tribes	Occaneechi Band of the Saponi Nation	Tribal Chair	NC			
					8/7/18	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
					10/4/2019	Email- PRIV	Discussion regarding Soutghate DEIS comment.
Tonya Caddle	Local Government	Alamance County Planning Department	Director, Planning & Inspections	NC			
					6/18/19	Meeting	Pre-application meeting between Southgate and Ms. Caddle to discuss floodplain permitting expectations and schedule.
					8/29/19	Email	Email correspondence regarding floodplain permitting within Alamance County.
Benjamin Leach	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Erosion & Sediment Control & Stormwater Management	VA			
					7/22/19	Email	Sounds good, Ben. Feel free to give me a call if you'd like to discuss anything in the meantime. Thanks, Cory From: Leach, Benjamin Sent: Monday, July 22, 2019 8:57 AM To: Chalmers, Cory M. Subject: [EXTERNAL] Re: Southgate Pipeline VA E&S Plans Cory, My team and I have started last week to review Southgate. I expect to have a preliminary completeness review done sometime this week. On Wed, Jul 17, 2019 at 8:33 AM Chalmers, Cory M. > wrote: Hi Ben, This email is to confirm that two thumb drives with digital copies of the Southgate Pipeline project's E&S plans, along with supporting calculations and details, were provided to EEE consulting yesterday, July 16. I've also attached the transmittal letter that was delivered along with the thumb drives. Printing is continuing through today so two hard copy sets will be delivered to EEE tomorrow, July 18. I'll provide notification once that is completed. Thank you, Cory Cory Chalmers • Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 • Mobile: 304.627.8173 cchalmers@equitransmidstream.com -- ~ Ben Ben Leach, GISP Stormwater Team Lead of the Office of Stormwater Management Department of Environmental Quality +1 (804) 698-4037 - direct dial Benjamin.Leach@deq.virginia.gov www.deq.virginia.gov
Renee Shearin	NC Agencies	NC Department of Natural and Cultural Resources (NC DNCR)	Environmental Review Technician, State Historic Preservation Office	NC			
					6/18/19	Email- PRIV	NCHPO submitted their comments on the archetectural reports to MVP Southgate. (comments enclosed within PRIV/CUI attachment package).
Renee Kramer	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Title VI and Environmental Justice Coordinator	NC			
					8/14/19	Phone Call	Left a voicemail providing DEIS comment meeting schedule.
					9/11/19	Email	Good morning Renee, Please let me know if there were any questions you had following your review of the FERC's DEIS for Southgate that I might be able to address. Hope all is well, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					9/24/18	Email	Hi Renee, Thank you for reviewing the FERC's Draft Environmental Impact Statement for the Southgate Project. Do you have the availability to sit down and go through your comments together? This would be valuable so we can address your concerns and revise our community outreach plan as necessary. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					10/4/2019	Phone Call	Left a voicemail requesting an email to distribute a confidentiality agreement.

					10/4/2019	Email	Hi Renee, Can you confirm for me that the day and time works for you? Thanks, Alex From: Miller, Alex Sent: Wednesday, October 2, 2019 7:03 AM To: 'Kramer, Renee P' Cc: fmr.bridget.munger ; Martin, Kyle ; shawn@capresults.net; Salvador, Kathy ; Mundt, Jennifer Subject: RE: [External] Southgate DEIS Comments
					10/7/2019	Email	Great, thank you for confirming. Regards, Alex V. Miller NextEra Energy Resources | Environmental Services Office: 713.374.1599 From: Kramer, Renee P Sent: Monday, October 7, 2019 11:30 AM To: Miller, Alex Subject: RE: [External] Southgate DEIS Comments Hello Alex, My apologies for the delayed response. Friday still works for me and my team, however we will have to chat via phone call. Please call in using the following line: 919-733-2490 Looking forward to talking. Renee [cid:image003.png@01D4F067.B694F4A0] From: Miller, Alex [mailto:Alex.Miller@nexteraenergy.com] Sent: Friday, October 4, 2019 10:48 AM To: Kramer, Renee P > Subject: RE: [External] Southgate DEIS Comments CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Renee, Can you confirm for me that the day and time works for you? Thanks, Alex
					10/11/2019	Meeting	Meeting To Discuss DEQ's Comments To The FERC Docket Regarding Environmental Justice, Outreach, And Economics. Meeting Attendees: Jennifer Mundt, Renee Kramer, Sharon Martin, John Luce, Kathy Salvador (MVP), Shawn Day (MVP), Alex Miller (MVP, Kyle Martin (MVP).
Rick Reynolds	VA Agencies	VA Department of Game and Inland Fisheries (VDGIF)	T&E bat survey contact	VA			
					6/20/19	Email- aschenbach cc	MVP Southgate confirmed with VDGIF about FERC data request question concerning the tri-colored bat.
					6/27/19	Email- aschenbach cc	Email Response Discussion Regarding Incidentals Plan.
Vickie Jeffries	Tribes	Occaneechi Band of Saponi Indians	Tribal Administrator	NC			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Gerald Stewart	Tribes	Chickahominy Tribe Eastern Division	Chief	VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Frank Adams	Tribes	Upper Mattaponi Tribe	Chief	VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Marion Werkheiser	Tribes	Cultural Heritage Partners		VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Lisa Herzog	Non-Governmental Organization	North Carolina Museum of Natural Science	Operations Manager, Paleontology	NC			
					8/29/19	Email	MVP Southgate reached out to Ms. Herzog for her comments on the Project Paleontological Resources Plan (attached).
Patrick Corbett	VA Agencies	Virginia Department of Environmental Quality (VADEQ)	Air Toxics Coordinator	VA			
					8/14/19	Meeting- see Paul Jenkins attachment	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
Jean Gibby	NC Agencies	NC US Corps of Engineers (NC USACE)					
					8/23/19	Letter see bailey attachments	Southgate submitted the August 2019 Buffer Variance Addendum to NCDEQ.
					9/18/19	Email see bailey attachments	Email Regarding JPA/RAI Submittal Date.
					9/18/19	Email see bailey attachments	Email response from USACE to MVP Southgate regarding JPA submittal and One Federal Decision.
					9/20/19	Email see bailey attachments	Southgate notified USACE that a complete application is now forecasted to be submitted in the first quarter of 2020.
Jeffery Steers	VA Agencies	VADEQ		VA			
					8/14/19	Meeting- see paul Jenkins attachment	Meeting with VADEQ (Steers, Dowd, Thompson, Corbett, Jenkins, Kiss, Faggert) and MVP Southgate team (Salvador, Curtis, Akly, Ryan, Mace, Pichardo, Miller) about the Lambert Compressor station.
					8/27/19	Phone Call	Jeff requested a follow-up meeting to discuss air permit application.
					8/28/19	Email	Hi Mr. Steers, Thank you for reaching out to me yesterday to discuss the Project's air application under review. We are available to meet Tuesday afternoon in Richmond if that works for your team as well? Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					8/28/19	Email	Hi Mr. Steers, Thank you for reaching out to me yesterday to discuss the Project's air application under review. We are available to meet Tuesday afternoon in Richmond if that works for your team as well? Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
					9/4/19	Email	See attachment for more details.
Zachary Lentz	NC Agencies	NC Department of Environmental Quality (NC-DEQ)	Regional Engineering Associate	NC			
					8/30/19	Email- see matt gantt email	See attachment for more details.
					8/30/19	Email- see matt gantt email	See attachment for more details.
					9/11/19	Email	Hi Zac, Thanks for the update. The check and FRO form will be heading your way in the next day or two. The check request process has taken a bit longer than anticipated so they will be sent together. I'll let you know when they are put in the mail and when you can expect them. Thank you, Cory From: Lentz, Zachary Sent: Wednesday, September 11, 2019 11:46 AM To: Chalmers, Cory M. Subject: [EXTERNAL] Plans received Cory, I received two full size sets of ESC drawings for Southgate this morning, but have not received the FRO form or the fees. Please advise. Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D56898.24D64EC0] [cid:image002.png@01D56898.24D64EC0]
					9/18/19	Email	See attachment for more details.
					9/23/19	Email	See attachment for more details.
					9/30/2019	Phone Call	For details please refer to call log in attachments.
					10/15/2019	Phone Call	For details please refer to call log in attachments.
					10/15/2019	Phone Call	Left voicemail asking for call back for update on review
Danny Smith	NC Agencies	NC Department of Environmental Quality (NC-DEQ)	Regional Supervisor	NC			
					7/23/19	Email- see Matt gantt email	See attachment for more details.
Matthew Strickler	Governmental Agency	Virginia Governer's Office (VA)		VA			
					6/26/19	Email	Hello Secretary Strickler, Thank you again for taking the time to meet with us earlier this month to discuss the Southgate Project. As promised, I wanted to get back to you about a specific question you had during our meeting. The nearest residence to the proposed Lambert Compressor Station is approximately 0.6 miles away. Please let me know if there are any other questions from your staff or your constituents that we can address. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Tamera Eplin	NC Agencies	NC Department of Environmental Quality (NC-DEQ)	Regional Engineer, Land Quality Section	NC			
					7/23/19	Email- see matt gantt email	See attachment for more details.
					8/13/19	Email- see matt gantt email	See attachment for more details.
					8/13/19	Email- see matt gantt email	See attachment for more details.
					8/13/19	Phone Call	Discussed E&S specifics and committed to meeting on 8/21 to review and submit E&S plans
					8/19/19	Phone Call	Provided information on DEIS public comment meeting time and locations; Tamera requested an email with specifics
					8/19/19	Email	See attachment for more details.
					8/30/2019	Email- see matt gantt email	See attachment for more details.
					10/16/2019	Phone Call	Left detailed voicemail asking that she call me back to discuss the E&S plan review and expressed my interest that she provide any review comments so that we can correct and resubmit prior to the 30 day review timeframe completing (which is Saturday 10/19).
					10/17/2019	Phone Call	Left voicemail with my name and contact number,
Joyce Thames	NC Agencies	NC US Corps of Engineers (NC USACE)	Program Tech				
					8/14/19	Email- see bailey email	MVP Southgate received a confirmation for the submittal of the PCN (JPA) request to the Corps on August 14.
Beverly Strickland	NC Agencies	NC Department of Environmental Quality (NC-DEQ)	Laserfische Admin				
					8/15/19	Email	Confirmation of MVP Southgate permit application fee payment.
Dean Branham	Tribes	Monacan Indian Nation	Chief	VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Barry Bass	Tribes	Nansemond Tribe	Chief	VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Nathan Page	Local Government	City of Graham	Planning Director	NC			

					6/19/19	Meeting	Pre-application meeting between Southgate and Mr. Page to discuss floodplain permitting expectations and schedule.
					9/23/19	Email	Email with Nathan Page, Graham planning director
Barbara Rudnick	Federal Agencies	Environmental Protection Agency (EPA)	NEPA Program Manager				
					5/28/19	Email- see Maria clark email	See attachment for more details.
Matthew Lee	Federal Agencies	Environmental Protection Agency (EPA)	Project Officer				
					5/28/19	Email- see Maria clark email	See attachment for more details.
Vann Stancil	NC Agencies	NC Wildlife Resources Commission (NCWRC)	Special Project Coordinator	NC			
					6/24/19	Email	MVP provided a mussel and crayfish survey update.
					6/26/19	Email	MVP Southgate asked for a status update regarding surface water withdrawal.
					7/17/19	Email	See attachment for more details.
					7/18/19	Email	MVP Southgate email discussing surface water withdrawal.
					7/29/19	Email	Southgate provided additional information regarding surface water withdrawals.
					7/31/19	Email- PRIV	Discussion on the Giles Creek aquatic surveys and subsequent turbidity issues.
					8/2/19	Email	NC Wildlife response in regards to Giles Creek aquatic surveys.
					8/19/2019	Phone Call	Provided information on DEIS public comment meeting time and locations (voicemail)
					10/9/2019	Meeting	Meeting to discuss MVP Southgate DEIS comments. Attendees: John Ellis (USFWS), Vann Stancil (NCWRC), Cory Chalmers (MVP), Megan Stahl (MVP)
					10/21/2019	Letter	MVP responses to comments received on the MVP Southgate Project DEIS by the NCWRC.
Olivia Munzer	NC Agencies	NC Wildlife Resources Commission (NCWRC)	Western Piedmont Habitat Conservation Coordinator	NC			
					6/24/19	Email- see Stancil email	MVP provided a mussel and crayfish survey update.
					7/17/19	Email	See attachment for more details.
					8/7/19	Email	See attachment for more details.
					8/19/19	Email	See attachment for more details.
					8/20/19	Email	See attachment for more details.
Brena Jones	NC Agencies	NC Wildlife Resources Commission (NCWRC)	Central Aquatic Wildlife Diversity Coordinator	NC			
					6/24/19	Email- see Stancil email	MVP provided a mussel and crayfish survey update.
Wenonah G. Haire	Tribes	Catawba Indian Nation	Tribal Historic Preservation Officer	SC			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
					9/5/19	Letter	The Catawba Indian Nation disclosed a letter to MVP Southgate stating they have no immediate concerns with regard to traditional cultural properties, sacred sites, or Native American archaeological sites. However, they would like to be notified if Native American artifacts or remains are found during ground disturbance.
Stephen Adkins	Tribes	Chickahominy Tribe	Chief	VA			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
Jennifer Frye	Federal Agencies	U.S. Army Corps of Engineers (USACE), Norfolk District	Western Section Chief	VA			
					9/18/19	Email- see miller email	Email Regarding JPA/RAI Submittal Date.
					9/18/19	Email - see miller email	Email response from USACE to MVP Southgate regarding JPA submittal and One Federal Decision.
					9/20/19	Email - see bailey email	Southgate notified USACE that a complete application is now forecasted to be submitted in the first quarter of 2020.
Jerome Brooks	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Office of Water Compliance	VA			
					8/14/19	Phone Call	Left a voicemail notifying him of DEIS comment meeting next Tuesday in Chatham and inquiry if the agency had any comments on it.
David Bailey	Federal Agencies	U.S. Army Corps of Engineers (USACE), Wilmington District	Project Manager	NC			
					5/23/19	Email	See attachment for more details.
					6/12/19	Email	See attachment for more details.
					6/13/19	Phone Call	Left a voicemail and requested call back to discuss recent 401 letter by NCDEQ.
					6/14/19	Email- see higgins email	Email discussion to schedule a Jordan Lake Watershed site visit with NCDEQ and MVP Southgate members.
					6/14/19	Phone Call	David returned my phone call and we ran through a project updated including discussion on DEQ's 401 denial letter, planned surveys for the summer, and the FERC schedule.
					6/20/19	Email	Email Discussion To Schedule A Jordan Lake Watershed Site Visit With NCDEQ And MVP Southgate Members.
					6/24/19	Email	Email response discussing the schedule for a field trip regarding Jordan watershed riparian buffer areas.
					6/24/19	Email	Field trip scheduled for July 26th to assess Jordan Lake riparian buffer locations.
					7/8/19	Meeting	Mr. Bailey met with MVP Southgate.
					7/22/19	Email	The USACE provided their review of the Southgate Ephemeral stream crossings.
					8/9/19	Letter - see Higgins letter	A Joint 404/401 Re-application for the MVP Southgate was submitted to NCDEQ and USACE.
					8/12/19	Phone Call	Follow-up to confirm receipt of the JPA submittal on Friday.
					8/12/19	Email - see todd miller email	See attachment for more details.
					8/13/19	Email - see todd miller email	See attachment for more details.
					8/14/19	Email	MVP Southgate received a confirmation for the submittal of the PCN (JPA) request to the Corps on August 14.
					8/23/19	Letter - see Higgins letter	Southgate submitted the August 2019 Buffer Variance Addendum to NCDEQ.
					9/9/19	Email - see higgins email	MVP Southgate Provided NCDEQ An Additional Map Set To Assist In The Buffer Variance Determination.
					9/18/19	Email - see todd miller email	Email regarding JPA/RAI submittal date.
					9/18/19	Email- see todd miller email	Email response from USACE to MVP Southgate regarding JPA submittal and One Federal Decision.
					9/19/19	Phone Call	Voicemail to discuss PCN submittal date and information to be included.
					9/20/2019	Email	Southgate notified USACE that a complete application is now forecasted to be submitted in the first quarter of 2020.
					10/10/2019	Phone Call	Left a voicemail requesting return call to discuss project timing.
John Ellis	Federal Agencies	U.S. Fish and Wildlife Service (USFWS), NC	Biologist	NC			
					5/30/19	Phone Call	Discussion on water withdrawal mitigation
					6/24/19	Email - see stancil email	MVP provided a mussel and crayfish survey update.
					6/26/19	Email- see stancil email	MVP Southgate asked for a status update regarding surface water withdrawal.
					6/26/19	Email - see stancil email	See attachment for more details.
					6/26/19	Email - see stancil email	See attachment for more details.
					7/17/19	Email - see stancil email	See attachment for more details.
					7/18/19	Email - see stancil email	MVP Southgate email discussing surface water withdrawal.
					7/29/19	Email - see stancil email	Southgate provided additional information regarding surface water withdrawals.
					8/19/19	Email - see stancil email	See attachment for more details.
					8/19/19	Phone Call	Provided information on DEIS public comment meeting time and locations (voicemail)
					9/5/19	Phone Call	Phone conversation to clarify statements within the DEIS.
					9/5/19	Phone Call- PRIV	Phone call conversation to clarify some items within Southgate's DEIS. Mr. Ellis clarified that he did not formally recommend tree clearing outside of the migratory bird nesting window. Additionally, Mr. Ellis said there is no need to complete a BA with informal consultation.
					9/11/2019	Phone Call	Phone call discussion with Mr. Ellis following up on the FERC DEIS tree clearing clarification. Mr. Ellis said that he is working on language for a comment to FERC regarding this statement in the DEIS: "FWS recommended that Mountain Valley avoid clearing from March 15 - August 15 in Virginia and from April 1 - August 31 in North Carolina". He plans to communicate that he prefers that the project clear outside of the nesting window and that FWS supports the states' recommendations regarding MBTA, but that FWS did not make the stated recommendation.
					10/9/2019	Meeting	Meeting to discuss MVP Southgate DEIS comments. Attendees: John Ellis (USFWS), Vann Stancil (NCWRC), Cory Chalmers (MVP), Megan Stahl (MVP)
					10/21/2019	Letter	MVP responses to comments received on the MVP Southgate Project DEIS by the USFWS.
Sarah McRae	Federal Agencies	U.S. Fish and Wildlife Service (USFWS), NC	Biologist	NC			
					6/24/19	Email- see stancil email	MVP provided a mussel and crayfish survey update.
					6/26/19	Email- see stancil email	MVP Southgate asked for a status update regarding surface water withdrawal.
					6/26/19	Email- see stancil email	See attachment for more details.
					6/26/19	Email- see stancil email	See attachment for more details.
					7/17/19	Email- see stancil email	See attachment for more details.
					7/18/19	Email- see stancil email	MVP Southgate email discussing surface water withdrawal.
					7/29/19	Email- see stancil email	Southgate provided additional information regarding surface water withdrawals.
David Paylor	VA Agencies	VA Department of Environmental Quality (VA DEQ)	Director	VA			
					6/27/19	Email - see Strickler email	Email follow up after the Southgate project meeting in regards to the Lambert Compressor Station (copied on an email with Secretary Matthew Strickler).
Ernie Aschenbach	VA Agencies	VA Department of Game and Inland Fisheries (VDGIF)	Environmental Services Biologist	VA			

					6/20/19	Email- see Rick reynolds email	MVP Southgate confirmed with VDGIF about FERC data request question concerning the tri-colored bat.
					6/27/19	Email- see Rick reynolds email	Email response discussion regarding incidentals plan.
					9/9/19	Phone Call	Privilege phone call within PRIV/CUI attachment package.
Toby Vinson	NC Agencies	NC Department of Environmental Quality (NC DEQ), Division of Energy, Mineral and Land Resources	Director	NC			
					6/3/19	Email- see matt gantt email	See attachment for more details.
					6/19/19	Email- see matt gantt email	See attachment for more details.
					7/23/19	Email- see matt gantt email	See attachment for more details.
					7/23/19	Email- see matt gantt email	See attachment for more details.
Sue Homewood	NC Agencies	NC Department of Environmental Quality (NC DEQ), Water Resources, Water Quality Regional Operations Section	Sr. Environmental Scientist	NC			
					5/28/19	Phone Call	Ms. Homewood contacted MVP to pass along additional comments she had upon further review of Southgate's buffer variance application after the meeting on 5/16/19.
					5/29/19	Email- see higgins email	See attachment for more details.
					6/14/19	Email- see higgins email	Email discussion to schedule a Jordan Lake Watershed site visit with NCDEQ and MVP Southgate members.
					6/14/19	Email- see higgins email	Email Discussion To Schedule A Jordan Lake Watershed Site Visit With NCDEQ And MVP Southgate Members.
					6/24/19	Email- see higgins email	Field trip scheduled for July 26th to assess Jordan Lake riparian buffer locations.
					7/16/19	Phone Call	MVP Southgate provided general project updates regarding the buffer variance.
					7/22/19	Phone Call	Ms. Homewood left a voicemail to MVP Southgate regarding the Variance application.
					7/26/19	Meeting	MVP Southgate field visit.
					8/9/19	Letter - see higges letter	A Joint 404/401 Re-application for the MVP Southgate was submitted to NCDEQ and USACE.
					8/23/19	Letter - see higges letter	Southgate submitted the August 2019 Buffer Variance Addendum to NCDEQ.
					8/30/19	Phone Call	Ms. Homewood called MVP Southgate to give an update on her review of the NC JPA re-application.
					9/4/19	Phone Call	Phone call discussion regarding Southgate JPA re-submittal.
					9/9/19	Email- see higgins email	MVP Southgate provided NCDEQ an additional map set to assist in the Buffer Variance determination.
					9/11/19	Phone Call	Ms. Homewood left MVP a voicemail regarding the status of her review on the Southgate JPA submittal.
					9/12/19	Phone Call	Phone call discussion regarding the JPA resubmital hearing meetings.
					9/24/2019	Email	NCDEQ has requested additional information for the Southgate JPA submittal.
					10/3/2019	Phone Call	Phone discussion regarding the Southgate buffer planting plan.
					10/4/2019	Phone Call	Left voicemail inquiry on 401 application.
					10/8/2019	Phone Call	Phone discussion regarding the 401 public hearing. Ms. Homewood notified MVP that the hearing will be on November 19th at Rockingham Community College.
					10/18/2019	Email	Email discussion regarding the Public Notice.
Renee Gledhill-Earley	NC Agencies	NC State Historic Preservation Office (NCSHPO)	Environmental Review Coordinator	NC			
					6/27/19	Phone Call	Discussion over Phase I architectural report.
					7/2/19	Letter- PRIV	Privilege letter within PRIV/CUI attachment package.
					7/22/19	Letter - PRIV	Privilege letter within PRIV/CUI attachment package.
Katie Harville	NC Agencies	NC State Historic Preservation Office (NCSHPO)	Environmental Review Specialist	NC			
					6/20/19	Email - PRIV	MVP Southgate discussed the requirements and timeline for the Addendum deliverables.
Rosie Blewitt-Golsch	NC Agencies	NC State Historic Preservation Office (NCSHPO)		NC			
					8/12/19	Phone Call	Discussion on recent Southgate submittals and FERC's DEIS issuance.
Gregory A. Richardson	NC Agencies	North Carolina Commission of Indian Affairs	Executive Director	NC			
					8/7/19	Letter	MVP Southgate sent a project update about the FERC Draft Environmental Impact Statement issuance.
					8/23/19	Phone Call	Phone call discussion in regards to attending the NC Commission of Indian Affairs Annual Meeting.
					9/4/19	Phone Call	Phone call discussion in regards to attending the NC Commission of Indian Affairs Annual Meeting (confirm date, time, etc.)
Sonja Ingram	eNGO	Preservation Virginia	Preservation Field Services Manager	VA			
					9/10/2019	Email	Ms. Ingram requested copies of the Southgate Cultural reports after submitting a signed confidentaility agreement.
					9/10/2019	Mail	MVP Southgate mailed Ms. Ingram a flash drive with the cultural reports to date.
Mark Joyner	eNGO	Danville Historical Society	President	VA			
					10/4/2019	Phone Call	Left a voicemail requesting an email to distribute a confidentiality agreement.
					10/4/2019	Phone Call	Discussion on Southgate Project route, distributing CA, and current architectural survey results.
					10/4/2019	Email	Hello Mr. Joyner, Thank You For Speaking With Me This Afternoon About The Southgate Project And Some Of Your Societies Concerns. Please Sign And Return The Attached Document So We Can Begin Distributing Confidential Data Regarding Our Project. Regards, Alex V. Miller Environmental Permitting Lead On Behalf Of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - Re-Sized]
					10/17/2019	Email	Hi Mark, Are you available the week of the 28th to meet at the Cherrystone Manor and review the cemetery? I would like to discuss the proposed workspace alignment and any additional concerns you might have on the project. Also, I have not received the signed CA yet and want to confirm that you are still reviewing it? Have a great day, Alex
					10/18/2019	Email	Email regarding the Confidentiality Agreement.
Roger Kirchen	VA Agencies	VA Department of Historic Resources (VDHR)	Director	VA	10/9/2019	Email	DHR has reviewed the updated Unanticipated Discoveries Plan for MVP Southgate and finds it acceptable with no further comments.
Jennifer Mundt	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Senior policy advisor	NC	10/11/2019	Meeting	Meeting To Discuss DEQ's Comments To The FERC Docket Regarding Environmental Justice, Outreach, And Economics. Meeting Attendees: Jennifer Mundt, Renee Kramer, Sharon Martin, John Luce, Kathy Salvador (MVP), Shawn Day (MVP), Alex Miller (MVP, Kyle Martin (MVP).
Sharon Martin	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Director of Public Affairs	NC	10/11/2019	Meeting	Meeting To Discuss DEQ's Comments To The FERC Docket Regarding Environmental Justice, Outreach, And Economics. Meeting Attendees: Jennifer Mundt, Renee Kramer, Sharon Martin, John Luce, Kathy Salvador (MVP), Shawn Day (MVP), Alex Miller (MVP, Kyle Martin (MVP).
John Lucey	NC Agencies	NC Department of Environmental Quality (NC DEQ)	Legislative Liaison	NC	10/11/2019	Meeting	Meeting To Discuss DEQ's Comments To The FERC Docket Regarding Environmental Justice, Outreach, And Economics. Meeting Attendees: Jennifer Mundt, Renee Kramer, Sharon Martin, John Luce, Kathy Salvador (MVP), Shawn Day (MVP), Alex Miller (MVP, Kyle Martin (MVP).
Jason Bulluck	VA Agencies	VA Department of Conservation and Recreation (VDCR0	Environmental Manager II	VA	9/17/2019	Meeting	DCR Meeting At Their Office In Richmond To Discuss Their DEIS Comments, Updated Surveys, And Forest Fragmentation. Attendees: Joe Weber, Jason Bulluck, Rene Hypes, Cory Chalmers (MVP), Alex Miller (MVP)
Rene Hypes	VA Agencies	VA Department of Conservation and Recreation (VDCR1	Environmental Manager I	VA	9/17/2019	Meeting	DCR Meeting At Their Office In Richmond To Discuss Their DEIS Comments, Updated Surveys, And Forest Fragmentation. Attendees: Joe Weber, Jason Bulluck, Rene Hypes, Cory Chalmers (MVP), Alex Miller (MVP)
Joe Weber	VA Agencies	VA Department of Conservation and Recreation (VDCR2	Natural Heritage Information Manager	VA	9/17/2019	Meeting	DCR Meeting At Their Office In Richmond To Discuss Their DEIS Comments, Updated Surveys, And Forest Fragmentation. Attendees: Joe Weber, Jason Bulluck, Rene Hypes, Cory Chalmers (MVP), Alex Miller (MVP)
Annette Lucas	NC Agencies	NC Department of Environmental Quality (NC DEQ), DEMLR	PE Stormwater Program Supervisor	NC	10/17/2019	Email	Hello Annette, Thanks for speaking with me earlier this week regarding meeting for a preliminary review of the MVP Southgate restoration plans to discuss stormwater permitting options. I have canvassed our team on their availability. Does 10:30 AM - 12 PM work for you on Tuesday, October 29th, or Friday, November 1st? If not, do you have any days that would work in that time slot the following week? Looking forward to APWA next week! Best, Alessa Alessandra Smolek Braswell, Ph.D., P.E. (NC) Engineer Geosyntec Consultants,
Sheila Holman	NC Agencies	NC Department of Environmental Quality (NC DEQ), Secretarys Office	Assistant Secretary for Environment	NC	10/21/2019	Letter	MVP responses to comments received on the MVP Southgate Project DEIS by the NCDEQ.
		VA Department of Environmental Quality (VA					

Bettina Rayfield	VA Agencies	VA Department of Environmental Quality (VA DEQ), Office of Environmental Impact Review	Manager	VA	10/21/2019	Letter	MVP responses to comments received on the MVP Southgate Project DEIS by the VADEQ.

From: Tonya Caddle [mailto:Tonya.Caddle@alamance-nc.com]
Sent: Thursday, August 29, 2019 8:49 AM
To: Shawn Day
Subject: RE: Following up on floodplain permitting

Shawn,
It looks like I have to talk to several people to address all of the questions. I am not sure on that time line. I will say that it looks like if a temporary change lasts more than three months, it will need to be permitted. I will get back with you though as soon as I find out more.

Thanks,
Tonya Caddle
Planning Director
Alamance County Government
201 W. Elm St
Graham, NC 27253
Ph: 336-570-4052
Fax: 336-228-3925

We've moved!!!

Please note our new address above.

Learn more about the Planning Department: https://www.alamance-nc.com/planningdept/

Vision Alamance: https://www.alamance-nc.com/strategicplan/

From: Shawn Day <shawn@capresults.net>
Sent: Wednesday, August 28, 2019 3:29 PM
To: Tonya Caddle <Tonya.Caddle@alamance-nc.com>
Subject: RE: Following up on floodplain permitting

Hi Tonya, I just wanted to follow up here. When do you expect to hear back from the state on this?

Thanks,

Shawn

From: Tonya Caddle [mailto:Tonya.Caddle@alamance-nc.com]
Sent: Tuesday, August 06, 2019 2:55 PM
To: Shawn Day; Sherry Hook; Bryan Hagood
Subject: RE: Following up on floodplain permitting

Shawn,
I have contacted the State and am working through their staff to see about what permits they would be interested in the project getting. Once they get back with me, I will let you know details of what permits will be needed. Thanks for your follow up.

Thanks,
Tonya Caddle
Planning Director
Alamance County Government
201 W. Elm St
Graham, NC 27253
Ph: 336-570-4052
Fax: 336-228-3925

We've moved!!!

Please note our new address above.

Learn more about the Planning Department: https://www.alamance-nc.com/planningdept/

Vision Alamance: https://www.alamance-nc.com/strategicplan/

From: Shawn Day <shawn@capresults.net>
Sent: Tuesday, August 6, 2019 2:53 PM
To: Tonya Caddle <Tonya.Caddle@alamance-nc.com>; Sherry Hook <Sherry.Hook@alamance-nc.com>; Bryan Hagood <Bryan.Hagood@alamance-nc.com>
Subject: Following up on floodplain permitting

Good afternoon Tonya, Sherry and Bryan:

I hope you all are well. I wanted to follow up on a few questions that we had from our meeting on June 18. Can you send this info at your earliest convenience? Thanks very much, and please let me know if you need anything!

Regards,

Shawn

1. What, if anything, is required regarding floodplain permitting for pipeline crossings where the only activity within the floodplain is a bore pit?

2. What, if anything, is required regarding floodplain permitting for temporary access roads and/or temporary bridges?

Shawn Day
Capital Results

Hi Karen and Sue,

An addendum to the MVP Southgate's major variance application for the MVP Southgate project has been posted to Laserfiche and the Project's Sharepoint Site, in a folder entitled "August 2019 Addendum":

https://trcextranet.trcsolutions.com/sites/CS-KM1/MVP-Southgate-Agency/SitePages/Home.aspx?RootFolder=%2Fsites%2FCS%2DKM1%2FMVP%2DSouthgate%2DAgency%2FShared%20Documents%2FMajor%20Variance%20Application%2FAugust%202019%20Addendum&FolderCTID=0x012000BB735D23F68CBE43B0EA67C7FE3D6E6E&View=%7BBCBB181D%2DF76D%2D460C%2D9A9F%2D7E063BA81F3E%7D

I will FedEx a hard copy of the maps to each of your offices. Please let me know if you need any additional hard copies, or if there are any issues opening up the files.

We look forward to continue working with you on this application! Have a great weekend,

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

625 Liberty Avenue, Suite 1700 | Pittsburgh, PA 15222
833-MV-SOUTH | mail@mvpsouthgate.com
www.mvpsouthgate.com

August 23, 2019

Ms. Karen Higgins
North Carolina Department of Environmental Quality
Division of Water Resources
401 & Buffer Permitting Unit, Wetlands Branch
1617 Mail Service Center
Raleigh, North Carolina 27699 -1617

Ms. Sue Homewood
North Carolina Department of Environmental Quality
Division of Water Resources
Water Quality Regional Operations Section
450 West Hanes Mill Road, Suite 300
Winston-Salem, North Carolina 27105

RE: MVP Southgate Project (DWR # 20181638)
Addendum to Major Variance Request for non-perpendicular stream crossings
Jordan Lake Watershed - 15A NCAC 02B .0267

Dear Ms. Higgins & Ms. Homewood:

On February 8th, 2019, Mountain Valley Pipeline, LLC ("Mountain Valley" or "the Project") submitted a Major Variance application for construction and operation of the MVP Southgate Project within the Jordan Lake Watershed. Additionally, an addendum was submitted on April 29th, 2019. The Project is requesting the variance in association with non-perpendicular stream crossings that will occur within portions of the Zone 1 and Zone 2 buffers in the Jordan Lake Watershed.

Since the February 8th, 2019 submittal, the Project has been working with landowners, stakeholders, and agencies to revise the pipeline alignment and submitted a supplement to the Federal Energy Regulatory Commission (FERC) in March of 2019. A portion of the modifications to the pipeline alignment and associated workspace occur within the Jordan Lake Watershed. In addition to the modifications submitted within the supplement, this addendum reflects additional wetland and waterway delineation surveys completed in May of 2019, and revisions following field verifications with NCDWR staff on July 26th, 2019.

Updated Project information and a summary of the justification for the requested variances are included in an attachment to this addendum. Enclosed are updated USGS Quad maps, published soil survey maps, and site-specific impact maps for non-perpendicular stream crossings for which the Project is seeking a variance. Also, in accordance with 15A NCAC 02B .0267, the Project has updated the alternatives analysis demonstrating the need for the variance as well as the specific hardships that prevent the Project from being able to fully comply with the buffer rules at the non-perpendicular stream crossings.

Should you have any questions regarding the enclosed documents or require any further information to complete your review of the Project, please do not hesitate to contact Alex Miller at 713-374-1599 or via email at

alex.miller@nexteraenergy.com or me at 561-691-7054 or via email kathy.salvador@nexteraenergy.com. Thank you for your consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador

Kathy Salvador
Senior Director, Environmental Services

Attachments

CC:

David Bailey, USACE
Jean Gibby, USACE
Travis Faul, MVP
Heather Patti, TRC
Kevin Martin, S&EC

MVP
SOUTHGATE

CAUTION - EXTERNAL EMAIL

I have it on my calendar

Thanks,

Sue Homewood
NC DWR

From: Patti, Heather <HPatti@trccompanies.com>
Sent: Monday, June 24, 2019 8:46:56 AM
To: David.E.Bailey2@usace.army.mil; Homewood, Sue
Cc: Higgins, Karen; Miller, Alex; Hamberg, Alexis; Faul, Travis; Zimmer, John; Walker, Lisa
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits (UNCLASSIFIED)

Thanks Dave! Let's put July 26th down for site visits. Sue, let us know of any issues with that day.

Heather

From: Higgins, Karen <karen.higgins@ncdenr.gov>
Sent: Wednesday, June 12, 2019 3:38 PM
To: Miller, Alex <Alex.Miller@nexteraenergy.com>
Cc: Homewood, Sue <sue.homewood@ncdenr.gov>; Patti, Heather <HPatti@trccompanies.com>; kmartin (kmartin@sandec.com) <kmartin@sandec.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Salvador, Kathy <Kathy.Salvador@fpl.com>
Subject: RE: [External] 401 Application Denial

CAUTION - EXTERNAL EMAIL

Alex-

I apologize, after you and I spoke on the 3rd about the letter being issued I did not follow up with an email sending you a copy of the letter. Please see attached copy.

Karen

Karen Higgins
401 & Buffer Permitting Branch Supervisor
Division of Water Resources
Department of Environmental Quality

temporary contact info

(919) 791-4252 office
karen.higgins@ncdenr.gov

3800 Barrett Drive (Raleigh Regional Office), Raleigh, NC 27609
1628 Mail Service Center, Raleigh, NC 27699-1628

From: Miller, Alex [mailto:Alex.Miller@nexteraenergy.com]
Sent: Wednesday, June 12, 2019 2:54 PM
To: Higgins, Karen <karen.higgins@ncdenr.gov>
Cc: Homewood, Sue <sue.homewood@ncdenr.gov>; Patti, Heather <HPatti@trccompanies.com>; kmartin (kmartin@sandec.com) <kmartin@sandec.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Salvador, Kathy <Kathy.Salvador@fpl.com>
Subject: [External] 401 Application Denial

Hi Karen,

The 401 application denial came to my attention this afternoon after the media reached out to us for comment. I was able to find it publicly through the DWR WSRO 401 files. Please give me a call to discuss.

Thanks,

Alex V. Miller
NextEra Energy Resources | Environmental Services
Office: 713.374.1599
Cell: 713.204.3729

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

NORTH CAROLINA
Environmental Quality

June 3, 2019

DWR # 20181638 v1
Alamance & Rockingham Counties

CERTIFIED MAIL: 7017 2680 0000 2219 4025
RETURN RECEIPT REQUESTED

Mountain Valley LLC
Attn: Mr. Matthew Raffenberg
700 Universe Blvd
Juno Beach, FL 33408

Subject: **DENIAL of 401 Water Quality Certification and Jordan Lake Riparian Buffer Authorization Application**
MVP Southgate

Dear Mr. Raffenberg:

On November 30, 2018, the Division of Water Resources (Division) received your application, requesting a 401 Certification and Buffer Authorization from the Division for the subject project. On January 10, 2019, the Division requested additional information on the project and received a partial response to that request on February 12, 2019. On March 25, 2019, the Division returned your application as incomplete.

Your response to the Division on February 12, as well as your recent response to the U.S. Army Corps of Engineers, stated "*Mountain Valley is currently completing route evaluations and will be providing updated impact tables at a later date*" and "*Mountain Valley will provide final plan and profile view for all proposed permanent fills of aquatic resources in North Carolina…once all surveys have been completed and Project design is finalized*".

On March 15, 2019, the Federal Energy Regulatory Commission (FERC) provided notice of the schedule for environmental review of the subject project. In the notice, FERC states that the draft EIS will be issued in July 2019. Based on the response provided to the Division and follow up phone conversations with MVP contacts, the updated impact tables, final plan and profile views for proposed impacts will not be available until after July 2019.

The Division's March 25th letter is hereby rescinded and, in accordance with 15A NCAC 02H .0507(e) and 15A NCAC 02B .0267, your application for a 401 Water Quality Certification and Jordan Lake Riparian Buffer Authorization is hereby denied. Once a Draft EIS has been issued and a preferred route is identified by FERC, you may reapply to the Division.

This decision can be contested as provided in General Statute 150B by filing a written petition for an administrative hearing to the Office of Administrative Hearings (OAH) within sixty (60) calendar days.

A petition form may be obtained from the OAH at http://www.ncoah.com/ or by calling the OAH Clerk's Office at (919) 431-3000 for information. A petition is considered filed when the original and one (1) copy along with any applicable OAH filing fee is received in the OAH during normal office hours (Monday through Friday between 8:00am and 5:00pm, excluding official State holidays). The petition may be faxed to the OAH at (919) 431-3100, provided the original and one copy of the petition along with any applicable OAH filing fee is received by the OAH within five (5) business days following the faxed transmission.

Mailing address for the OAH:

If sending via US Postal Service:
Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714

If sending via delivery service (UPS, FedEx, etc):
Office of Administrative Hearings
1711 New Hope Church Road
Raleigh, NC 27609-6285

One (1) copy of the petition must also be served to DEQ:

William F. Lane, General Counsel
Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

Please be aware that you have no authorization under Section 401 of the Clean Water Act or the Jordan Lake Riparian Buffer Rules for this activity and any work done within waters of the State or riparian buffers may be a violation of North Carolina General Statutes and Administrative Code.

Please contact Karen Higgins at 919-791-4252 or karen.higgins@ncdenr.gov, or Sue Homewood at 336-776-9693 or sue.homewood@ncdenr.gov if you have any questions or concerns.

Sincerely,

Linda Culpepper, Director
Division of Water Resources

cc: Alex Miller, MVP Southgate (via email)
Heather Patti, TRC Environmental Corp (via email)
Kevin Martin, S&EC (via email)
David Bailey, Raleigh Regulatory Field Office (via email)
Todd Bowers, EPA (via email)
DWR WSRO 401 files

Filename: 20181638v1MVPSouthgate(RockinghamAlamance)_401_IC_DENIAL

Hamberg, Alexis

From: Homewood, Sue <sue.homewood@ncdenr.gov>
Sent: Friday, June 14, 2019 2:54 PM
To: Patti, Heather; David.E.Bailey2@usace.army.mil
Cc: Higgins, Karen; Miller, Alex; Hamberg, Alexis; Faul, Travis; Zimmer, John; Walker, Lisa
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits

Hi Heather,

I'm sorry but I'm not available until mid-July. The 15-29th is mostly open.

Thanks,

Sue Homewood
Division of Water Resources, Winston Salem Regional Office
Department of Environmental Quality

336 776 9693 office
336 813 1863 mobile
Sue.Homewood@ncdenr.gov

450 W. Hanes Mill Rd, Suite 300
Winston Salem NC 27105

From: Patti, Heather <HPatti@trccompanies.com>
Sent: Friday, June 14, 2019 1:57 PM
To: Homewood, Sue <sue.homewood@ncdenr.gov>; David.E.Bailey2@usace.army.mil
Cc: Higgins, Karen <karen.higgins@ncdenr.gov>; Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: [External] MVP Southgate - Jordan Watershed Site Visits

Hi Sue and Dave,

We would like to schedule another day or two of site visits along the Southgate route within the Jordan Lake Watershed in order to verify (or remove) streams along the route. We have a list of streams going and will get out to you soon, and please let me know of any specific streams you may want to visit.

If you would, please let me know a few days that would work for you in June (wow, the month is half way through already!) and July and we can coordinate. Sue, I believe you are out on vacation early August?

Also, Update for Sue: Regarding the variance alternatives you brought up during our meeting in May, the project team is basically adopting those alternatives. There are a couple where we may propose a hybrid route that we will want your review. We anticipate final approvals next week and then will need another week to get them turned around, but we are moving on it.

Thanks all!

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

From: Patti, Heather
Sent: Friday, June 14, 2019 5:06 PM
To: Homewood, Sue <sue.homewood@ncdenr.gov>; David.E.Bailey2@usace.army.mil
Cc: Higgins, Karen <karen.higgins@ncdenr.gov>; Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits

Thanks Sue! I am open during that window except for July 18th and 19th.

Dave, could you tell us your availability during that time frame?

Thanks again,
Heather

Hamberg, Alexis

From: Patti, Heather <HPatti@trccompanies.com>
Sent: Tuesday, September 24, 2019 1:59 PM
To: Homewood, Sue
Cc: Miller, Alex; Faul, Travis; Hamberg, Alexis; Zimmer, John; Walker, Lisa; De La Flor, Laura
Subject: Re: MVP Requests for More Info
Attachments: 20181836 Ver 2_More Info Requested_20190923.pdf; 20181836 Ver 3_More Info Requested_20190923.pdf

CAUTION - EXTERNAL EMAIL

Hi Sue,

Received and thank you. We will review and be in touch with questions.

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079
LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

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From: Homewood, Sue <sue.homewood@ncdenr.gov>
Sent: Tuesday, September 24, 2019 1:44 PM
To: Patti, Heather <HPatti@trccompanies.com>; Kevin Martin <kmartin@sandec.com>
Cc: David.E.Bailey2@usace.army.mil; Munzer, Olivia <olivia.munzer@ncwildlife.org>; Bowers, Todd <bowers.todd@epa.gov>
Subject: MVP Requests for More Info

Please see attached requests.

Thanks,

Sue Homewood
Division of Water Resources, Winston Salem Regional Office
Department of Environmental Quality

336 776 9693 office
336 813 1863 mobile
Sue.Homewood@ncdenr.gov

450 W. Hanes Mill Rd, Suite 300
Winston Salem NC 27105

Email correspondence to and from this address is subject to the
North Carolina Public Records Law and may be disclosed to third parties.

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

NORTH CAROLINA
Environmental Quality

September 23, 2019

DWR # 20181638 v3
Alamance & Rockingham Counties

Mountain Valley LLC
Attn: Kathy Salvaor
700 Universe Boulevard
Juno Beach FL 33408

Subject: **REQUEST FOR ADDITIONAL INFORMATION**
Mountain Valley Pipeline – Southgate (MVP Southgate)

Dear Ms. Salvaor:

On August 14, 2019, the Division of Water Resources (Division) received your application dated August 9, 2019, requesting a 401 Individual Water Quality Certification and Jordan Lake Buffer Authorization (15A NCAC 02B .0267) from the Division for your project. The Division has determined that your application is incomplete and cannot be processed. **The application is on-hold until all of the following information is received**:

1. Public Hearing – The Director has determined that it is in the public's interest to hold a public hearing to receive public comment and additional information on the proposed project. This hearing must be held prior to taking final action on your application. The Division is in the process of scheduling the public hearing and will forward the details by separate letter. [15A NCAC 02H .0503(f)]

2. Provide a *qualitative* cumulative impact analysis for the project. The analysis should follow the procedure/guidance outlined in the Division's Cumulative Impact Policy for the 401 and Isolated Wetland Permitting Programs (Ver2.1, dated April 10, 2004), available online: https://files.nc.gov/ncdeq/Water%20Quality/Surface%20Water%20Protection/401/Policies_Guides_Manuals/CumulativeImpactPolicy.pdf [15A NCAC 02H .0506(b)(4)]

3. Provide the exact locations and rate of discharge for the hydrostatic test water to be used within the Project. [15A NCAC 02H .0506(b)(3)]

4. Appendix I – HDD Contingency Plan Page 7 states "Technical data sheets for the more typical benign and environmentally friendly products that are approved for use by the Project are

included in Appendix A." Please provide these technical data sheets. [15A NCAC 02H .0506(b)(3)]

5. The Division's review of the documents submitted with the application has identified discrepancies between the following exhibits:
    - Wetland and Waterway Delineation Maps
    - Pipeline Alignment sheets
    - Proposed Pipeline Route and Impacts sheets
    - Wetland Impact Table
    - Stream Impact Table

    The inconsistencies in these exhibits include:
    - pipeline corridor location
    - access road location
    - jurisdictional features and impacts.

    Please submit updated exhibits that incorporate the most recent available data. Please ensure that the various sheets/maps correspond with each other, as well as other available documents such as the ATWS variance tables filed with FERC, with regards to jurisdictional features, alignment corridors, access road locations, additional temporary workspace locations and impact locations and amounts. [15A NCAC 02H .0506(b)]

The following comments are made in reference to the Proposed Pipeline Route and Impacts sheets (Appendix M):

6. At various locations within the project corridor, it appears that impacts could be avoided with a minor realignment or reduction of the construction corridor. Please review these areas and propose further avoidance and minimization, or provide site-specific justification of why these impacts could not be avoided or further minimized: [15A NCAC 02H .0506(b)(2)]
    a. Sheet 3, W-A18-44
    b. Sheet 21, W-C18-40
    c. Sheet 94, S-B18-11, Buffer Zone Impacts for workspace
    d. Sheet 102, Parallel Buffer Zone Impacts at approximately MP 72.7
    e. Sheet 108, appears that minor revision to norther boundary of CY-26B would reduce impacts to the adjacent buffer in this location

7. On Sheet 4, impacts are noted for both Cascade Creek and Dry Creek at MP27.5, however the Stream Impact Table notes that Cascade Creek is to be crossed using a Conventional Bore method, but Dry Creek is to be crossed using typical dewatering methods. Please explain why the Conventional Bore method is not proposed for the Dry Creek crossing, given its adjacency to Cascade Creek within the Construction Corridor. [15A NCAC 02H .0506(b)(2)]

8. Please review the Proposed Pipeline Route and Impacts sheets to confirm that in all wetland and waterbody impact locations the construction corridor width has been reduced to 75 feet where

proposed. Section 4.4 of the application notes that the construction right-of-way width will be reduced "unless alternative, site specific measures are requested by the Project and approved by FERC and other applicable agencies". If you are proposing a construction corridor greater than 75 feet through any wetland or waterbody please provide a clear identification/list of those locations a detailed site-specific justification for each location. Please note that although in some locations a stream or wetland may not be present within the entire width of the construction corridor, a reduction in the corridor to 75 feet would still provide avoidance and minimization, and therefore should still be justified on site-specific merit, not solely the length of the stream or wetland within the corridor. Please also update the impact quantities as appropriate. Examples of locations noted as having a greater than 75-foot construction corridor are: [15A NCAC 02H .0506(b)(2)]

a. Sheet 5, MP 28.0, W-A18-39 PEM and W-A18-26 PEM
b. Sheet 10 MP 30, W-A18-18 PFO.
c. Sheet 29, MP 38.7, W-A18-7 (7-2 through 7-7)
d. Sheet 32, MP 40.5 RR, S-A18-210 and S-A18-210-2
e. Sheet 55, MP 50.5, SS-SOIL- 18-02
f. Sheet 59, MP 52.4, AS-A18-219
g. Sheet 61, MP 53.4, W-A18-83
h. Sheet 62, MP 53.7, W-A18-85
i. Sheet 63, MP 54.4, W-C18-67
j. Sheet 81, MP 63.0, AS-B18-24
k. Sheet 85 MP 65, S-A19-319 and W-A19-320
l. Sheet 86, MP 65.1, S-A19-321 and S-A19-324
m. Sheet 87, MP 65.5, W-B19-168
n. Sheet 92, MP 67.9, SS-SOIL 19-12
o. Sheet 93, MP 68.3, S-B18-3
p. Sheet 102, Parallel Buffer Zone Impacts at approximately MP 72.7.

9. The application proposes to adhere to a 30-foot operational workspace (10 feet regularly mowed, and trees removed within 15 feet on either side of the pipeline) as required by FERC for intermediate and major waterbodies and all wetlands. Provide a detailed justification why the operational workspace cannot be reduced to 30 feet in for all other streams within the project. [15A NCAC 02H .0506(b)(2)]

10. On Sheet 29, stream construction impacts have been identified for Wolf Island Creek however the application notes that Wolf Island Creek is to be crossed by Conventional Bore. Please clarify what the nature of the impacts to Wolf Island Creek is and please verify if adjacent streams and wetlands impact are accurate given the location of the Bore entry and exit which are not shown on the sheets. [15A NCAC 02H .0506(b)(2)]

11. The Division recognizes the Wetland and Waterbody Crossing Analysis that has been provided, however we request additional information on the following specific locations: [15A NCAC 02H .0506(b)(2)]

a. Sheet 34, MP 41.2 - Given the size of Lick Fork and the adjacency of 2 tributaries and a wetland, please provide further detailed analysis that incorporates the practicality of a Conventional Bore which could avoid impacts to all 4 features at this location.
b. Sheet 39, MP 43.3 - Given the size of Jones Creek and the adjacency of a perennial tributary, please provide further detailed analysis that incorporates the practicality of a Conventional Bore which could avoid impacts to both features at this location.
c. Sheet 39 and 40, MP 43.7 - Given the size of the Tributary to Jones Creek (S-A18-105) and that the stream runs parallel with, and directly over the pipeline in this location, and the adjacency of a perennial tributary, please provide further detailed analysis that incorporates the practicality of a Conventional Bore which could avoid impacts to both features at this location.
d. Sheet 56, MP 50.8 - Given the size of the Tributary to Haw River (S-A19-286) and that the stream runs parallel with, and directly over the pipeline in this location, and that the Jordan Buffers also run parallel with the pipeline, please provide further detailed analysis that incorporates the practicality of a Conventional Bore which would address significant concerns the Division has regarding temporary impacts to and permanent restoration of a large stream running parallel and immediately over the pipeline.

12. At various locations within the project corridor, streams are present and parallel with the corridor/pipeline. Please provide site specific drawings indicating how these features are to be impacted during construction activities and how they are to be restored upon construction completion. The typical dewatering specifications provided with the application for stream crossings are not sufficient for parallel impacts. Please also describe how downstream water quality will be protected during construction activities when a stream is parallel within the project corridor. Please provide site-specific restoration details for each of these locations. The Division is specifically concerned with any proposal to restore the channel to pre-construction location when the channel is parallel with the pipeline and within the operational workspace, as long term maintenance activities are likely to have permanent impacts to the channels. The following locations are noted as examples of this scenario: [15A NCAC 02H .0506(b)(2)]
    a. Sheet 15, MP 32.0, S-A18-140, S-A18-143 and S-A18-144
    b. Sheet 15 MP 32.2, S-A18-147
    c. Sheet 21, MP 34.6 S-C18-38-2
    d. Sheet 21, MP 34.7, S-C18-53
    e. Sheet 28, MP 38.2, AS-APS-400
    f. Sheet 28, MP 38.5, S-A18-4 and S-A18-4-2
    g. Sheet 29, MP 38.8, S-A19-269 (if not avoided by adjacent Bore for Wolf Island Creek)
    h. Sheet 39 and 40, MP 37.7, S-A18-105
    i. Sheet 43, MP 45.6, S-A18-213
    j. Sheet 56, MP 50.8, S-A19-286

13. On Sheet 48 at MP 47.4 two streams are shown within the corridor however only one stream is called out with impacts. Please clarify.

14. On Sheet 68, MP 56.5 and Sheet 69, MP 56.7, please provide a construction sequences and site-specific details for how the pipeline will be constructed within these ponds in a manner which will protect downstream water quality. Please also include a dewatering detail/sequence (if applicable) and pond restoration detail for these locations. [15A NCAC 02H .0506(b)(2)]

The following comments are made specific to Jordan Buffer Rules and the portion of the project that lies within the Jordan Lake Watershed. [15A NCAC 02B .0267]

15. Provide a copy of the most recent USGS 1:24,000 map and published soil survey map with the proposed corridor as an overlay on each set of maps. The scale must be such that all streams as shown on these maps are easily identifiable. Please label all streams shown on these maps with the nomenclature used throughout the application documents.

16. Provide specific details of how diffuse flow shall be maintained for all above ground facilities within the Jordan Lake Watershed in order to document compliance with the diffuse flow provisions of the Jordan Buffer Rules.

17. Provide a detailed buffer restoration plan for all temporary workspace areas within Zone 1 that are not within the operational corridor shown on the plans. The plan must include a replanting plan, a vegetation monitoring plan, and proposed success criteria.

18. On Sheets 65 and Sheet 90, an access road is shown as impacting the buffer of a pond, however it appears that a road already exists at this location. The existing road should be considered as an "existing use" and buffer impacts should not be counted within the footprint of the existing road. Buffer impacts should be shown only for widening/improvements to the road outside of the existing footprint.

19. At the following locations please provide a detailed drawing at a more detailed scale which clearly shows how buffer impacts were identified between separate buffer impacts/categories (perpendicular vs. non-perpendicular)
    a. Sheet 74, MP 59.2-59.3
    b. Sheet 78, MP 61.8

20. It appears that there are buffer impacts along an intermittent stream that is unlabeled on Sheet 87 at MP 65.6 that serves as the outlet of the pond and joins S-A18-250 that have not been shown on the Proposed Pipeline Route and Impact sheet.

21. It does not appear that the buffer impacts associated with a pond on Sheet 90 at MP 67.3 are called out on the Sheet but appear on the Buffer Impact Table.

22. It does not appear that the buffer impacts on Sheet 95 at MP 69.1-2, which are called out on the Sheet and include 33VAR and 34VAR, are tabulated on the Buffer Impact Table.

23. It does not appear that the buffer impacts on Sheet 102 at MP 72.7, which are called out on the Sheet, are tabulated on the Buffer Impact Table.

Pursuant to Title 15A NCAC 02H .0502(e) and 15A NCAC 02B .0267, the applicant shall furnish all of the above requested information for the proper consideration of the application. Please respond in writing within 30 calendar days of receipt of this letter by sending one (1) copy of all of the above requested information to the 401 & Buffer Permitting Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617 OR by submitting all of the above requested information through this link: https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form (note the DWR# requested on the link is referenced above).

If all of the requested information is not received within 30 calendar days of receipt of this letter, the Division will be unable to approve the application and it will be denied as incomplete. The denial of this project will necessitate reapplication to the Division for approval, including a complete application package and the appropriate fee.

Please be aware that you have no authorization under the Water Quality Certification Rules for this activity and any work done within waters of the state may be a violation of North Carolina General Statutes and Administrative Code.

Please contact Sue Homewood at 336-776-9693 or Sue.Homewood@ncdenr.gov if you have any questions or concerns.

Sincerely,

Jeffrey Poupart, Section Chief
Water Quality Permitting Section
Division of Water Resources

cc: Heather Patti, TRC Environmental Corporation (via email)
David Bailey, USACE Raleigh Regulatory Field Office (via email)
Olivia Munzer, NCWRC (via email)
Todd Bowers, EPA (via email)
Christopher A. Militscher, Chief, NEPA Section, Strategic Programs Office, USEPA, 61 Forsyth St SW, Atlanta GA 30303
Maria Clark, NEPA Section – Region 4, USEPA, 61 Forsyth St SW, Atlanta GA 30303
DWR WSRO 401 files
DWR 401 & Buffer Permitting Unit

ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

NORTH CAROLINA
Environmental Quality

September 23, 2019

DWR # 20181638 v2
Alamance & Rockingham Counties

Mountain Valley LLC
Attn: Kathy Salvaor
700 Universe Boulevard
Juno Beach FL 33408

Subject: **REQUEST FOR ADDITIONAL INFORMATION**
Mountain Valley Pipeline – Southgate (MVP Southgate)

Dear Ms. Salvaor:

On August 14, 2019, the Division of Water Resources (Division) received your application dated August 9, 2019, requesting a Major Variance to the Jordan Lake Buffer Rules (15A NCAC 02B .0267) for your project. The Division has determined that your application is incomplete and cannot be processed. **The application is on-hold until all of the following information is received [15A NCAC 02B .0267]**:

1. Provide a detailed buffer restoration plan for all temporary workspace areas within Zone 1 that are not within the operational corridor shown on the plans. The plan must include a replanting design including species and location, vegetation monitoring parameters, and proposed success criteria.

2. Page 1 of Appendix E states "Features not shown on either reference are not subject to the buffer rules per the administrative code, and as such, were not buffered on the maps in Appendices C and D per the exemption based on a field determination from the NCDWR." The first portion of this statement is correct, that features not shown on either map are not subject to the Jordan Lake Buffer Rules. However, an on-site determination to document that features do not exist when they are shown on either map is a separate exemption within the Jordan Buffer Rules and should be stated as such within the project request.

3. The Summary Impact Table denotes some of the requested variance locations as "Workspace Only." If these areas are for workspace activities only and not for pipeline installation, please clarify for each specific location as to why the requirements of Footnote 1 and/or 4 are unable to be met for these locations.

4. The associated 401 application for this project proposes to adhere to a 30-foot operational workspace (10 feet regularly mowed, and trees removed within 15 feet on either side of the pipeline) as required by FERC for intermediate and major waterbodies and all wetlands. Page 3 of Appendix E submitted with the variance request states "only 10 feet centered over the pipeline will be mowed in wetland and riparian buffer areas to maintain an herbaceous state....In addition, trees within 15 feet of the pipeline with roots that could compromise the integrity of the pipeline coating will be removed." However, Appendix C indicates that 50-foot operation corridor will be maintained for the majority of locations within the variance request. Please clarify.

5. At various locations within variance request it appears that impacts could be avoided with a minor realignment, relocation, or reduction of the temporary workspace. Please review these areas and propose further avoidance and minimization, or site-specific justification of why these impacts could not be avoided or further minimized:
    a. Sheet 15, 15VAR
    b. Sheet 26, 28VAR
    c. Sheet 35, 37VAR

6. Please review the Proposed Pipeline Route and Impacts sheets to confirm that in all buffer impact areas proposed within the variance request the construction corridor width has been reduced to 75 feet where proposed in Appendix E of the request. Examples of locations noted as greater than 75-foot construction corridor are:
    a. Sheet 4, 3VAR
    b. Sheet 14 14VAR
    c. Sheet 17, 17VAR and 18VAR
    d. Sheet 18, 19VAR
    e. Sheet 22, 23VAR
    f. Sheet 24, 25VAR
    g. Sheet 27, 29VAR
    h. Sheet 29, 31VAR
    i. Sheet 32, 34VAR

7. The Division recognizes the Wetland and Waterbody Crossing Analysis that the applicant has referenced from the 401 Individual Certification Application, however we request additional information on the following specific locations:
    a. Sheet 4, 4VAR - Given the size of the tributary to the Haw River (S-A19-286) and that the stream runs parallel with, and directly over, the pipeline in this location, and that the Jordan Buffers also run parallel with the pipeline, please provide further detailed analysis that incorporates the practicality of a Conventional Bore.

8. The Summary Impact Table indicates that 5VAR, 12VAR and 13VAR are required for "Workspace Only" however it appears that these impacts are related to non-perpendicular crossings of the pipeline.

9. The alternative stream crossing analysis for 8VAR, 9VAR and 10VAR is presented as an alternative for all three impact areas. Please provide another alternative which avoids impacts at 8VAR and 9VAR and re-aligns with the proposed route alignment between MP 54.7 and 54.8, possibly aligning a portion of the alternative route adjacent to the proposed access road.

10. The analysis provided in Appendix E for 11VAR indicates that stream S-A18-129 is an ephemeral stream. If this channel has been verified by field determination by the Division as an ephemeral feature, then it would not be subject to the Jordan Buffer Rules and should not be part of the variance request.

11. The alternative stream crossing analysis for 26VAR includes both stream S-A18-177 and S-B18-80 within one alternative route alignment. Provide an analysis that evaluates only the first portion of the alternative alignment for crossing stream S-A18-177 and rejoins the proposed alignment at approximately MP67.2. This analysis must include an evaluation of the benefit of avoiding crossing two stream channels at a confluence (AS-A18-180 and S-A18-177) which has additional risk for restoration of a channel confluence immediately above the pipeline center and long term maintenance activities which will be a long term concerns for stream stabilities.

Pursuant to 15A NCAC 02B .0267, the applicant shall furnish all of the above requested information for the proper consideration of the application. Please respond in writing within 30 calendar days of receipt of this letter by sending one (1) copy of all of the above requested information to the 401 & Buffer Permitting Branch, 1617 Mail Service Center, Raleigh, NC 27699-1617 OR by submitting all of the above requested information through this link: https://edocs.deq.nc.gov/Forms/Supplemental-Information-Form (note the DWR# requested on the link is referenced above).

If all of the requested information is not received within 30 calendar days of receipt of this letter, the Division will be unable to approve the application and it will be denied as incomplete. The denial of this project will necessitate reapplication to the Division for approval, including a complete application package and the appropriate fee.

Please be aware that you have no authorization under the Jordan Lake Riparian Buffer Rules for this activity and any work done within riparian buffers may be a violation of North Carolina General Statutes and Administrative Code.

Please contact Sue Homewood at 336-776-9693 or Sue.Homewood@ncdenr.gov if you have any questions or concerns.

Sincerely,

Jeff Poupart, Chief
Water Quality Permitting Section

cc: Heather Patti, TRC Environmental Corporation (via email)
Kevin Martin, S&EC (via email)
David Bailey, USACE Raleigh Regulatory Field Office (via email)
Olivia Munzer, NCWRC (via email)
Todd Bowers, EPA (via email)
Christopher A. Militscher, Chief, NEPA Section, Strategic Programs Office, USEPA, 61 Forsyth St SW, Atlanta GA 30303
Maria Clark, NEPA Section – Region 4, USEPA, 61 Forsyth St SW, Atlanta GA 30303
DWR WSRO 401 files
DWR 401 & Buffer Permitting Unit

Hamberg, Alexis

From: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Sent: Wednesday, September 18, 2019 11:52 AM
To: Patti, Heather; Miller, Todd M CIV USARMY CENAO (US); Miller, Alex
Cc: Salvador, Kathy; Gibby, Jean B CIV USARMY CESAW (USA); Frye, Jennifer S CIV USARMY CENAO (USA); Hamberg, Alexis; Zimmer, John
Subject: RE: Response to Request for Additional Information; Mountain Valley Pipeline-Southgate, Alamance and Rockingham Counties; SAW-2018-00887

CAUTION - EXTERNAL EMAIL

Hi Heather. The November 1st target date is related to our responsibilities pertaining to One Federal Decision, which requires target dates for important milestones in the permitting process. Based on information received from MVP as of February 2019, November 1st was anticipated as the date when the Corps would receive a complete PCN/application. The completion status would be determined based primarily on the items mentioned in the Wilmington and Norfolk District's letters following your December 2018 and August 2019 JPA submittals. We need to know if you anticipate submittal of a complete PCN/application by November 1st, or if surveys/delineations/design/etc. pertaining to our above-referenced response letters are likely to push back this submittal. If so, we just need a revised anticipated complete PCN/application date to update the One Federal Decision milestone target. Thanks again.
-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
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Thanks!
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Western Virginia Regulatory Section
U.S. Army Corps of Engineers
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Please let me know if you have any issues with the files or if you have any questions.

Have a great weekend,

Heather Patti, PWS
Senior Ecologist

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T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079 LinkedIn | Twitter | Blog | Flickr |
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Email: David.E.Bailey2@usace.army.mil

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at:
Blockedhttps://nam01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fcorpsmapu.usace.army.mil%2Fcm_apex%2Ff%3Fp%3D136%3A4%3A0&data=02%7C01%7CHPatti%40trccompanies.com%7C9868be132535427e838208d732230aca%7C543eaf7b7e0d4076a34d1fc8cc20e5bb%7C0%7C1%7C637032999002746048&sdata=Cd6gdEBpCBpKx1AiYut3bt%2BcnMI4Qem8ZHAMXdeQo1c%3D&reserved=0
Thank you for taking the time to visit this site and complete the survey.

Hi Heather.

I apologize for not getting back to you sooner, but hopefully this email will be helpful in moving the JD/delineation verification forward. I have itemized my responses below after reviewing the updated delineation maps you sent on 5/30/2019, the ephemeral stream information you sent on 6/14/2019, and our in-office meeting on 7/8/2019:

1) I do not see a need for additional Corps field verification of delineated potential waters of the US, and therefore the Corps will not attend the field meeting you have scheduled for 7/26/2019. However, see the items below for additional areas for your staff to evaluate in the field and provide information for Corps review;
2) Please remove from the delineation maps all ephemeral streams listed in the information you submitted on 6/14/2019 (see attached). The Corps does not consider these features to be potential waters of the US based on their lack of consistency in displaying at least two indicators of ordinary high water mark;
3) Based on the data submitted on 5/30/2019, please also remove the following ephemeral features form the delineation maps: S-B19-154, S-B19-155, S-A19-267, S-A19-276, S-B19-158, S-B18-119, S-B19-152, S-B19-162, and S-B19-147. The Corps does not consider these features to be potential waters of the US based on their lack of consistency in displaying at least two indicators of ordinary high water mark;
4) Please provide data for features S-A18-220, S-C18-39, S-C18-74, S-A18-1, S-A18-228, S-A18-232, S-A18-231, S-B18-143, S-A18-123, S-A18-126, S-C18-4, S-C18-14, and S-A18-161. As above, this information will help determine whether or not the Corps will consider these features potential waters of the US;
5) Distinguish via symbology on the map and in the legend those features that were removed by the Corps (i.e. determined not to be potential waters of the US) based on field or office verification;
6) Distinguish on the maps which tracts have not been field reviewed at this time, whether or not any approximate waters were identified on the maps;
7) Feature-specific notes are as follows:
    a. S-B18-120: potential jurisdiction should start at flag 120-3
    b. W-A19-268: this feature should extend to bank of S-C18-35. Further, there is no side tributary here through W-A19-268, per field notes;
    c. S-18-1: it appears that this feature would be become potentially jurisdictional prior to its confluence with S-A18-2 near MP 38.2, please evaluate in the field;
    d. S-B18-72: it appears that the symbology is incorrect on the map. The potential jurisdiction should start at flag 7, and extend west to the corridor boundary. The section above (east) of flag 7 is not potentially jurisdictional.
    e. S-A18-228/229/230: please double check to ensure that the symbology is correct for these 3 features. Also, it appears that the flow regime should be perennial from the point where S-A18-228 has its confluence with S-A18-229/230;
    f. S-C18-78: this feature should be a wetland 8' wide, part of W-C18-77;
    g. S-C18-79: there are two features labeled the same. Change one of them as all unique potentially jurisdictional features must have unique labels;
    h. S-A18-90: there are three features labeled the same. Add unique labels to two of them as all unique potentially jurisdictional features must have unique labels;
    i. S-A18-123: extend the intermittent section to its confluence with S-A18-125;
    j. S-A18-129: begin at flag 11;

k. S-B18-10: change to intermittent;
l. S-A18-108: the ephemeral/intermittent symbology is reversed;
m. Field review topographic low areas at the following locations: between MPs 58.2/58.3, between MPs 58.4/58.5, and on either side of MP 65.1RR;

8) Once corrected, is it possible for you to send kmz/kml's or shapefiles of the updated Survey Area, Limits of Construction ROW, and Temp Access Roads? It would also be helpful if you could send kmz/kml's or shapefiles of the delineated waters;
9) Please note, once updated information of the above, and/or access is granted for existing red tracts to facilitate field delineation, the Corps may request field verification of those areas.

Please let me know if you have any questions.

-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
Fax: (919) 562-0421
Email: David.E.Bailey2@usace.army.mil

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at: http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0
Thank you for taking the time to visit this site and complete the survey.

-----Original Message-----
From: Patti, Heather [mailto:HPatti@trccompanies.com]
Sent: Friday, June 14, 2019 1:41 PM
To: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Cc: Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: [Non-DoD Source] MVP Southgate: List of Ephemeral Streams attached for your review

Hi Dave,

I have posted a list of ephemeral streams along the NC portion of the MVP Southgate project in which we would like a review and confirmation to remove them from the project route. Due to file size, the list is on the Sharepoint Site:

Blockedhttps://trcextranet.trcsolutions.com/sites/CS-KM2/MVPSouthgateNC/SitePages/Home.aspx?RootFolder=%2Fsites%2FCS%2DKM2%2FMVPSouthgateNC%2FShared%20Documents%2FMarch%202019%20Wetland%20Delineation%20Addendum%20Report&FolderCTID=0x012000E6F0B5881E9A844BBE6D9E10C7DE8DBE&View=%7B8E6533D0%2DC55A%2D41B0%2DAAF5%2D02F95FF16238%7D

The stream data forms and photos are attached to the list, entitled “Ephemerals for USACOE Review.PDF”. The sheet #’s coincide with the March 2019 delineation supplement – also in the same folder for your reference.

I would be happy to meet and go over these in person, so we could look at these together with the mapping pulled up/printed out. I am on vacation next week, but returning the week of the 24th.

Thank you!

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606

T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn <Blockedhttp://www.linkedin.com/company/trc-companies-inc> | Twitter <Blockedhttp://twitter.com/TRC_Companies> | Blog <Blockedhttp://blog.trcsolutions.com/> | Flickr <Blockedhttp://www.flickr.com/photos/trcsolutions/> | Blockedwww.TRCcompanies.com <Blockedhttp://www.TRCcompanies.com>

Please note that our domain name and email addresses have changed

MVP Southgate

Ephemeral Resources from 2018 Surveys for USACOE-Wilmington District Desktop Review

Feature Name (Sheet Number)	MVP Southgate Scientist Determination	*NC Methodology* Determination
S-A18-10 (pg. 183)	Ephemeral	Ephemeral
S-A18-77 (pg. 152)	Ephemeral	Ephemeral
S-A18-91 (pg. 96, 98)	Ephemeral	Ephemeral
S-A18-92 (pg. 99)	Ephemeral	Ephemeral
S-A18-103 (pg. 82)	Ephemeral	Ephemeral
S-A18-117 (pg. 185)	Ephemeral	Ephemeral
S-A18-148 (pg. 29)	Ephemeral	Ephemeral
S-A18-150 (pg. 30)	Ephemeral	Ephemeral
S-A18-159 (pg. 16)	Ephemeral	Ephemeral
S-A18-160 (pg. 18)	Ephemeral	Ephemeral
S-A18-211 (pg. 88)	Ephemeral	Ephemeral
S-A18-226 (pg. 84)	Ephemeral	Ephemeral
S-B18-23 (pg. 156)	Ephemeral	Ephemeral
S-B18-45 (pg. 73)	Ephemeral	Ephemeral
S-B18-47 (pg. 16)	Ephemeral	Ephemeral
S-B18-73 (pg. 59)	Ephemeral	Ephemeral
S-B18-75 (pg. 59)	Ephemeral	Ephemeral
S-B18-88 (pg. 183)	Ephemeral	Ephemeral
S-B18-109 (pg. 64)	Ephemeral	Ephemeral
S-B18-124 (pg. 28)	Ephemeral	Ephemeral
S-B18-126 (pg. 196)	Ephemeral	Ephemeral
S-B18-128 (pg. 196)	Ephemeral	Ephemeral
S-B18-129 (pg. 196, 198)	Ephemeral	Ephemeral
S-B18-130 (pg. 196, 198)	Ephemeral	Ephemeral
S-B18-135 (pg. 186, 187)	Ephemeral	Ephemeral
S-C18-6 (pg. 137)	Ephemeral	Ephemeral
S-C18-23 (pg. 111)	Ephemeral	Ephemeral
S-C18-48 (pg. 40)	Ephemeral	Ephemeral

S-C18-75 (pg. 42)	Ephemeral	Ephemeral
S-C18-83 (pg. 187)	Ephemeral	Ephemeral

Ephemeral Resources from January 2019 Surveys for USACOE-Wilmington District Desktop Review

Feature Name (Sheet Number)	**MVP Southgate Scientist Determination**	***NC Methodology* Determination**
S-A19-276 (pg. 6, 8)	Ephemeral	Ephemeral
S-A19-290 (pg. 136)	Ephemeral	Ephemeral
S-A19-147 (pg. 185)	Ephemeral	Ephemeral
S-A19-152 (pg. 183)	Ephemeral	Ephemeral
S-A19-162 (pg. 165, 166)	Ephemeral	Ephemeral
S-A19-163 (pg. 169)	Ephemeral	Ephemeral

CAUTION - EXTERNAL EMAIL

Thanks Dave! Let's put July 26th down for site visits. Sue, let us know of any issues with that day.

Heather

-----Original Message-----
From: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Sent: Friday, June 21, 2019 3:25 PM
To: Patti, Heather <HPatti@trccompanies.com>; Homewood, Sue <sue.homewood@ncdenr.gov>
Cc: Higgins, Karen <karen.higgins@ncdenr.gov>; Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Hi all. I still haven't had time to review the additional information Heather sent, but I am available July 26th to review any additional areas.
Thanks.
-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
Fax: (919) 562-0421
Email: David.E.Bailey2@usace.army.mil

Hi Dave,

Just checking in on scheduling these site visits – could you let us know your availability per the below so we can get something on folks' calendars?

Much appreciated!
Heather

From: Patti, Heather
Sent: Friday, June 14, 2019 5:06 PM
To: Homewood, Sue <sue.homewood@ncdenr.gov>; David.E.Bailey2@usace.army.mil
Cc: Higgins, Karen <karen.higgins@ncdenr.gov>; Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits

Thanks Sue! I am open during that window except for July 18th and 19th.

Dave, could you tell us your availability during that time frame?

Thanks again,
Heather

Hi Dave,

Just checking in on scheduling these site visits – could you let us know your availability per the below so we can get something on folks' calendars?

Much appreciated!
Heather

From: Patti, Heather
Sent: Friday, June 14, 2019 5:06 PM
To: Homewood, Sue <sue.homewood@ncdenr.gov>; David.E.Bailey2@usace.army.mil
Cc: Higgins, Karen <karen.higgins@ncdenr.gov>; Miller, Alex <Alex.Miller@nexteraenergy.com>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Faul, Travis <Travis.Faul@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>; Walker, Lisa <LWalker@trccompanies.com>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits

Thanks Sue! I am open during that window except for July 18th and 19th.

Dave, could you tell us your availability during that time frame?

Thanks again,
Heather

-----Original Message-----
From: Patti, Heather
Sent: Monday, June 24, 2019 6:43 AM
To: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits (UNCLASSIFIED)

Hi Dave,

Thanks for getting back to me! That would be great. July 8, 11 and 12 work - how about the 8th?? What time?

Heather

-----Original Message-----
From: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Sent: Friday, June 21, 2019 3:27 PM
To: Patti, Heather <HPatti@trccompanies.com>
Subject: RE: [External] MVP Southgate - Jordan Watershed Site Visits (UNCLASSIFIED)

CLASSIFICATION: UNCLASSIFIED

Heather, as you suggested, it's a good idea for us to meet in the office prior to any field date to go over your additional data, including ephemeral stream reviews.

I am available June 25, and July 2, 3, 8, 11, and 12. Would any of those dates work for you?

-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
Fax: (919) 562-0421
Email: David.E.Bailey2@usace.army.mil

From: John Spaeth
Sent: Monday, June 24, 2019 5:18 AM
To: Stancil, Vann F <vann.stancil@ncwildlife.org>; Brena.Jones@ncwildlife.org; thomas.russ@ncwildlife.org; olivia.munzer@ncwildlife.org; sarah_mcrae@fws.gov; john_ellis@fws.gov
Cc: Laurid Broughton <lbroughton@envsi.com>; Casey Swecker <CSwecker@envsi.com>; Jo Garofalo <JGarofalo@envsi.com>; Adam Benshoff <ABenshoff@envsi.com>; David Foltz <DFoltz@envsi.com>; Brandon Yates <BYates@envsi.com>; Stahl, Megan D. <MStahl@equitransmidstream.com>; Alex.Miller@nexteraenergy.com; Taina Pankiewicz <TPankiewicz@envsi.com>
Subject: RE: MVP Southgate Mussel Study Plan & Survey Commencement

All,
This week, ESI plans to conduct mussel and crayfish surveys at select locations along the MVP Southgate Project. If you have any questions or need additional information, please do not hesitate to contact us.
Thanks,
-John

John Spaeth
Aquatic Scientist / Project Manager
Environmental Solutions & Innovations, Inc.
4525 Este Ave. | Cincinnati, OH 45232 | USA
mobile: 513.377.0443 **direct:** 513.451.4329
office: 513.451.1777 **fax:** 513.451.3321
jspaeth@envsi.com | www.envsi.com

From: Walthall, Anita <anita.walthall@deq.virginia.gov>
Sent: Monday, June 24, 2019 7:37 AM
To: Akly, Christina
Subject: Status

CAUTION - EXTERNAL EMAIL

Good morning Christina,

I have been away from the office (time off, training). I am still developing draft documents for both applicants intermittently. I don't have any other changes to report for the Lambert Station at this time.

I am working remotely but will be in the office Wednesday (6/26).

Anita

_____
Anita L. Walthall
Air Permit Writer
Department of Environmental Quality
Blue Ridge Regional Office
901 Russell Dr.
Salem, VA 24153
(540) 562-6769
www.deq.virginia.gov

Effective APRIL 1, 2019 DEQ - Blue Ridge Regional Office has RELOCATED to:

901 Russell Drive, Salem, VA 24153

- Please update your records -

Contact Report for Aaron Blair

Contact ID 1060	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/28/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	To: "Clark, Maria (Clark.Maria@epa.gov)" From: "Miller, Alex" Subject: MVP Southgate Project Response Date: 05/28/2019 Cc: "Blair, AaronM" , "Rudnick.Barbara@Epa.Gov" , "Lee.Matthew@Epa.Gov" , "Salvador, Kathy" ReplyTo: "Miller, Alex" Body: Hello Ms. Clark: Please find the attached responses to your letter resubmitted on April 15, 2019 to the FERC docket regarding the MVP Southgate Project. Following your review, we would welcome a follow-up meeting to further discuss any outstanding questions/concerns. Thank you for your time, Alex Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Chief Frank Adams
Upper Mattaponi Tribe
5932 East River Road
King William, VA 23086

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Chief Adams:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

August 7, 2019

Mr. Stephen Adkins
Chief
Chickahominy Tribe
8200 Lott Cary Road
Providence Forge, VA 23140

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

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Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

From: Reynolds, Richard <rick.reynolds@dgif.virginia.gov>
Sent: Thursday, June 27, 2019 1:29 PM
To: Stahl, Megan D. <MStahl@equitransmidstream.com>
Cc: ProjectReview (DGIF), rr <projectreview@dgif.virginia.gov>
Subject: Re: [EXTERNAL] Fwd: Southgate Project - Transco Road Net Conservation Site Avoidance

It is not whether DGIF would like to see a plan, it is whether you would like the project to be covered for incidental take through a plan. Ernie and I were only showing you what the regulation states. It doesn't matter what I believe the probability of incidental take may be, a plan is the only legal means for allowable incidental take. Does that make sense? If not, give me a call.

Rick

Richard Reynolds
Wildlife Biologist
VDGIF
P.O. Box 996
Verona, VA 24482
540-248-9386

DEPARTMENT OF
GAME & INLAND
FISHERIES
CONSERVE. CONNECT. PROTECT.

On Thu, Jun 27, 2019 at 12:53 PM Stahl, Megan D. <MStahl@equitransmidstream.com> wrote:

Good afternoon Rick,

Can you clarify whether DGIF would like to see a plan for incidental take, or is this not necessary since you do not believe the project will have an impact on tri-colored bats?

Thank you,

Megan

From: ernie.aschenbach@dgif.virginia.gov <ernie.aschenbach@dgif.virginia.gov> **On Behalf Of** ProjectReview (DGIF), rr
Sent: Monday, June 24, 2019 2:44 PM
To: Stahl, Megan D. <MStahl@equitransmidstream.com>; Richard Reynolds <rick.reynolds@dgif.virginia.gov>; rr ProjectReview (DGIF) <ProjectReview@dgif.virginia.gov>
Subject: [EXTERNAL] Fwd: Southgate Project - Transco Road Net Conservation Site Avoidance

Please see attached guidance from Rick Reynolds and call if you have any questions. Thanks.

Ernie Aschenbach
Environmental Services Biologist
P 804.367.2733
Email: Ernie.Aschenbach@dgif.virginia.gov
Virginia Department of Game & Inland Fisheries
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dgif.virginia.gov

---------- Forwarded message ---------

Reynolds, Richard 2:23 PM (14 minutes ago)

to me

Ernie, I don't believe the project will have an impact on tri-colored bats. They only caught one tri-colored bat during their surveys so I think the odds of them coming across another tri-colored bat are slim to none. That said, the regulation requires a DGIF approved "plan" for incidental take.

Rick

Richard Reynolds

Wildlife Biologist

VDGIF

P.O. Box 996

Verona, VA 24482

540-248-9386

From: ernie.aschenbach@dgif.virginia.gov <ernie.aschenbach@dgif.virginia.gov> **On Behalf Of** ProjectReview (DGIF), rr
Sent: Monday, June 24, 2019 2:44 PM
To: Stahl, Megan D. <MStahl@equitransmidstream.com>; Richard Reynolds <rick.reynolds@dgif.virginia.gov>; rr ProjectReview (DGIF) <ProjectReview@dgif.virginia.gov>
Subject: [EXTERNAL] Fwd: Southgate Project - Transco Road Net Conservation Site Avoidance

Please see attached guidance from Rick Reynolds and call if you have any questions. Thanks.

Ernie Aschenbach
Environmental Services Biologist
P 804.367.2733
Email: Ernie.Aschenbach@dgif.virginia.gov
Virginia Department of Game & Inland Fisheries
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dgif.virginia.gov

---------- Forwarded message ---------
Reynolds, Richard 2:23 PM (14 minutes ago)

Ernie, I don't believe the project will have an impact on tri-colored bats. They only caught one tri-colored bat during their surveys so I think the odds of them coming across another tri-colored bat are slim to none. That said, the regulation requires a DGIF approved "plan" for incidental take.

Rick

Richard Reynolds
Wildlife Biologist
VDGIF
P.O. Box 996
Verona, VA 24482
540-248-9386

DEPARTMENT OF GAME & INLAND FISHERIES
CONSERVE. CONNECT. PROTECT.

On Mon, Jun 24, 2019 at 2:13 PM ProjectReview (DGIF), rr <projectreview@dgif.virginia.gov> wrote:
ESSLog 39178; MVP Southgate extension FERC pre-filing request (PF18-4) in VA & NC

Yes. On 19 October 2018 they submitted a 641 page report titled: REPORT: BAT SURVEYS FOR THE MVP SOUTHGATE PROJECT IN ALAMANCE AND ROCKINGHAM COUNTIES, NORTH CAROLINA AND PITTSYLVANIA COUNTY, VIRGINIA.

You ought to have a copy; either CD or paper-copy. Maybe both. According to to the report (p.22; Section 4.2 Virginia),

4.2 Virginia

Mist netting was completed at 30 sites from July 23 to August 15, 2018 resulting in completion of 183 complete and 31 partial net nights (Table 5). Acoustic surveys were not proposed, or completed, in Virginia.

4.2.1 Bat Capture

Bat captures during survey efforts totaled 220, including 160 eastern red, 55 big brown, 3 evening, 1 tri-colored, and 1 hoary (Table 10). Three eastern red bats escaped or were released due to inclement weather before morphometric measurements could be recorded. No federally listed species were captured; however, the tri-colored bat is listed as state-endangered in Virginia. No radio transmitter was attached to the tri-colored bat as it was a juvenile.

Ernie Aschenbach
Environmental Services Biologist
P 804.367.2733
Email: Ernie.Aschenbach@dgif.virginia.gov
Virginia Department of Game & Inland Fisheries
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dgif.virginia.gov

---------- Forwarded message ---------
From: **ProjectReview (DGIF), rr** <projectreview@dgif.virginia.gov>
Date: Fri, Jun 21, 2019 at 2:13 PM
Subject: Fwd: Southgate Project - Transco Road Net Conservation Site Avoidance
To: Richard Reynolds <rick.reynolds@dgif.virginia.gov>, rr ProjectReview (DGIF) <ProjectReview@dgif.virginia.gov>

Please advise. Thanks.

Ernie Aschenbach
Environmental Services Biologist
P 804.367.2733
Email: Ernie.Aschenbach@dgif.virginia.gov
Virginia Department of Game & Inland Fisheries
CONSERVE. CONNECT. PROTECT.
A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228-0778
www.dgif.virginia.gov

---------- Forwarded message ---------
From: **Stahl, Megan D.** <MStahl@equitransmidstream.com>
Date: Thu, Jun 20, 2019 at 3:41 PM
Subject: Southgate Project - Transco Road Net Conservation Site Avoidance
To: Ernst Aschenbach <ernie.aschenbach@dgif.virginia.gov>, Reynolds, Rick (DGIF) <Rick.Reynolds@dgif.virginia.gov>, rr ProjectReview (DGIF) <projectreview@dgif.virginia.gov>
Cc: Laurid Broughton <lbroughton@envsi.com>

Good afternoon Ernie and Rick,

During review of the Southgate project, FERC asked for the following information:

With regard to the correspondence received from the VDCR on September 5, 2018, provide correspondence from the VDGIF that the Project's proximity to the Transco Road Net Conservation would not significantly affect the state endangered tri-colored bat.

To avoid impacts to the site in question, the limits of disturbance for the project were adjusted to avoid overlap with the site as shown on the attached map. Please confirm that this adjustment to the project limits of disturbance is sufficient to ensure the project would not significantly affect the tri-colored bat.

Thank you,

Megan

Megan Stahl

Manager Environmental

2200 Energy Drive

Canonsburg, PA 15317

T 412-553-7783

C 412-737-2587

mstahl@equitransmidstream.com

Please note my new email address

Contact Report for David Bailey

Contact ID 1057	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Mr. Bailey, To clarify, this is not a revised submittal. The supplement is simply additional information to be considered for jurisdictional determination purposes on the currently proposed route. Thank you for your time, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Patti, Heather Sent: Wednesday, May 22, 2019 1:39 PM To: Bailey, David E CIV USARMY CESAW (US) ; Higgins, Karen Cc: Walker, Lisa ; Zimmer, John ; Miller, Alex ; Faul, Travis ; Miller, Todd M CIV USARMY CENAO (US) ; Homewood, Sue ; Hamberg, Alexis Subject: MVP Southgate Project, NC Joint Permit Application Supplement CAUTION - EXTERNAL EMAIL Hi Dave and Karen, A supplement to the November 2018 MVP Southgate Project Joint Permit Application has been uploaded to the project's Sharepoint site: https://trcextranet.trcsolutions.com/sites/CS-KM1/MVP-Southgate-A The supplementary PDF files are in a folder entitled "May 2019 JPA Supplement". Please let me know if you have any trouble logging in or downloading the files. Thank you! Heather Patti, PWS Senior Ecologist [cid:image001.png@01D4DD8B.DFF2F020] 5540 Centerview Drive, Suite 100, Raleigh, NC 27606 T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079 LinkedIn| Twitter | Blog | Flickr | www.TRCcompanies.com Please note that our domain name and email addresses have changed
Contacted By	Alex Miller

Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for David Bailey

Contact ID 1092	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/12/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi David, I wanted to make sure that you received this updated response on our 401 application. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Higgins, Karen Sent: Wednesday, June 12, 2019 3:38 PM To: Miller, Alex Cc: Homewood, Sue ; Patti, Heather ; kmartin (kmartin@sandec.com) ; Faul, Travis ; Salvador, Kathy Subject: RE: [External] 401 Application Denial CAUTION - EXTERNAL EMAIL Alex- I apologize, after you and I spoke on the 3rd about the letter being issued I did not follow up with an email sending you a copy of the letter. Please see attached copy. Karen Karen Higgins 401 & Buffer Permitting Branch Supervisor Division of Water Resources Department of Environmental Quality **temporary contact info** (919) 791-4252 office karen.higgins@ncdenr.gov 3800 Barrett Drive (Raleigh Regional Office), Raleigh, NC 27609 1628 Mail Service Center, Raleigh, NC 27699-1628 Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties. From: Miller, Alex [mailto:Alex.Miller@nexteraenergy.com] Sent: Wednesday, June 12, 2019 2:54 PM To: Higgins, Karen > Cc: Homewood, Sue >; Patti, Heather >; kmartin (kmartin@sandec.com) >; Faul, Travis >; Salvador, Kathy > Subject: [External] 401 Application Denial CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Karen, The 401 application denial came to my attention this afternoon after the media reached out to us for comment. I was able to find it

	publicly through the DWR WSRO 401 files. Please give me a call to discuss. Thanks, Alex V. Miller NextEra Energy Resources | Environmental Services Office: 713.374.1599 Cell: 713.204.3729
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for David Bailey

Contact ID 1256	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/08/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	Mr. Bailey met with MVP Southgate.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for David Bailey

Contact ID 1094	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/13/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail and requested call back to discuss recent 401 letter by NCDEQ.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for David Bailey

Contact ID 1109	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/14/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	David returned my phone call and we ran through a project updated including discussion on DEQ's 401 denial letter, planned surveys for the summer, and the FERC schedule.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for David Bailey

Contact ID 1259	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Follow-up to confirm receipt of the JPA submittal on Friday.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for David Bailey

Contact ID 1470	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/19/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Voicemail to discuss PCN submittal date and information to be included.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Chief Sam Bass
Nansemond Tribe
1001 Pembroke Lane
Suffolk, VA 23434

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Chief Bass:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Rosie Blewitt-Golsch

Contact ID 1264	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on recent Southgate submittals and FERC’s DEIS issuance.
Contacted By	Paul Webb
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Mr. Kenneth Branham
Chief
P.O. Box 1136
Madison Heights 24572

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Chief Branham:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Jason Bulluck

Contact ID 1528	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/17/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	DCR Meeting at their office in Richmond to discuss their DEIS comments, updated surveys, and forest fragmentation.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tonya Caddle

Contact ID 1123	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/18/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	Pre-application meeting between Southgate and Ms. Caddle to discuss floodplain permitting expectations and schedule.
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Catawba Indian Nation
Tribal Historic Preservation Office
1536 Tom Steven Road
Rock Hill, South Carolina 29730

Office 803-328-2427
Fax 803-328-5791

September 5, 2019

Attention: Agnes S. Ramsey
MVP Southgate
2200 Energy Drive
Canonsburg, PA 15317

Re. THPO # 2019-1055-1 TCNS # Project Description
Natural Gas Pipeline in Pittsylvania Co., VA and Alamance Co., NC

Dear Ms. Ramsey,

The Catawba have no immediate concerns with regard to traditional cultural properties, sacred sites or Native American archaeological sites within the boundaries of the proposed project areas. **However, the Catawba are to be notified if Native American artifacts and / or human remains are located during the ground disturbance phase of this project.**

If you have questions please contact Caitlin Rogers at 803-328-2427 ext. 226, or e-mail caitlinh@ccppcrafts.com.

Sincerely,

Caitlin Rogers for

Wenonah G. Haire
Tribal Historic Preservation Officer

August 7, 2019

Mr. Dante Desiderio
Executive Director
P.O. Box 3265
Roxboro, NC 27574

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Dante:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Michael Dowd

Contact ID 1428	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/06/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion regarding the Southgate air permit application.
Contacted By	Christina Akly
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for John Ellis

Contact ID 1085	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/30/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on water withdrawal mitigation
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for John Ellis

Contact ID 1288	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Provided information on DEIS public comment meeting time and locations (voicemail)
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for John Ellis

Contact ID 1427	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/05/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone conversation to clarify statements within the DEIS.
Contacted By	Megan Stahl
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for John Ellis

Contact ID 1458	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/11/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call discussion with Mr. Ellis following up on the FERC DEIS tree clearing clarification. Mr. Ellis said that he is working on language for a comment to FERC regarding this statement in the DEIS: “FWS recommended that Mountain Valley avoid clearing from March 15 - August 15 in Virginia and from April 1 - August 31 in North Carolina”. He plans to communicate that he prefers that the project clear outside of the nesting window and that FWS supports the states’ recommendations regarding MBTA, but that FWS did not make the stated recommendation.
Contacted By	Megan Stahl
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Eplin

Contact ID 1292	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Tamera, As discussed, public meetings to collect comment on the Southgate Project's DEIS will be held in each of the three counties along the proposed route: 5 p.m. - 8 p.m. Aug. 19, 2019 Rockingham Community College 215 Wrenn Memorial Road Wentworth, NC 27375 5 p.m. - 8 p.m. Aug. 20, 2019 Olde Dominion Agricultural Complex 19783 US Highway 29 South Chatham, VA 24531 5 p.m. - 8 p.m. Aug. 22, 2019 Vailtree Event & Conference Center 1567 Bakatsias Lane Haw River, NC 27258 Please let me know if you have any questions. Thanks, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Tamera Eplin

Contact ID 1287	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/13/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussed E&S specifics and committed to meeting on 8/21 to review and submit E&S plans
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Eplin

Contact ID 1290	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Provided information on DEIS public comment meeting time and locations; Tamera requested an email with specifics
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Stan Faggert

Contact ID 1498	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/24/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	To: "sms@pipelineoutreach.com" From: "Miller, Alex" Subject: FW: Date: 09/24/2019 Cc: ReplyTo: "Miller, Alex" Body: From: Faggert, Stanley Sent: Tuesday, September 24, 2019 10:49 AM To: Miller, Alex Subject: CAUTION - EXTERNAL EMAIL In the past we've used the Chatham's "Star-Tribune" (chathamstartribune.com) that serves Pittsylvania County. -- Stanley M. Faggert Minor NSR Coordinator Virginia Department of Environmental Quality 804-698-4424 sms@pipelineoutreach.com,sms@pipelineoutreach.com
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Stan Faggert

Contact ID 1285	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/22/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Arranged meeting to discuss public outreach and environmental justice analysis for Lambert CS.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Stan Faggert

Contact ID 1291	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/22/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on community outreach plans around the Lambert CS and air permit application process.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Stan Faggert

Contact ID 1490	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/24/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on community outreach plan for the Lambert CS area.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Matt Gantt

Contact ID 1086	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/03/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Matt, I'm following up on a topic that has been discussed during our in-person E&S plan review meetings over the past months. I'd like to propose the belted silt retention fence as an erosion control device available for use on the Southgate project. This ECD has been used with great success on a large amount of projects Equitrans has built over the past years. It is commonly used as an enhancement in protection when compared to regular silt fence. On Southgate, its uses could include ROW perimeter protection, around ATWS locations, and also as aquatic resource buffers. I've attached the MVP construction detail showing its use on the mainline and also the manufacture's typical and technical specifications. Here is the website to the company. There are other manufactures that develop a similar product that go by different names. Would you be available for a call tomorrow to discuss the potential for implementing a belted silt retention fence on Southgate? Thank you, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Matt Gantt

Contact ID 1147	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/19/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Thanks Matt! Cory From: Gantt, Matt Sent: Wednesday, June 19, 2019 10:33 AM To: Chalmers, Cory M. Cc: Vinson, Toby Subject: RE: [External] Southgate-- Belted Silt Retention Fence Hi Cody, I'll make a point to discuss this with Toby shortly. Sorry for the delay but I'm still splitting time between here and Winston-Salem. Thanks, Matt From: Chalmers, Cory M. > Sent: Monday, June 3, 2019 8:46 AM To: Gantt, Matt > Cc: Vinson, Toby > Subject: [External] Southgate-- Belted Silt Retention Fence CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Matt, I'm following up on a topic that has been discussed during our in-person E&S plan review meetings over the past months. I'd like to propose the belted silt retention fence as an erosion control device available for use on the Southgate project. This ECD has been used with great success on a large amount of projects Equitrans has built over the past years. It is commonly used as an enhancement in protection when compared to regular silt fence. On Southgate, its uses could include ROW perimeter protection, around ATWS locations, and also as aquatic resource buffers. I've attached the MVP construction detail showing its use on the mainline and also the manufacture's typical and technical specifications. Here is the website to the company. There are other manufactures that develop a similar product that go by different names. Would you be available for a call tomorrow to discuss the potential for implementing a belted silt retention fence on Southgate? Thank you, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061

	Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Matt Gantt

Contact ID 1243	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
	Thanks Matt. Enjoy your time away! Unless Tamera objects, perhaps we could still have the call early next week. That would be a good opportunity to introduce myself and the project along with what has been happening up until now. And if a follow up call once your back is needed, we can schedule that as well. Tamera, would Monday be convenient for your schedule? Thanks, Cory From: Gantt, Matt Sent: Tuesday, July 23, 2019 11:56 AM To: Chalmers, Cory M. Cc: Vinson, Toby ; Smith, Danny ; Eplin, Tamera Subject: RE: [External] Southgate-- Belted Silt Retention Fence Hey Cory, After today, I will be out of the office until 8/12/19. Also, I am no longer the Regional Engineer in the WSRO. I am now based out of the Raleigh Central Office. The new Regional Engineer is Ms. Tamera Eplin, PE. I will include her on this email. I am also happy to assist you with the permitting since I have been involved with it up to this point. Do you want to meet on August 12th? I'm happy to meet then if you can wait that long. Thanks , Matt From: Chalmers, Cory M. [mailto:CChalmers@equitransmidstream.com] Sent: Tuesday, July 23, 2019 11:43 AM To: Gantt, Matt > Cc: Vinson, Toby > Subject: RE: [External] Southgate-- Belted Silt Retention Fence CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Matt, Would I be able to schedule a call for early next week for a quick check-in/update? We are within a week or two of being ready to submit plans and I want to go over a few details prior to finalizing the E&S sheets. Would you be available Monday, July 29 at 3:00? Thanks, Cory From: Chalmers, Cory M. Sent: Wednesday, June 19, 2019

Issue Comments	10:59 AM To: Gantt, Matt > Cc: Vinson, Toby > Subject: RE: [External] Southgate-- Belted Silt Retention Fence Thanks Matt! Cory From: Gantt, Matt > Sent: Wednesday, June 19, 2019 10:33 AM To: Chalmers, Cory M. > Cc: Vinson, Toby > Subject: RE: [External] Southgate-- Belted Silt Retention Fence Hi Cody, I'll make a point to discuss this with Toby shortly. Sorry for the delay but I'm still splitting time between here and Winston-Salem. Thanks, Matt From: Chalmers, Cory M. > Sent: Monday, June 3, 2019 8:46 AM To: Gantt, Matt > Cc: Vinson, Toby > Subject: [External] Southgate-- Belted Silt Retention Fence CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Matt, I'm following up on a topic that has been discussed during our in-person E&S plan review meetings over the past months. I'd like to propose the belted silt retention fence as an erosion control device available for use on the Southgate project. This ECD has been used with great success on a large amount of projects Equitrans has built over the past years. It is commonly used as an enhancement in protection when compared to regular silt fence. On Southgate, its uses could include ROW perimeter protection, around ATWS locations, and also as aquatic resource buffers. I've attached the MVP construction detail showing its use on the mainline and also the manufacture's typical and technical specifications. Here is the website to the company. There are other manufactures that develop a similar product that go by different names. Would you be available for a call tomorrow to discuss the potential for implementing a belted silt retention fence on Southgate? Thank you, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Matt Gantt

Contact ID 1239	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Matt, Would I be able to schedule a call for early next week for a quick check-in/update? We are within a week or two of being ready to submit plans and I want to go over a few details prior to finalizing the E&S sheets. Would you be available Monday, July 29 at 3:00? Thanks, Cory From: Chalmers, Cory M. Sent: Wednesday, June 19, 2019 10:59 AM To: Gantt, Matt Cc: Vinson, Toby Subject: RE: [External] Southgate-- Belted Silt Retention Fence Thanks Matt! Cory From: Gantt, Matt > Sent: Wednesday, June 19, 2019 10:33 AM To: Chalmers, Cory M. > Cc: Vinson, Toby > Subject: RE: [External] Southgate-- Belted Silt Retention Fence Hi Cody, I'll make a point to discuss this with Toby shortly. Sorry for the delay but I'm still splitting time between here and Winston-Salem. Thanks, Matt From: Chalmers, Cory M. > Sent: Monday, June 3, 2019 8:46 AM To: Gantt, Matt > Cc: Vinson, Toby > Subject: [External] Southgate-- Belted Silt Retention Fence CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Matt, I'm following up on a topic that has been discussed during our in-person E&S plan review meetings over the past months. I'd like to propose the belted silt retention fence as an erosion control device available for use on the Southgate project. This ECD has been used with great success on a large amount of projects Equitrans has built over the past years. It is commonly used as an enhancement in protection when compared to regular silt fence. On Southgate, its uses could include ROW perimeter protection, around ATWS locations, and also as aquatic resource buffers. I've attached the

	MVP construction detail showing its use on the mainline and also the manufacture's typical and technical specifications. Here is the website to the company. There are other manufactures that develop a similar product that go by different names. Would you be available for a call tomorrow to discuss the potential for implementing a belted silt retention fence on Southgate? Thank you, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Matt Gantt

Contact ID 1277	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/13/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Matt and Tamera, Would the two of you be available for an hour sometime tomorrow to review a page or two of E&S plans with myself and Geosyntec through Webex? We have a couple pages of E&S plans and would really appreciate being able to ask a few questions about our proposed designs so that we can finalize our plans. Whatever time is convenient for the both of you will work for us. Thanks so much for your time. Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Matt Gantt

Contact ID 1293	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Tamera, As discussed, public meetings to collect comment on the Southgate Project's DEIS will be held in each of the three counties along the proposed route: 5 p.m. - 8 p.m. Aug. 19, 2019 Rockingham Community College 215 Wrenn Memorial Road Wentworth, NC 27375 5 p.m. - 8 p.m. Aug. 20, 2019 Olde Dominion Agricultural Complex 19783 US Highway 29 South Chatham, VA 24531 5 p.m. - 8 p.m. Aug. 22, 2019 Vailtree Event & Conference Center 1567 Bakatsias Lane Haw River, NC 27258 Please let me know if you have any questions. Thanks, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com tamera.eplin@ncdenr.gov
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Matt Gantt

Contact ID 1453	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/30/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	From: Lentz, Zachary Sent: Friday, August 30, 2019 10:33 AM To: Tim Seldon ; Gantt, Matt ; Eplin, Tamera Cc: Chalmers, Cory M. Subject: RE: [External] Federal Construction Requirements Tim, Assuming this is a regular review, it will be $65 per acre, with acreage rounded up. Zac From: Tim Seldon > Sent: Friday, August 30, 2019 10:25 AM To: Lentz, Zachary >; Gantt, Matt >; Eplin, Tamera > Cc: Chalmers, Cory M. > Subject: RE: [External] Federal Construction Requirements CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Oh great, we have those in the Set already. If I could ask another question, where do I find Review Fee information for our upcoming submittal? I see a couple different sections here: https://deq.nc.gov/about/divisions/energy-mineral-land-resources/er and want to be sure we send in the right documents, amount, etc. with our Plans. Thanks for all your help, Tim Tim Seldon, Senior Engineer - Geosyntec Consultants D: 804-665-2824 M: 804-840-4433 From: Lentz, Zachary > Sent: Friday, August 30, 2019 10:11 AM To: Tim Seldon >; Gantt, Matt >; Eplin, Tamera > Cc: Chalmers, Cory M. > Subject: RE: [External] Federal Construction Requirements Tim, That sounds to me like the new NCG01 plan sheets. https://deq.nc.gov/ncg01 - "Sample Plan Sheets" Please let me know if this is not what you're looking for. Zac From: Tim Seldon > Sent: Thursday, August 29, 2019 5:09 PM To: Gantt, Matt >; Eplin, Tamera >; Lentz, Zachary > Cc: Chalmers, Cory M. > Subject: [External] Federal Construction Requirements CAUTION: External email. Do not

	click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov All, Thank you for your time last week, we thought it was a very productive meeting and appreciate all the feedback. I have a note to look at some sample plans that are on DEQ website(?) and include pertinent info. from there so as to comply Federal Construction requirements as well. Can I be pointed in the direction of or sent those Plans? We look forward to submitting our forthcoming plans and your review. Thanks, Tim Tim Seldon, P.E., ESPA, SWPA Senior Engineer [licensed in VA] ---------- 9211 Arboretum Parkway, Suite 200 Richmond, VA 23236 Phone: 804-767-2206 Direct: 804-665-2824 Mobile: 804-840-4433 www.geosyntec.com [Geosyntec_Logo_COLOR_high-res] This electronic mail message contains information that (a) is or may be LEGALLY PRIVILEGED, CONFIDENTIAL, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) is intended only for the use of the Addressee(s) named herein. If you are not the intended recipient, an addressee, or the person responsible for delivering this to an addressee, you are hereby notified that reading, using, copying, or distributing any part of this message is strictly prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system.
Contacted By	N/A
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Matt Gantt

Contact ID 1286	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/09/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussed E&S specifics and plan to meet week of 8/19 to review and submit plans.
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Renee Gledhill-Earley

Contact ID 1190	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/27/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion over Phase I architectural report.
Contacted By	Paul Webb
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Dr. Wenonah Haire
THPO
Catawba Indian Nation
1536 Tom Steven Road
Rock Hill, SC 29730

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Dr. Haire:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

August 7, 2019

Mr. Tony Hayes
Tribal Chair
Occaneechi Band of the Saponi Nation
P.O. Box 356
Mebane, NC 27302

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Mr. Hayes:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

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Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Karen Higgins

Contact ID 1083	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/29/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Good afternoon Karen, Thank you again for meeting with us to review our draft buffer variance application and hope you had a great Memorial Day. I wanted to circle back with you on the proposed schedule that we discussed to make sure I accurately captured the timeframes through the end of the year. This schedule assumes that only one additional round of our application needs to occur and there will be a public hearing for 401 permit application. Please let me know if any corrections are needed. - July: DEIS issued by the FERC, MVP submittal of updated variance request and 401 application, DEQ completes review - August: MVP resubmits applications with updates to comments/discussion, DEQ completes review - September: 401 public hearing - October: MVP responds to public hearing comments - November: Water Quality Committee Presentation, MVP makes adjustments to application and resubmits (if necessary) - December 19, 2019: FERC issues Final Environmental Impact Statement (based on Notice of Schedule) Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Karen Higgins

Contact ID 1089	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/06/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Karen, I believe that you are still on temporary detail away from the office. Please call me at 713-374-1599 at your earliest convenience. Thank you, Alex
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1088	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/03/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Ms. Higgins called MVP Southgate to deliver a status update concerning the buffer variance.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1091	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Attempted contact; voicemail said that she was still out of the office.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1108	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/13/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Karen called to discuss that the change confirm receipt of the 401 denial letter and confirm that this was procedural as the agency is no longer to "return an application" and has to either approve or deny.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1357	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/29/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail requesting call back to discuss 401 application.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1430	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/10/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail to check on application review.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Karen Higgins

Contact ID 1450	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/11/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Called Alex Miller to notify that she changed positions in the agency and Sue Homewood will be the primary contact moving forward for the state's 401 and buffer variance.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1254	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/26/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	MVP Southgate field visit.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1459	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/11/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Ms. Homewood left MVP a voicemail regarding the status of her review on the Southgate JPA submittal.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1082	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/28/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Ms. Homewood contacted MVP to pass along additional comments she had upon further review of Southgate's buffer variance application after the meeting on 5/16/19.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1207	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/16/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	MVP Southgate provided general project updates regarding the buffer variance.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1208	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/22/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Ms. Homewood left a voicemail to MVP Southgate regarding the Variance application.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1398	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/30/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Ms. Homewood called MVP Southgate to give an update on her review of the NC JPA re-application.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1412	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/04/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call discussion regarding Southgate JPA re-submittal.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Sue Homewood

Contact ID 1460	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call discussion regarding the JPA resubmital hearing meetings.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

From: Sonja Ingram <singram@preservationvirginia.org>
Sent: Wednesday, August 28, 2019 9:45 AM
To: Lavarco, William <William.Lavarco@nexteraenergy.com>
Cc: Ross, Kimberli <KIMBERLI.Ross@nexteraenergy.com>
Subject: Re: Mountain Valley Southgate

Mr. Lavarco,

Thank you. Attached are the signed Confidentiality Agreement documents. Let me know if you need anything else from me.

Sincerely,
Sonja Ingram

On Tue, Aug 27, 2019 at 8:15 PM Lavarco, William <William.Lavarco@nexteraenergy.com> wrote:

Dear Ms. Ingram:

In connection with your request for certain cultural resource reports filed with the FERC as privileged and confidential in the Mountain Valley Pipeline Southgate proceeding, Docket No. CP19-14-000, attached please find a Confidentiality and Protective Agreement ("Agreement") for your organization to execute. This is the standard form of Agreement as mandated by FERC. In addition, each person that wishes to view the cultural resource reports must also execute the non-disclosure certificate on the last page of the Agreement. Upon receipt of the executed Agreement and, as applicable, the non-disclosure certificates, Mountain Valley will execute the Agreement and send you the cultural resource reports for the Mountain Valley Southgate Project from the State of Virginia.

Please contact me if you have any questions. Also, note that I will be on vacation beginning Friday through September 6 with little to no e-mail and phone access so please also direct any responses to Kimberly Ross, copied here. Thank you.

William Lavarco

Senior Attorney

Federal Regulatory Affairs

NextEra Energy, Inc.

202-347-7127

202-341-5487

William.lavarco@nee.com

--

Sonja Ingram
Preservation Field Services Manager

PRESERVATION VIRGINIA
608 Holbrook Avenue
Danville, VA 24541
434-770-1209
singram@preservationvirginia.org
www.preservationvirginia.org

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<MVP Southgate Flash Drive Instructions_7.31.2019.pdf>

Contact Report for Jeffery Steers

Contact ID 1408	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/28/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Mr. Steers, Thank you for reaching out to me yesterday to discuss the Project's air application under review. We are available to meet Tuesday afternoon in Richmond if that works for your team as well? Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Jeffery Steers

Contact ID 1411	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/04/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	From: Steers, Jeffery Sent: Wednesday, September 4, 2019 12:49 PM To: Miller, Alex Subject: Re: Southgate Follow-up Meeting Perfect, thank you...I will assemble our team. Please provide me with the names of who is coming in person so I can alert the front desk in our lobby....Jeff Jeffery A Steers, Director of Central Operations/Acting Director of Enforcement Virginia Department of Environmental Quality 1111 E Main St, Suite 1400 Richmond, VA 23219 (804) 698-4079 jeffery.steers@deq.virginia.gov On Wed, Sep 4, 2019 at 1:46 PM Miller, Alex > wrote: Jeff, I was able to get in touch with Legal and we can make Monday (9/9) work at your office if you are having difficulty with something the following week. From: Steers, Jeffery > Sent: Wednesday, September 4, 2019 11:28 AM To: Miller, Alex > Subject: Re: Southgate Follow-up Meeting Nope, I want to have Mike Dowd there, and he is only open on Monday morning, He will be out of town on travel returning next week. Let me know if we need to stretch into the following week....Jeff Jeffery A Steers, Director of Central Operations/Acting Director of Enforcement Virginia Department of Environmental Quality 1111 E Main St, Suite 1400 Richmond, VA 23219 (804) 698-4079 jeffery.steers@deq.virginia.gov On Wed, Sep 4, 2019 at 10:00 AM Miller, Alex > wrote: Thanks for getting back quickly. Are there any other times/days to provide some options in case that does not work? From: Steers, Jeffery > Sent: Wednesday, September 4, 2019 8:43 AM To: Miller, Alex > Subject: Re: Southgate Follow-up Meeting Good morning, next Monday morning at 11:00 would work best for DEQ and the Attorney General's Office. jeff Jeffery A Steers,

	Director of Central Operations/Acting Director of Enforcement Virginia Department of Environmental Quality 1111 E Main St, Suite 1400 Richmond, VA 23219 (804) 698-4079 jeffery.steers@deq.virginia.gov On Wed, Sep 4, 2019 at 9:38 AM Miller, Alex > wrote: Hi Jeff, Circling back on this to see if there is another day next week that will work for your team to meet? Thanks, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Miller, Alex > Sent: Wednesday, August 28, 2019 3:16 PM To: Steers, Jeffery > Subject: Re: Southgate Follow-up Meeting Hi Jeff, My attorney can't do Thursday but is open the following week. Any of those days work? Alex On Aug 28, 2019, at 3:09 PM, Steers, Jeffery > wrote: CAUTION - EXTERNAL EMAIL Thanks for getting back to me.....our Assistant Attorney General now has conflicts and we were wondering if next Thursday is possible? We can meet anytime that is convenient for you all...Jeff Jeffery A Steers, Director of Central Operations/Acting Director of Enforcement Virginia Department of Environmental Quality 1111 E Main St, Suite 1400 Richmond, VA 23219 (804) 698-4079 jeffery.steers@deq.virginia.gov On Wed, Aug 28, 2019 at 12:03 PM Miller, Alex > wrote: Hi Mr. Steers, Thank you for reaching out to me yesterday to discuss the Project's air application under review. We are available to meet Tuesday afternoon in Richmond if that works for your team as well? Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 sms@pipelineoutreach.com,sms@pipelineoutreach.com
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Jeffery Steers

Contact ID 1330	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/27/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Jeff requested a follow-up meeting to discuss air permit application.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Ms. Vickie Jeffries
Occaneechi Band of the Saponi Nation
Tribal Administrator
P.O. Box 356
Mebane, NC 27302

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Vickie:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Jerome Brooks

Contact ID 1280	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/14/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail notifying him of DEIS comment meeting next Tuesday in Chatham and inquiry if the agency had any comments on it.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Mark Joyner

Contact ID 1520	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/04/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Mr. Joyner, Thank You For Speaking With Me This Afternoon About The Southgate Project And Some Of Your Societies Concerns. Please Sign And Return The Attached Document So We Can Begin Distributing Confidential Data Regarding Our Project. Regards, Alex V. Miller Environmental Permitting Lead On Behalf Of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - Re-Sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Hamberg, Alexis

From: Patti, Heather <HPatti@trccompanies.com>
Sent: Friday, August 9, 2019 12:10 PM
To: Bailey, David E CIV USARMY CESAW (US); Higgins, Karen; Homewood, Sue
Cc: Walker, Lisa; Zimmer, John; Miller, Alex; Faul, Travis; Hamberg, Alexis; Sabol, James J.
Subject: MVP Southgate Project NC Joint Permit Re-application (SAW-2018-00887)
Attachments: MVP Southgate NC JPA Addendum Cover Ltr_08.09.19.pdf; NC_PCN Form_Final 08.09.19.pdf; NC_JPA FINAL 08.09.19.pdf

Hi Dave, Karen and Sue,

A Joint 404/401 Re-application for the MVP Southgate Project is posted to the project's sharepoint site:

https://trcextranet.trcsolutions.com/sites/CS-KM2/MVPSouthgateNC/SitePages/Home.aspx?RootFolder=%2Fsites%2FCS%2DKM2%2FMVPSouthgateNC%2FShared%20Documents%2FAugust%202019%20JPA%20Re%2DApplication&FolderCTID=0x012000E6F0B5881E9A844BBE6D9E10C7DE8DBE&View=%7B8E6533D0%2DC55A%2D41B0%2DAAF5%2D02F95FF16238%7D

I will send hard copies of the figures and maps to Sue and Dave via FedEx (Karen, let me know if you would like a copy as well). Please let me know if you have any trouble logging in to the Sharepoint site or downloading the files.

Thank you for your assistance with this project thus far! Have a good weekend,

Heather Patti, PWS
Senior Ecologist

TRC

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

625 Liberty Avenue, Suite 1700 | Pittsburgh, PA 15222
833-MV-SOUTH | mail@mvpsouthgate.com
www.mvpsouthgate.com

August 9, 2019

Mr. David Bailey
United States Army Corps of Engineers -Wilmington District
Raleigh Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
SAW-2018-00887

Ms. Karen Higgins
North Carolina Department of Environmental Quality
Division of Water Resources
401 & Buffer Permitting Unit, Wetlands Branch
1617 Mail Service Center
Raleigh, North Carolina 27699 -1617

RE: MVP Southgate Project, Rockingham and Alamance Counties, North Carolina
Addendum to Pre-Construction Notification for Nationwide Permit 12 (SAW-2018-00887)
Re-Application for Individual 401 Water Quality Certification (DWR# 20181638)
Authorization for Buffer Impacts in Jordan Lake Watershed

Dear Mr. Bailey and Ms. Higgins,

Mountain Valley Pipeline, LLC ("Mountain Valley") is providing an addendum to the Joint Permit Application ("JPA") for the MVP Southgate Project ("Project"). Mountain Valley is proposing to construct and operate the Project to provide timely, cost-effective access to new natural gas supplies to meet the growing needs of natural gas users in the southeastern United States ("U.S."). The Project is a separate project from the 303-mile Mountain Valley Pipeline that is currently under construction.

Subsequent to the initial submittal of the JPA as well as the application to the Federal Energy Regulatory Commission ("FERC") for a Certificate of Public Convenience and Necessity in November 2018, Mountain Valley has continued to evaluate the pipeline alignment and submitted a Supplemental Filing to FERC in March and May of 2019 reflecting modifications incorporated based on FERC review and stakeholder / agency comments. Mountain Valley is providing this re-application of the JPA which reflects changes to the route as well as additional biological field surveys along with updated wetland and waterbody impact tables and drawings.

In March of 2019, the Southgate Project submitted a Wetland Delineation Addendum to FERC summarizing the second round of field surveys within the North Carolina Project survey area based on additional survey access to identify the presence and delineate the boundaries of wetlands and other waters potentially subject to regulation by the USACE and North Carolina Department of Environmental Quality. Since the submittal of the March 2019 addendum to FERC, additional field surveys have occurred, and the enclosed information reflects the most recent data.

As you know, a preliminary jurisdictional determination (PJD) review process is currently ongoing with the USACE-Wilmington District and NC Department of Water Resources to review the delineated resources. To-date, several field visits have occurred with the USACE and NCDWR to verify survey data.

In addition to the PJD, Mountain Valley submitted a major variance application to the NCDWR on February 8th, 2019 for non-perpendicular stream crossings within the Jordan Lake Watershed (NC DWR# 20181638). This application is currently under review, and an addendum is underway which will reflect the most recent route.

Mountain Valley appreciates the opportunity to provide this information in support of its request for the Joint USACE Section 404/NCDEQ Section 401 authorization of the Project pursuant to Nationwide Permit 12. Should you have

any additional questions or further information to complete your review of the Project, please do not hesitate to contact Alex Miller at 713-374-1599 or via email at alex.miller@nexteraenergy.com or me at 561-691-7054 or via email kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador

Kathy Salvador
Senior Director, Environmental Services

Attachments

CC: Todd Miller, Corps, NAO
Travis Faul, MVP
John Zimmer, TRC
Lisa Walker, TRC
Heather Patti, TRC

Office Use Only:
Corps action ID no. _____
DWQ project no. _____
Form Version 1.4 January 2009

Pre-Construction Notification (PCN) Form

A. Applicant Information

1. Processing

1a. Type(s) of approval sought from the Corps:	☒ Section 404 Permit	☐ Section 10 Permit
1b. Specify Nationwide Permit (NWP) number: 12	or General Permit (GP) number:	
1c. Has the NWP or GP number been verified by the Corps?	☒ Yes	☐ No

1d. Type(s) of approval sought from the DWQ (check all that apply):

☒ 401 Water Quality Certification – Regular ☐ Non-404 Jurisdictional General Permit

☐ 401 Water Quality Certification – Express ☒ Riparian Buffer Authorization

1e. Is this notification solely for the record because written approval is not required?	For the record only for DWQ 401 Certification: ☐ Yes ☒ No	For the record only for Corps Permit: ☐ Yes ☒ No
1f. Is payment into a mitigation bank or in-lieu fee program proposed for mitigation of impacts? If so, attach the acceptance letter from mitigation bank or in-lieu fee program.		☒ Yes ☐ No
1g. Is the project located in any of NC's twenty coastal counties. If yes, answer 1h below.		☐ Yes ☒ No
1h. Is the project located within a NC DCM Area of Environmental Concern (AEC)?		☐ Yes ☒ No

2. Project Information

2a. Name of project:	MVP Southgate Project
2b. County:	Rockingham and Alamance
2c. Nearest municipality / town:	Multiple between Eden and Graham - see Figure 1 and Appendix A
2d. Subdivision name:	N/A
2e. NCDOT only, T.I.P. or state project no:	N/A

3. Owner Information

3a. Name(s) on Recorded Deed:	Multiple - provided under separate confidential cover
3b. Deed Book and Page No.	
3c. Responsible Party (for LLC if applicable):	
3d. Street address:	
3e. City, state, zip:	
3f. Telephone no.:	
3g. Fax no.:	
3h. Email address:	

4. Applicant Information (if different from owner)	
4a. Applicant is:	☐ Agent ☒ Other, specify:
4b. Name:	Kathy Salvaor
4c. Business name (if applicable):	Mountain Valley, LLC.
4d. Street address:	700 Universe Blvd
4e. City, state, zip:	Juno Beach, Florida 33408
4f. Telephone no.:	561-691-7054
4g. Fax no.:	
4h. Email address:	kathy.salvador@nexteraenergy.com
5. Agent/Consultant Information (if applicable)	
5a. Name:	Heather Patti
5b. Business name (if applicable):	TRC Environmental Corporation
5c. Street address:	5540 Centerview Drive, Suite 100
5d. City, state, zip:	Raleigh, North Carolina 27606
5e. Telephone no.:	919-256-6236
5f. Fax no.:	919-838-9661
5g. Email address:	HPatti@TRCSolutions.com

B. Project Information and Prior Project History

1. Property Identification

1a. Property identification no. (tax PIN or parcel ID):		Multiple - provided under separate confidential cover
1b. Site coordinates (in decimal degrees):	Latitude: 36.384175	Longitude: -79.63296
1c. Property size:		1,200 acres

2. Surface Waters

2a. Name of nearest body of water to proposed project:	Multiple - see Table 3-2, Appendix A and Appendix K
2b. Water Quality Classification of nearest receiving water:	Multiple - see Appendix K
2c. River basin:	Roanoke and Cape Fear; See Table 2-1 & Appendix A

3. Project Description

3a. Describe the existing conditions on the site and the general land use in the vicinity of the project at the time of this application:
See Section 2.0, Appendix J & Appendix K for Existing Conditions information.

3b. List the total estimated acreage of all existing wetlands on the property: 46.43

3c. List the total estimated linear feet of all existing streams (intermittent and perennial) on the property: 89,968

3d. Explain the purpose of the proposed project:
See Section 2.1 in the attached narrative.

3e. Describe the overall project in detail, including the type of equipment to be used:
See Section 2.0 in the attached narrative.

4. Jurisdictional Determinations

4a. Have jurisdictional wetland or stream determinations by the Corps or State been requested or obtained for this property / project (including all prior phases) in the past?	☒ Yes ☐ No ☐ Unknown Comments:
4b. If the Corps made the jurisdictional determination, what type of determination was made?	☒ Preliminary ☐ Final
4c. If yes, who delineated the jurisdictional areas? Name (if known): TRC Environmental - See data sheets in AppendixK	Agency/Consultant Company: TRC Environmental Corporation Other:

4d. If yes, list the dates of the Corps jurisdictional determinations or State determinations and attach documentation.
Corps PJD site visits took place on September 5th, 11th and 25th, 2018. Additional State determinations took place on July 26th, 2019.

5. Project History

5a. Have permits or certifications been requested or obtained for this project (including all prior phases) in the past?	☐ Yes ☒ No ☐ Unknown

5b. If yes, explain in detail according to “help file” instructions.

6. Future Project Plans

6a. Is this a phased project?	☐ Yes ☒ No

6b. If yes, explain.

C. Proposed Impacts Inventory

1. Impacts Summary

1a. Which sections were completed below for your project (check all that apply):

☒ Wetlands ☒ Streams – tributaries ☒ Buffers ☒ Open Waters ☐ Pond Construction

2. Wetland Impacts

If there are wetland impacts proposed on the site, then complete this question for each wetland area impacted.

2a. Wetland impact number Permanent (P) or Temporary (T)	2b. Type of impact	2c. Type of wetland	2d. Forested	2e. Type of jurisdiction Corps (404,10) or DWQ (401, other)	2f. Area of impact (acres)
W1 -	Choose one	Choose one	Yes/No	-	
W2 -	Choose one	Choose one	Yes/No	-	
W3 -	Choose one	Choose one	Yes/No	-	
W4 -	Choose one	Choose one	Yes/No	-	
W5 -	Choose one	Choose one	Yes/No	-	
W6 -	Choose one	Choose one	Yes/No	-	
				2g. **Total Wetland Impacts:**	

2h. Comments:
See Appendix L-1.

3. Stream Impacts

If there are perennial or intermittent stream impacts (including temporary impacts) proposed on the site, then complete this question for all stream sites impacted.

3a. Stream impact number Permanent (P) or Temporary (T)	3b. Type of impact	3c. Stream name	3d. Perennial (PER) or intermittent (INT)?	3e. Type of jurisdiction	3f. Average stream width (feet)	3g. Impact length (linear feet)
S1 -	Choose one		-	-		
S2 -	Choose one		-	-		
S3 -	Choose one		-	-		
S4 -	Choose one		-	-		
S5 -	Choose one		-	-		
S6 -	Choose one		-	-		
					3h. **Total stream and tributary impacts**	

3i. Comments:
See Appendix L-2.

4. Open Water Impacts

If there are proposed impacts to lakes, ponds, estuaries, tributaries, sounds, the Atlantic Ocean, or any other open water of the U.S. then individually list all open water impacts below.

4a. Open water impact number Permanent (P) or Temporary (T)	4b. Name of waterbody (if applicable)	4c. Type of impact	4d. Waterbody type	4e. Area of impact (acres)
O1 -		Choose one	Choose	
O2 -		Choose one	Choose	
O3 -		Choose one	Choose	
O4 -		Choose one	Choose	
		4f. **Total open water impacts**		

4g. Comments: See Appendix L-2.

5. Pond or Lake Construction

If pond or lake construction proposed, then complete the chart below.

5a. Pond ID number	5b. Proposed use or purpose of pond	5c. Wetland Impacts (acres)			5d. Stream Impacts (feet)			5e. Upland (acres)
		Flooded	Filled	Excavated	Flooded	Filled	Excavated	
P1	Choose one							
P2	Choose one							
	5f. **Total:**							

5g. Comments: Not Applicable to Project.

5h. Is a dam high hazard permit required?	☐ Yes ☐ No If yes, permit ID no:
5i. Expected pond surface area (acres):	
5j. Size of pond watershed (acres):	
5k. Method of construction:	

6. Buffer Impacts (for DWQ)

If project will impact a protected riparian buffer, then complete the chart below. If yes, then individually list all buffer impacts below. If any impacts require mitigation, then you **MUST** fill out Section D of this form.

6a. Project is in which protected basin? ☐ Neuse ☐ Tar-Pamlico ☐ Catawba ☐ Randleman ☒ Other: Jordan Lake

6b. Buffer Impact number – Permanent (P) or Temporary (T)	6c. Reason for impact	6d. Stream name	6e. Buffer mitigation required?	6f. Zone 1 impact (square feet)	6g. Zone 2 impact (square feet)
B1 -			Yes/No		
B2 -			Yes/No		
B3 -			Yes/No		
B4 -			Yes/No		
B5 -			Yes/No		
B6 -			Yes/No		
		6h. **Total Buffer Impacts:**			

6i. Comments: See Table 4-3 in the attached narrative for buffer mitigation calculations.

D. Impact Justification and Mitigation

1. Avoidance and Minimization

1a. Specifically describe measures taken to avoid or minimize the proposed impacts in designing project.
See Section 4.4 in the attached narrative.

1b. Specifically describe measures taken to avoid or minimize the proposed impacts through construction techniques.
See Sections 2.5, 4.3 and 4.4 in the attached narrative.

2. Compensatory Mitigation for Impacts to Waters of the U.S. or Waters of the State

2a. Does the project require Compensatory Mitigation for impacts to Waters of the U.S. or Waters of the State?	☒ Yes ☐ No
2b. If yes, mitigation is required by (check all that apply):	☐ DWQ ☒ Corps
2c. If yes, which mitigation option will be used for this project?	☒ Mitigation bank ☐ Payment to in-lieu fee program ☐ Permittee Responsible Mitigation

3. Complete if Using a Mitigation Bank

3a. Name of Mitigation Bank: TBD

3b. Credits Purchased (attach receipt and letter)	Type: Choose one Type: Choose one Type: Choose one	Quantity: Quantity: Quantity:

3c. Comments: The Project is discussions with mitigation banks to obtain reservation letters. There are ample mitigation credits available.

4. Complete if Making a Payment to In-lieu Fee Program

4a. Approval letter from in-lieu fee program is attached.	☐ Yes
4b. Stream mitigation requested:	linear feet
4c. If using stream mitigation, stream temperature:	Choose one
4d. Buffer mitigation requested (DWQ only):	square feet
4e. Riparian wetland mitigation requested:	acres
4f. Non-riparian wetland mitigation requested:	acres
4g. Coastal (tidal) wetland mitigation requested:	acres

4h. Comments:

5. Complete if Using a Permittee Responsible Mitigation Plan

5a. If using a permittee responsible mitigation plan, provide a description of the proposed mitigation plan.
N/A

6. Buffer Mitigation (State Regulated Riparian Buffer Rules) – required by DWQ

6a. Will the project result in an impact within a protected riparian buffer that requires buffer mitigation?	☒ Yes ☐ No

6b. If yes, then identify the square feet of impact to each zone of the riparian buffer that requires mitigation. Calculate the amount of mitigation required.

Zone	6c. Reason for impact	6d. Total impact (square feet)	Multiplier	6e. Required mitigation (square feet)
Zone 1			3 (2 for Catawba)	
Zone 2			1.5	
	6f. **Total buffer mitigation required:**			

6g. If buffer mitigation is required, discuss what type of mitigation is proposed (e.g., payment to private mitigation bank, permittee responsible riparian buffer restoration, payment into an approved in-lieu fee fund).

See Table 4.3 and Appendix M for buffer impacts. The Project is discussions with private mitigation banks to obtain reservation letters. There are ample mitigation credits available.

6h. Comments:

E. Stormwater Management and Diffuse Flow Plan (required by DWQ)	
1. Diffuse Flow Plan	
1a. Does the project include or is it adjacent to protected riparian buffers identified within one of the NC Riparian Buffer Protection Rules?	☒ Yes ☐ No
1b. If yes, then is a diffuse flow plan included? If no, explain why. The Project is developing this plan in conjunction with the Project-Specific Erosion and Sediment Control Plans and will be submitted in early 2019.	☐ Yes ☒ No
2. Stormwater Management Plan	
2a. What is the overall percent imperviousness of this project?	%
2b. Does this project require a Stormwater Management Plan?	☐ Yes ☐ No
2c. If this project DOES NOT require a Stormwater Management Plan, explain why: The Project is developing this plan in conjunction with the Project-Specific Erosion and Sediment Control Plans and will be submitted in early 2019.	
2d. If this project DOES require a Stormwater Management Plan, then provide a brief, narrative description of the plan:	
2e. Who will be responsible for the review of the Stormwater Management Plan?	
3. Certified Local Government Stormwater Review	
3a. In which local government's jurisdiction is this project?	
3b. Which of the following locally-implemented stormwater management programs apply (check all that apply):	☐ Phase II ☐ NSW ☐ USMP ☐ Water Supply Watershed ☐ Other:
3c. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☒ No
4. DWQ Stormwater Program Review	
4a. Which of the following state-implemented stormwater management programs apply (check all that apply):	☐ Coastal counties ☐ HQW ☐ ORW ☐ Session Law 2006-246 ☐ Other:
4b. Has the approved Stormwater Management Plan with proof of approval been attached?	☐ Yes ☒ No
5. DWQ 401 Unit Stormwater Review	
5a. Does the Stormwater Management Plan meet the appropriate requirements?	☐ Yes ☐ No
5b. Have all of the 401 Unit submittal requirements been met?	☐ Yes ☐ No

F. Supplementary Information	
1. Environmental Documentation (DWQ Requirement)	
1a. Does the project involve an expenditure of public (federal/state/local) funds or the use of public (federal/state) land?	☐ Yes ☒ No
1b. If you answered "yes" to the above, does the project require preparation of an environmental document pursuant to the requirements of the National or State (North Carolina) Environmental Policy Act (NEPA/SEPA)?	☐ Yes ☐ No
1c. If you answered "yes" to the above, has the document review been finalized by the State Clearing House? (If so, attach a copy of the NEPA or SEPA final approval letter.) Comments:	☐ Yes ☐ No
2. Violations (DWQ Requirement)	
2a. Is the site in violation of DWQ Wetland Rules (15A NCAC 2H .0500), Isolated Wetland Rules (15A NCAC 2H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 2B .0200)?	☐ Yes ☒ No
2b. Is this an after-the-fact permit application?	☐ Yes ☒ No
2c. If you answered "yes" to one or both of the above questions, provide an explanation of the violation(s):	
3. Cumulative Impacts (DWQ Requirement)	
3a. Will this project (based on past and reasonably anticipated future impacts) result in additional development, which could impact nearby downstream water quality?	☐ Yes ☒ No
3b. If you answered "yes" to the above, submit a qualitative or quantitative cumulative impact analysis in accordance with the most recent DWQ policy. If you answered "no," provide a short narrative description. See Section 5.3 in the attached narrative.	
4. Sewage Disposal (DWQ Requirement)	
4a. Clearly detail the ultimate treatment methods and disposition (non-discharge or discharge) of wastewater generated from the proposed project, or available capacity of the subject facility. The Project will not create or dispose of sewage.	

5. Endangered Species and Designated Critical Habitat (Corps Requirement)		
5a. Will this project occur in or near an area with federally protected species or habitat?	☒ Yes	☐ No
5b. Have you checked with the USFWS concerning Endangered Species Act impacts?	☒ Yes	☐ No
5c. If yes, indicate the USFWS Field Office you have contacted.	Raleigh	
5d. What data sources did you use to determine whether your site would impact Endangered Species or Designated Critical Habitat? See Section 5.5 in the attached narrative.		
6. Essential Fish Habitat (Corps Requirement)		
6a. Will this project occur in or near an area designated as essential fish habitat?	☐ Yes	☒ No
6b. What data sources did you use to determine whether your site would impact Essential Fish Habitat? National Oceanic and Air Administration - National Marine Fisheries Service Essential Fish Habitat Mapper Tool. See Section 5.6 in the attached narrative.		
7. Historic or Prehistoric Cultural Resources (Corps Requirement)		
7a. Will this project occur in or near an area that the state, federal or tribal governments have designated as having historic or cultural preservation status (e.g., National Historic Trust designation or properties significant in North Carolina history and archaeology)?	☒ Yes	☐ No
7b. What data sources did you use to determine whether your site would impact historic or archeological resources? See Section 5.7 in the attached narrative.		
8. Flood Zone Designation (Corps Requirement)		
8a. Will this project occur in a FEMA-designated 100-year floodplain?	☒ Yes	☐ No
8b. If yes, explain how project meets FEMA requirements: See Section 5.8 in the attached narrative.		
8c. What source(s) did you use to make the floodplain determination? FEMA 100-year Floodplain Maps - See Appendix Q.		

Kathy Salvador Applicant/Agent's Printed Name	Kathy Salvador Applicant/Agent's Signature (Agent's signature is valid only if an authorization letter from the applicant is provided.)	August 9,2019 Date

MVP Southgate Project

Pre-Construction Notification – Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

August 2019

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LIST OF ACRONYMS AND ABBREVIATIONS

API	American Petroleum Institute
ATWS	Additional temporary construction workspace
BA	Biological Assessment
BMPs	best management practices
CEQ	Council on Environmental Quality
Certificate	Certificate of Public Convenience and Necessity
CFR	Code of Federal Regulations
Corps	US Army Corps of Engineers or USACE
DOE	US Department of Energy
East Tennessee	East Tennessee Natural Gas, LLC
ECD	Erosion Control Device
EI	Environmental Inspector
E&SCP	Erosion and Sediment Control Plan
FERC or Commission	Federal Energy Regulatory Commission
EFH	Essential Fish Habitat
EFSO	Ecological Field Services Office
EPA	Environmental Protection Agency
ESI	Environmental Services Inc.
FEMA	Federal Emergency Management Agency
FWS	Fish and Wildlife Service
HDD	Horizontal Directional Drill
HDD Plan	Horizontal Directional Drill Fluid Monitoring, Operations, and Contingency Plan
hp	horsepower
HUC	Hydrologic Unit Code
IPaC System	Information Planning and Conservation System
MLV	mainline valve
MP	milepost
NCDEMLR	North Carolina Department of Energy, Mineral and Land Resources
NCDEQ	North Carolina Department of Environmental Quality
NCDWR	North Carolina Department of Water Resources
NGO	non-governmental organization
NHD	National Hydrography Dataset
NHI	National Heritage Inventory
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
NWI	National Wetland Inventory
NWP	Nationwide Permit
PCN	Pre-Construction Notification
Plan	Southgate Upland Erosion Control, Revegetation, and Maintenance Plan
Procedures	Southgate Wetland and Waterbody Construction and Mitigation Procedures
Project	MVP Southgate Project
psig	pounds per square inch gauge

PSNC Energy	PSNC Energy, a wholly owned subsidiary of SCANA Corporation
SPCC Plan	Spill Prevention, Control, and Countermeasures Plan
The Project	Mountain Valley Pipeline, LLC
Transco	Transcontinental Gas Pipe Line Company, LLC
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDOT	United States Department of Transportation
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
WQC	Water Quality Certification

1.0 INTRODUCTION

Mountain Valley Pipeline, LLC ("Mountain Valley") is proposing to construct and operate the MVP Southgate Project ("Southgate Project" or "Project"). The Southgate Project will provide timely, cost-effective access to new natural gas supplies to meet the growing needs of natural gas users in the southeastern United States ("U.S."). The Project is expected to be in service by late 2020 and is a separate project from the 303-mile Mountain Valley Pipeline that is currently under construction.

The Southgate Project includes an approximately 0.4-mile-long 24-inch-diameter pipeline (H-605), 73 miles of 24- and 16-inch-diameter natural gas pipeline (H-650), a new 28,915 nominal horsepower ("hp") compressor station (Lambert Compressor Station), meter stations and other ancillary facilities (e.g. contractor yards and access roads) required for the safe and reliable operation of the pipeline. The Southgate Project facilities will be located in Pittsylvania County, Virginia and Rockingham, Guilford, Caswell and Alamance counties, North Carolina. A location map (Figure 1) illustrates the proposed Project facilities.

The Project is regulated by the Federal Energy Regulatory Commission ("FERC" or "Commission") pursuant to Section 7(c) of the Natural Gas Act and requires a Certificate of Public Convenience and Necessity ("Certificate") to construct and operate. The FERC will conduct a full review of the Project under its regulations in compliance with the Natural Gas Act ("NGA") and the National Environmental Policy Act. On May 3, 2018, the Project requested approval from the FERC to initiate the Pre-filing review process for the Project, and the FERC issued its approval of the request on May 15, 2018, under Docket No. PF18-4-000. The Pre-filing review process allows for active participation by interested stakeholders early in Project development while maintaining a coordinated schedule and helps to ensure the timely review and determination on the Certificate application. The Project filed an application with the Commission for a Certificate to construct, install, own, operate, and maintain the Southgate Project on November 6th, 2018 (FERC Docket No. CP19-14-000, Accession No. 20181106-5159).

On February 13, 2019, FERC issued a Post-Application Environmental Information Request #1, and the Project provided a data response on March 5th, 2019. On April 23rd, 2019, FERC issued a Post-Application Environmental Information Request #2, and the Project provided a data response on May 13th, 2019. On June 11th, 2019, FERC issued a Post-Application Environmental Information Request #3, and the Project provided a data response on June 21st, 2019. On July 26th, 2019 the FERC issued their Draft Environmental Impact Statement for public comment.

In addition to the FERC data requests and responses summarized above, the Project provided supplemental filings on January 24th, 2019, March 28th, 2019, May 22nd, 2019 and August 9th, 2019.

1.1 SCOPE OF THE JOINT PERMIT APPLICATION

In addition to the FERC Certificate, the Southgate Project will require several additional permits, clearances and / or approvals to construct or operate the Project facilities. This submittal is a reapplication which was originally filed on November 30, 2018 and includes minor updates to the Project since that time. The application is limited to the portion of the Project within the State of North Carolina, and is being submitted in support of requests for the following:

- Nationwide Permit 12 verification from the U.S. Army Corps of Engineers ("USACE") Wilmington District for wetland and waterbody impacts under Section 404 of the Clean Water Act (33 U.S.C. § 1344);
- 401 Water Quality Certification from the North Carolina Department of Environmental Quality ("NCDEQ") for activities in state surface waters and wetlands under Section 401 of the Clean Water Act (33 U.S.C. § 1341), N.C. General Statue § 143-215.3(c), and Title 15A N.C. Administrative Code § 02H.0500 et seq.; and
- Riparian Buffer Authorization from NCDEQ under N.C. General Statue § 143-214.5 and Title 15A N.C. Administrative Code § 02B.0262 et seq.

A separate Joint State/Federal Permit application is being prepared for the portion of the Project within Virginia under USACE Action # NAO-2018-1574.

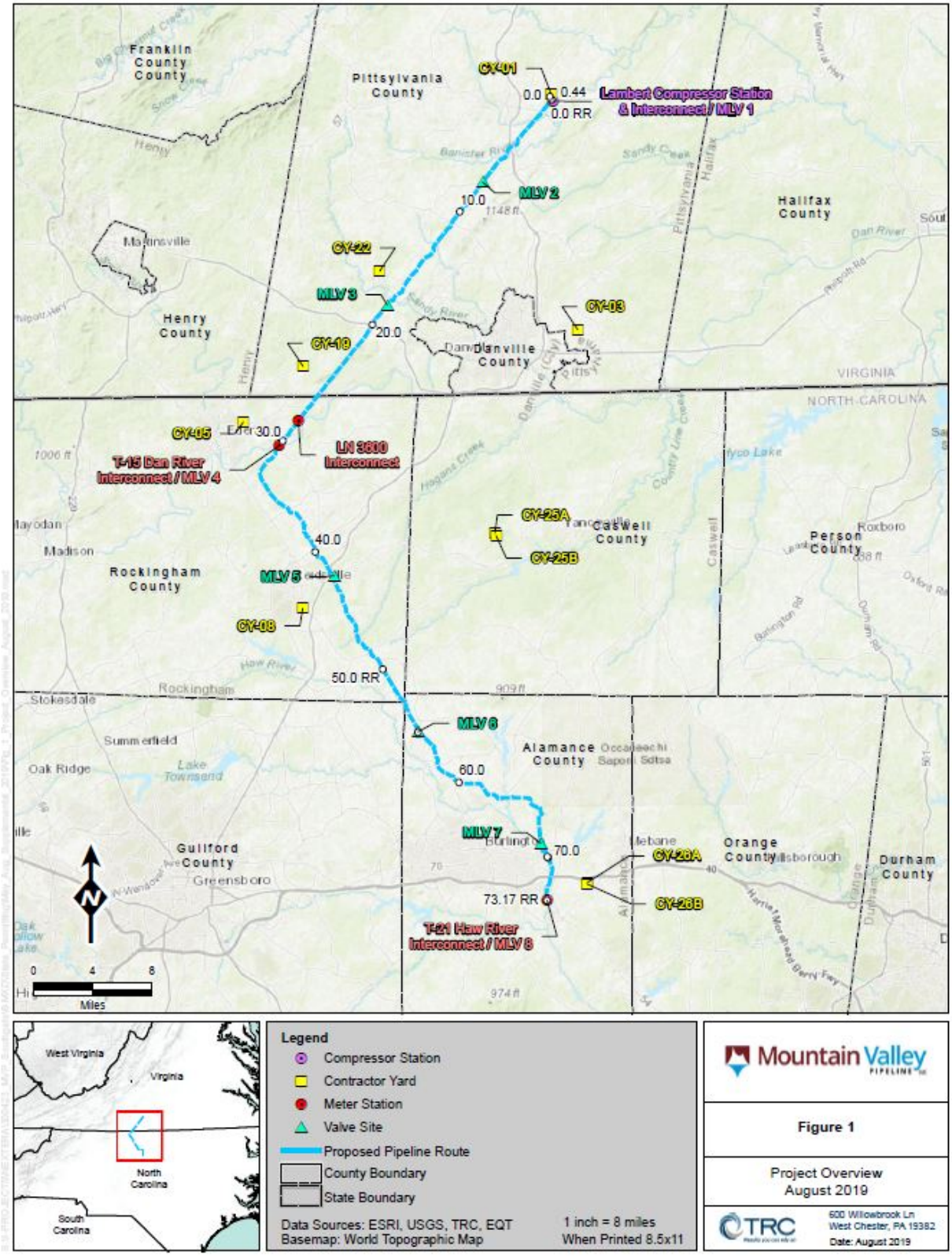

Figure 1. Southgate Project Overview Map.

2.0 PROJECT DESCRIPTION

2.1 PURPOSE AND NEED

The proposed Southgate Project is a new pipeline designed to (1) meet the growing needs of natural gas users in the southeastern U.S.; (2) add a new natural gas transmission pipeline to provide competition and enhance the reliability and resiliency of the existing pipeline infrastructure in southern Virginia and North Carolina; and (3) provide southern Virginia and North Carolina with direct pipeline access to the Marcellus and Utica gas regions in West Virginia, Ohio and southwestern Pennsylvania. The Project will enhance the diversity of gas supply and create additional pipeline capacity in the region. The overall purpose and need with respect to the single and complete projects included in this preconstruction notification is to provide a timely, efficient, and cost-effective means of transporting natural gas from the existing terminus of the Mountain Valley Pipeline in Pittsylvania County, Virginia to the T-15 Dan River Interconnect in Rockingham County and then on to the T-21 Haw River Interconnect in Alamance County, North Carolina, so that that the natural gas may be distributed to local and regional end users via those interconnects.

In 2017, PSNC Energy, a wholly owned subsidiary of SCANA Corporation, solicited interest from existing and proposed interstate pipeline providers for additional natural gas transportation capacity. PSNC Energy is a local distribution company primarily engaged in the purchase, transportation, distribution, and sale of natural gas to more than 563,000 customers in North Carolina. PSNC Energy solicited interest because it requires additional pipeline capacity to meet forecasted incremental demand on its distribution system. Over the past four years, PSNC Energy has experienced a 15 percent increase in peak daily throughput on its system. This trend will carry forward into the future, as PSNC Energy expects its design day requirements to increase an additional 11 percent over the next five years. This past, present, and future demand growth on PSNC Energy's system reflects, at least in part, the substantial population increase in North Carolina. North Carolina's population is expected to increase by nearly 2 million people between 2020 and 2035.[1]

After consideration of other existing and proposed interstate pipeline providers, PSNC Energy committed to 300 million cubic feet per day ("MMcf/d") of firm transportation service to be made available by the Project. Mountain Valley and PSNC Energy entered into binding long-term agreements in December 2017 that made PSNC Energy an anchor shipper for the Project.[2] In choosing the Southgate Project to provide its needed incremental pipeline capacity, PSNC Energy cited numerous reasons, including transportation cost, supply cost, supply diversity, reliability/resiliency, and operational efficiencies:

- PSNC Energy found the Southgate Project provides the best-cost transportation alternative available to satisfy PSNC Energy's long-term interstate capacity needs.

[1] See North Carolina Office of State Budget and Management population projections, available at: https://files.nc.gov/ncosbm/demog/countytotals_populationoverview.html

[2] Mountain Valley and PSNC Energy entered into binding agreements for the Southgate Project more than three years after Mountain Valley entered the pre-filing process, and more than two months after the Commission issued its certificate, for the 303-mile Mountain Valley Pipeline Project. While the Mountain Valley Pipeline Project is targeted to commence service during 2019, Mountain Valley expects the Southgate Project to commence service in late 2020.

- The Southgate Project will provide PSNC Energy with a third direct interstate pipeline connection, which will improve reliability and add resiliency to the interstate pipeline services PSNC Energy receives.[3] The addition of a third interstate pipeline diversifies risk by giving PSNC Energy multiple options on geographically-diverse interstate pipelines. In the event of outages or constraints on one of the pipelines serving the region, PSNC Energy would have access to the other pipelines to continue serving its customers.
- The Southgate Project will provide PSNC Energy additional direct access to low-cost natural gas produced in the prolific Marcellus and Utica shale regions.[4]
- PSNC Energy will have more competitive and diverse options for natural gas supply. PSNC Energy will gain optionality in selecting best-cost supply sources and will be able to take advantage of price differentials across more gas supply regions.
- The Southgate Project will provide a direct connection between PSNC Energy's distribution system and the East Tennessee Natural Gas, LLC ("East Tennessee") pipeline system. PSNC Energy currently sources gas from Saltville Storage and transports these volumes on the East Tennessee and Transcontinental Gas Pipeline Company, LLC ("Transco") systems before delivery to PSNC Energy's distribution system. The Project provides a primary receipt and delivery forward haul transportation path that offers improved reliability as compared to the secondary-firm backhaul deliveries PSNC Energy currently receives from Transco.
- The Southgate Project will provide PSNC Energy flexibility with deliveries from the intrastate Cardinal Pipeline, which should avoid the need for PSNC Energy to acquire additional Cardinal capacity.
- The Southgate Project allows PSNC Energy to avoid incremental capital investment for system upgrades. The other pipeline alternatives considered by PSNC Energy would have required additional system upgrades.
- Mountain Valley and PSNC Energy have agreed to a minimum delivery pressure that is higher than Transco's existing obligation. This should improve PSNC Energy's ability to conduct system planning and enhance the operation of its system.

In addition to executing agreements that made PSNC Energy an anchor shipper for the Project, Mountain Valley conducted an Open Season between April 11, 2018 and May 11, 2018 to determine interest from additional shippers. Negotiations continue with interested shippers for the remaining capacity of the Southgate Project. There are no plans to extend this pipeline from the proposed terminus of the T-21 Haw River Interconnect at this time.

The Southgate Project is not designed to provide natural gas to any liquefied natural gas export terminal and has no intention of seeking authorization under Section 3 of the Natural Gas Act to export natural gas, nor does the contracted shipper have plans to transport gas to a liquefied natural gas terminal. The Project

[3] In 2013, the North Carolina Utilities Commission recognized the need for competitive interstate pipeline capacity alternatives in Docket No. G-100, Sub 91, *Investigation Regarding Competitive Alternatives for Additional Natural Gas Service Agreements*. The Project will satisfy this need for a new competitive interstate pipeline consistent with the expressed goal of the North Carolina Utilities Commission.

[4] Mountain Valley and PSNC Energy also executed binding long-term agreements whereby PSNC Energy became a shipper on the Mountain Valley Pipeline Project.

terminates at an inland location more than 185 miles from the nearest coastal Virginia port, 155 miles from the nearest coastal North Carolina port, and even farther from the nearest liquefied natural gas export terminal. Accordingly, the Southgate Project does not have the physical ability to export natural gas. As currently designed, gas transported on the Southgate system will be delivered into existing facilities in Eden and Graham, North Carolina. The Project's anchor shipper, PSNC Energy, has committed to 300 MMcf/d of firm transportation service and will use the gas it transports to serve its fast growing residential, commercial and industrial markets in North Carolina.

2.2 LOCATION

The North Carolina portion of the Project includes approximately 47.1 miles (64 percent) of the proposed pipeline alignment. It originates at the Virginia/North Carolina state boundary in Rockingham, North Carolina at milepost ("MP") 26.1 and ends at MP 73.1 in Alamance County, North Carolina, as shown on Figure 1. The route through North Carolina is described below and is depicted on U.S Geological Society ("USGS") 7.5-Minute topographic excerpt maps provided in Appendix A.

From the Virginia/North Carolina border, at MP 26.1 in Rockingham County, the 24-inch-diameter pipeline extends southwest approximately 4.3 miles to a proposed delivery interconnect (T-15 Dan River Interconnect) located at approximate MP 30.4. From the T-15 Dan River Interconnect, the pipeline will be a 16-inch-diameter pipeline and continue generally southwest for approximately 2.4 miles. East of the City of Eden, North Carolina, the pipeline will turn to the southeast near MP 32.8 and continue southeast for approximately 20 miles into Alamance County at (MP 52.6), east of the town of Wentworth and the City of Reidsville. From the Alamance County boundary, the pipeline will continue southeasterly to MP 66.3, where it will turn south and continue for approximately 6.8 miles to its delivery terminus (T-21 Haw River Interconnect) located at MP 73.1 approximately 2.5 miles southeast of the City of Graham, North Carolina.

The North Carolina portion of the Project is located within the USGS designated 03-South Atlantic-Gulf Region (USGS, 2018a). In North Carolina, the Project crosses the Roanoke River Basin and the Cape Fear River Basin, three sub basins and five watersheds (NCDEQ, 2018b). Table 2-1 (below) identifies these major regions and their respective sub-basins by 8-digit HUC and watershed by 10-digit HUC.

Table 2-1

Major Regions, 8-digit HUC and 10-digit HUCs crossed by the Project

Major Region (2-digit HUC)	River Basin	County	Sub-basin (8-digit HUC)	Watershed (10-digit HUC)
03- South Atlantic-Gulf Region	Roanoke	Rockingham	Upper Dan 3010103	Cascade Creek-Dan River 301010309
		Rockingham	Lower Dan 3010104	Hogans Creek-Dan River 301010401
	Cape Fear	Rockingham/ Alamance	Haw 3030002	Headwaters Haw River 303000202
		Alamance	Haw 3030002	Back Creek-Haw River 303000204

Source: NCDEQ, 2018b

2.3 PROPOSED FACILITIES

In North Carolina, the Project includes 47.4 miles of new 24-inch and 16-inch diameter pipeline, temporary construction workspace, new and existing access roads, above ground facilities, cathodic protection and contractor yards. These are depicted on the Project's alignment sheets (Appendix B) and are described below. Typical construction details depicting the workspace for the proposed facilities in a variety of work conditions are provided as Appendix C. Table 2-2 summarizes the facilities by location and land requirements for construction and operation.

Table 2-2

Proposed Southgate Project Facilities and Land Requirements in North Carolina

County	Facility	Pipeline Length (miles)	Total Land Requirements (acres) c/	
			Construction d/	Operation e/
Rockingham	H-650 Pipeline Right-of-Way a/	26.7	305.06	152.56
	Additional Temporary Workspace	NA	107.14	0.00
	Access Roads b/	NA	41.05	3.08
	Contractor Yards	NA	31.24	0.00
	Aboveground Facilities	NA	9.88	1.51
	Cathodic Protection Ground beds	NA	0.02	0.02
Total c/		**26.7**	**494.39**	**157.17**
Alamance	Pipeline Right-of-Way	20.8	298.93	121.21
	Additional Temporary Workspace	NA	77.80	0.00
	Access Roads	NA	21.18	0.32
	Contractor Yards	NA	22.30	0.00
	Aboveground Facilities	NA	1.43	0.63
	Cathodic Protection Ground beds	NA	0.59	0.59
Total		**20.8**	**362.22**	**122.75**
Guilford	Access Roads	NA	0.14	0.00
	Total	NA	**0.14**	**0.00**
Caswell	Contractor Yard	NA	96.32	0.00
	Total	47.4	**96.32**	**0.00**
Project Total in North Carolina		**47.4**	**953.06**	**279.91**

a/ Acreage based on 100-foot construction right-of-way and 50-foot operations right-of-way. Impacted acreage will be less due to avoidance of sensitive resources where practicable.

b/ Acreage assumes a 25-foot road width for temporary and permanent access roads. Actual road widths may be less than 25 feet.

c/ Includes uplands and wetlands.

d/ Construction acreage includes the area affected by construction (i.e., temporary and additional temporary workspace, contractor yards, and access roads) and the area affected by operation of the Southgate Project. (i.e., facility operation footprint and 50-foot pipeline permanent right-of-way). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

e/ Operation acreage includes only the operation footprint of the Southgate Project facilities (e.g., the 50-foot-wide permanent pipeline right-of-way in uplands and 25-foot-wide maintenance corridor in wetlands). The 50-foot-wide permanent right-of-way between horizontal directional drill entry and exit points and within railroad rights-of-way are not included in this acreage.

NA = Not Applicable

2.3.1 Pipeline Facilities

The pipeline will generally require a 100-foot-wide construction right-of-way (limit of disturbance) during construction consisting of a 50-foot permanent right-of-way and 50 feet of temporary workspace. The temporary workspace is necessary for worker safety, the safe travel of construction vehicles and equipment, stockpiling soil, and installation of erosion and sediment controls. The proposed 100-foot wide construction right-of-way is consistent with the Interstate Natural Gas Association of America's ("INGAA") recommendations for a pipeline diameter of 18 to 24 inches. INGGA recommends the use of a 95-foot baseline width and increasing or decreasing this baseline width for special conditions (Gulf Interstate Engineering, 1999). The necessary construction workspace is largely dictated by the area required for the safe operation and movement of equipment required to install the pipeline as well as the additional workspace needed to install and maintain appropriate erosion and sediment controls. These workspace requirements are not materially different for a 16 inch or 24 inch pipeline. See Appendix C for typical construction workspace details.

The Southgate Project has reduced the construction right-of-way width at wetland and waterbody crossings to 75 feet along the construction right-of-way, for a distance of 50 feet on each side of the crossing to preserve upland and riparian buffer areas. The Project will implement a modified FERC *Upland Erosion Control, Revegetation, and Maintenance Plan* ("Southgate Plan") (Appendix D) and a modified FERC *Wetland and Waterbody Construction and Mitigation Procedures* ("Southgate Procedures") (2013) (Appendix E), and its Project-specific Erosion and Sediment Control Plan ("E&SCP") that comply with state-specific regulations to minimize impacts during construction. The Project is preparing a state-specific E&SCP that will comply with North Carolina erosion control regulations and will incorporate all relevant substantive provisions of General Permit – NCG01000.[5] See Appendix C for typical wetland and waterbody crossing details.

The pipeline is located parallel to and adjacent with an existing gas or electric transmission corridor for approximately 18 miles (37 percent) of the proposed alignment in North Carolina. Where collocation with existing utility right-of-way occurs, the Project has designed the workspace such that the construction right-of-way for the new pipeline is located immediately adjacent to or partially within the existing pipeline right-of-way wherever feasible. The Project is proposing to use up to 25 feet of temporary workspace within the adjacent utility right-of-way where possible; however, final design and use of workspace within these areas is dependent on successful negotiation with the easement owner(s). See Appendix C for typical construction workspace details for construction with collocated facilities.

2.3.2 Additional Temporary Workspace

Additional temporary work space "ATWS" areas will be required for construction activities requiring space outside the standard 100-foot construction right-of-way. Construction activities that may require ATWS include but are not limited to:

- Areas requiring extra depth of cover over the pipeline;
- Timber storage areas;
- Areas with unstable soil;
- Installation of erosion and sediment controls and other stormwater management facilities;

[5] The Project is exempted from obtaining coverage under this permit for stormwater discharges by 33 U.S.C. § 1342(l).

- Road and railroad crossings;
- Winch hills;
- Wetland and waterbody crossings;
- Conventional bores;
- Horizontal Direction Drills;
- Foreign pipeline crossings and interconnects;
- Foreign utility crossings;
- Areas requiring full-width topsoil segregation;
- Specific request of the landowner;
- Areas with steep side slopes, rock, or other difficult terrain;
- Pipeline access and truck turnarounds;
- Material storage, storage of excess spoil at crossings, parking, vehicle turning radius, or other worker safety issues;
- Fabrication and staging areas; and
- Hydrostatic test water withdrawal and discharge locations.

The ATWS areas will be limited to the minimum size necessary to safely construct the pipeline and be protective of the environment with respect to the existing conditions at the time of construction. ATWS is located near wetlands and waterbodies in accordance with the setback requirements contained in the FERC Procedures and in consultation with other federal and state agencies. If field conditions do not allow for a minimum 50-foot setback from wetlands and/or waterbodies, the Project will request alternative measures to the FERC Procedures. Proposed ATWS and ancillary sites required for the Project are shown on the alignment sheets (Appendix B).

2.3.3 Access Roads

New or existing roads will be used to provide access to the pipeline right-of-way during construction and/or operation of the Project. Access road widths will be the minimum necessary to provide access for construction equipment while maintaining safe travel conditions. Access will be constructed such that the length of the road minimizes impacts on waters of the United States and will be maintained as close as possible to pre-construction contours and elevations. Temporary construction-related wetland or waterbody impacts are proposed along 11 access roads in Rockingham and two in Alamance counties. Two of the permanent access roads in Rockingham County have limited permanent wetland impacts and three will have permanent culverted waterbody crossings. These impacts are discussed further in Section 4.0. The locations of proposed temporary and permanent access roads are shown on the 7.5-Minute topographic maps (Appendix A) and updated alignment sheets (Appendix B).

2.3.4 Contractor Yards

The Southgate Project has identified potential contractor staging yards for temporary use during construction. They will be used to stockpile pipe and fabricate facilities, if needed. Additionally, they will be used by the construction contractor to stage construction operations, store materials, park equipment, and set up temporary construction offices. The contractor yards were selected due to their proximity to existing roads, railways, and rail yards and primary open industrial/commercial land uses. Focus was given to properties with limited streams, wetlands, and other sensitive habitats. Depending upon the condition of

these yards and their current use, some surface grading, drainage improvements, placement of surface materials (e.g., crushed rock), and internal roadways may be required.

Six contractor yards are proposed along the North Carolina portion of the route. Minor construction-related temporary impacts to wetlands and waterbodies are proposed for contractor yard 5. Table 2-3 details the land requirements and current land use for contractor yards, and their locations are shown on the alignment sheets (Appendix B).

Table 2-3

Southgate Project Contractor Yards in North Carolina

Contractor Yard Name	Location/County	Approximate Milepost	Existing Land Use a/	Workspace (acres)
CY-05	Eden, Rockingham	3.6 miles West of 28.3	CI, OL	19.8
CY-08	Reidsville, Rockingham	2.9 miles West of 44.6	OL, CI	11.5
CY-25A	Yanceyville, Caswell	12.3 miles East of MP 38.9	OL	22.2
CY-25B	Yanceyville, Caswell	12.3 miles East of 38.9	FW, OL	74.1 (Forest to be cleared 0.3)
CY-26A	Swepsonville, Alamance	2.4 miles East of 71.7	OL	11.8
CY-26B	Swepsonville, Alamance	2.4 miles East of 71.7	FW, OL	10.5 (Forest to be cleared 0.2)

a/ Existing Land Use: CI = Commercial / Industrial; FW = Upland Forest / Woodland; OL = Upland Open Land; RD = Residential; WL = Wetland

2.3.5 Aboveground Facilities

2.3.5.1 Meter Stations

Two downstream delivery points with the PSNC Energy system are proposed near MP 30.4 and MP 73.2. The Project will install a meter (interconnect) station at both of these locations consisting of but not limited to custody-transfer flow meter, pressure/flow regulator, over pressure protection, isolation mainline valves, and associated instrumentation and controls at the proposed gas receipt and delivery points to measure the flow of natural gas between the Project and the interconnect. Each interconnect will consist of one or more meter runs located inside a fenced and gated site and will contain flow or pressure control. The metering sites will be located as close as practicable to the actual intersection of the Project and the receipt / delivery facilities to keep the length of the interconnecting piping to a minimum. The locations of these facilities are described in Table 2-4 and are shown on the alignment sheets in Appendix B. The meter stations will include upstream and downstream piping to connect to the pipeline and third-party pipelines.

Table 2-4

Southgate Project Mainline Valve and Meter Station (Interconnect) Locations

Name	County	Approximate Milepost Location
LN 3600 Interconnect	Rockingham	28.2 RR
T-15 Dan River Interconnect / MLV 4	Rockingham	30.4
MLV 5	Rockingham	42.2
MLV 6	Alamance	55.1
MLV 7	Alamance	68.7
T-21 Haw River Interconnect / MLV 8	Alamance	73.2 RR

a/ Mainline Valves ("MLV's") will be 30 feet by 30 feet in area and will be wholly contained within the permanent right-of-way. Mainline valves at the T-15 Dan River Interconnect and T-21 Haw River Interconnect will be located within the fence line of those facilities.

2.3.5.2 Mainline Valves

The Project will install mainline valves ("MLVs") at intermediate locations as necessary to meet operational needs and the design and installation requirements described in 49 CFR 192.179(a) – Transmission Line Valves that require minimum distances to the nearest valve based on pipeline location class. Table 2-4 identifies the location of MLVs. MLVs will be located within the permanent right-of-way of the pipeline. With the exception of those located at pig launcher/receiver locations, MLVs will be buried with aboveground extensions and equipped with valve actuators to allow for local or remote operation. Each MLV will be contained within a fenced, gated, and locked area. None of the MLVs are located in wetlands or waterbodies.

2.3.5.3 Pig Launchers and Receivers

The Project has incorporated launching and receiving facilities to accommodate in-line inspection tools (smart pigs) for periodic internal inspections of the pipeline during operations. A pig launcher is proposed at the origination point inside the Lambert Compressor Station fence line at MP 0.0 of the pipeline in Pittsylvania County, Virginia. The corresponding pig receiver will be located at MP 30.4 in Rockingham County, North Carolina at the T-15 Dan River Interconnect (meter station), and a second pig launcher will also be located at this site. A second pig receiver will be located at the terminus of the pipeline at approximate MP 73.1 at the T-21 Haw River Interconnect near Graham, North Carolina. The locations of these facilities are included on the updated alignment sheets located in Appendix B. No wetlands or waterbodies will be affected by the construction or use of these Pig Launchers and Receivers.

2.4 CONSTRUCTION

2.4.1 General Practices

Construction of the Southgate Project will follow industry-accepted practices and procedures and will be done in accordance with applicable federal and state regulations and guidelines, as well as the specific requirements of applicable permits. The Project developed its own Project-specific Erosion and Sediment Control Plan ("E&SC") based on field conditions and state requirements that will outline best management practices ("BMPs") to minimize impacts (Appendix E). The Project will train construction personnel in the environmental restrictions and/or requirements applicable to their particular duties. The Project will provide construction management personnel and environmental inspectors ("EIs") with the appropriate

environmental information/materials specific to the Project. The Project will handle any hazardous materials stored or encountered during construction in accordance with the Project Spill, Prevention, Control, and Countermeasures Control Plan ("SPCC") (Appendix F). Waste will be disposed of at an approved, off-site facility.

The pipeline will be buried a minimum of three feet below the ground surface except for locations where the pipe will be installed within rock. In those instances, the minimum depth of cover will be two feet. The pipeline will be constructed of high strength carbon steel pipe manufactured in accordance with the American Petroleum Institute's ("API") specification API 5L PSL2, Specification for Line Pipe. The Project will protect the pipe from corrosion by a fusion-bonded epoxy coating and an impressed current cathodic protection system during operation. Weld joints and other piping that are not factory coated will be field-coated per applicable standards.

The Project is proposing to use two spreads to construct the pipeline. Spread 1 includes MP 0 to MP 30.4 and Spread 2 includes MP 30.4 to MP 73.1. Generally, construction of the proposed pipeline within each spread will follow a set of sequential operations as shown in Figure 2. In this typical pipeline construction scenario, the construction spread proceeds along the pipeline right-of-way in one continuous operation. The Project will coordinate the entire process in such a manner as to minimize the total time a tract of land is disturbed and therefore exposed to erosion and temporarily precluded from normal use. Appendix C includes typical construction details depicting various construction scenarios. The following sections provide detailed descriptions of each proposed construction method.

2.4.2 Typical Upland Pipeline Construction Procedures

The majority of the pipeline is in upland terrain and will be crossed via conventional overland construction techniques for large-diameter pipelines. In this typical pipeline construction scenario (Figure 2), the construction contractor will construct the pipeline along the construction right-of-way using sequential pipeline construction techniques, including survey, staking and fence crossing; clearing and grading; trenching; pipe stringing, bending and welding; lowering-in and backfilling; hydrostatic testing; clean-up and restoration; and commissioning. Each step is briefly described in the following:

(a) Surveying

The initial step in preparing the right-of-way for construction will be the civil survey. A civil survey crew will stake the outside limits of the construction right-of-way, the centerline location of the pipeline, highway and railroad crossings, access roads, and any temporary ATWS, such as laydown areas or at stream crossings. The Project will contact the North Carolina 811 "One Call" system, and all known underground utilities (e.g., cables, conduits, and pipelines) will be located and flagged. The Project will notify affected landowners a minimum of 24 hours prior to surveying and staking of the proposed route, following applicable state/federal guidelines.

(b) Clearing and Grading, and Fencing

After the right-of-way has been surveyed and easements have been secured (for the permanent and temporary construction right-of-way, and any existing right-of-way if necessary), the Project will clear the right-of-way of obstructions (e.g., trees and stumps, brush, logs, and large rocks) according to the Southgate Plan, the Project-specific E&SCP and applicable regulatory approvals. The Project will clear the right-of-way to the width required for construction, but not more than specified on the pipeline alignment sheets

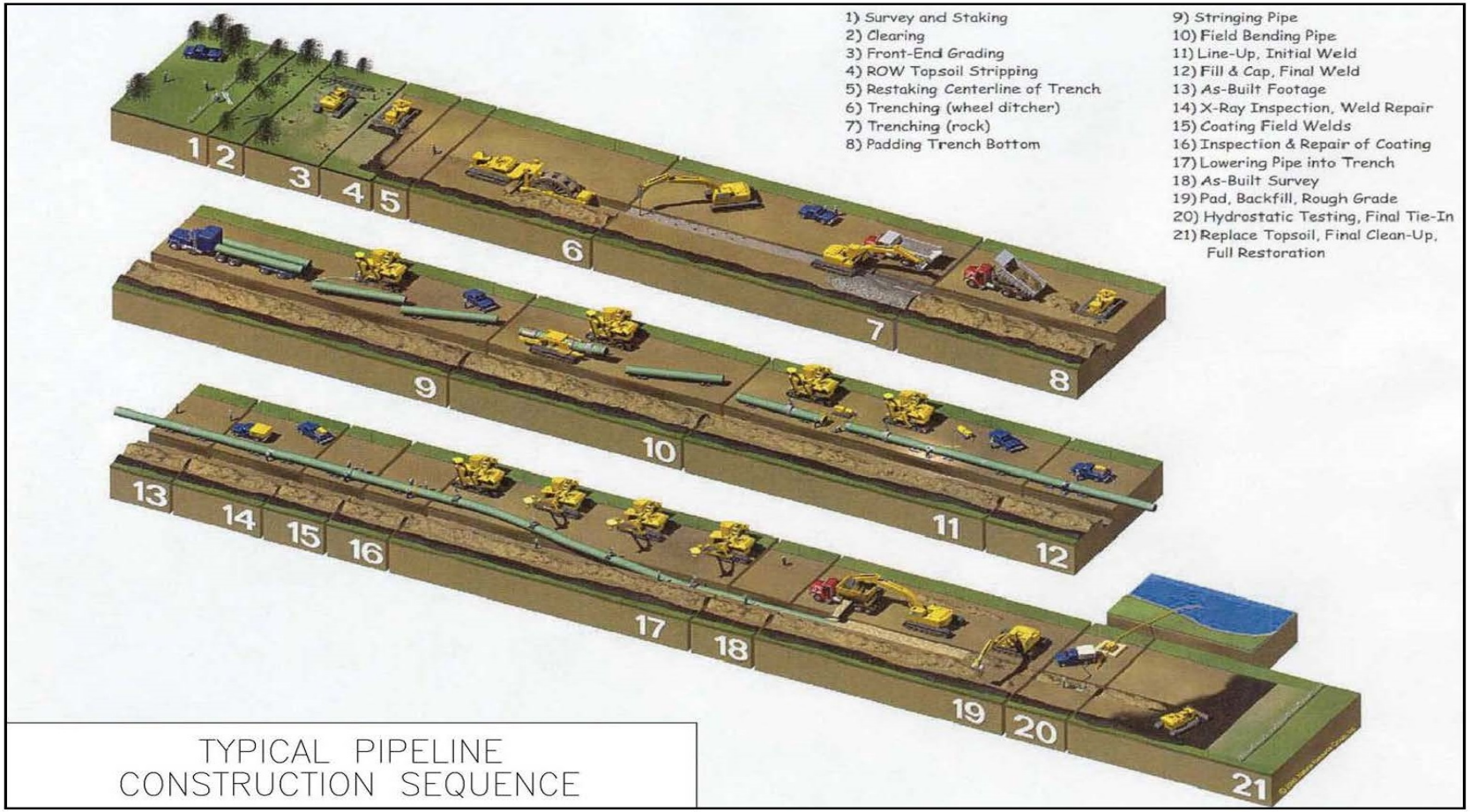

Figure 2. Typical Pipeline Construction Sequence

(Appendix B) and approved by applicable regulatory approvals. Merchantable timber will be stacked outside of the work area alongside the edge of the right-of-way or ATWS (outside of jurisdictional wetlands or waters). The Project will dispose of brush and slash through burning, windrowing, or chipping, in accordance with applicable approvals and conditions.

(c) Trenching

The Project will excavate the pipeline trench with a track-mounted backhoe or similar equipment and only use explosives when necessary in areas where rock substrates are at depths that interfere with conventional excavation or rock-trenching methods. On actively cultivated agricultural tracts, at wetland crossings, streams, and in residential areas, subsoil will be segregated and stockpiled separately from topsoil per the Southgate Plan.

The Project will stockpile excavated soils along the right-of-way on the side of the trench (the "spoil" side) away from the construction traffic and pipe assembly area (the "working" side). Where the pipeline route is collocated adjacent to an existing infrastructure, the spoil will generally be placed on the same side of the trench as the existing infrastructure.

(d) Pipe Stringing and Bending

New steel pipe for the pipeline will be procured and protected with an epoxy coating applied at the factory or at a coating yard (the beveled ends will be left uncoated for welding) and shipped to strategically located materials storage areas, contractor yards, or "pipe yards." The Project will transport the individual joints to the right-of-way by truck and place along the excavated trench in a single, continuous line that is easily accessible to the construction personnel on the working side of the trench (typically opposite the spoil side). This will allow the subsequent lineup and welding operations to proceed efficiently.

The Project will deliver the pipe to the Project workspace in straight joints typically 40 to 60 feet in length. The use of controlled internal diameter fittings, in addition to the bending of pipe, will be required to allow the pipeline to follow natural grade changes and directional changes of the right-of-way. Prior to welding, track-mounted hydraulic bending machines will bend selected joints in the field.

(e) Pipe Assembly and Welding

Following stringing and bending, the Project will place the joints of pipe on temporary supports adjacent to the trench. The ends will be aligned and welded together by qualified personnel using multiple passes for a full penetration weld. To ensure that the assembled pipe will meet or exceed the design strength requirements, the completed welds will be visually inspected and tested for integrity using non-destructive examination methods such as radiography (X-ray), or ultrasound, in accordance with API 1104. Welds displaying unacceptable slag inclusions, void spaces, or other defects will be repaired or replaced.

Following welding, the Project will sandblast the previously uncoated ends of the pipe at the joints and cover them in epoxy. The coating on the completed pipe section will be inspected, and damaged areas will be repaired prior to lowering in accordance with applicable industry standards.

(f) Pipe Lowering

The completed section of pipe will be lifted off temporary supports and lowered into the trench by side-boom tractors or equivalent equipment. Prior to lowering the pipe, the Project will inspect the trench to ensure that it is free of rocks and other debris that could damage the pipe or the coating. In rocky areas, if

the bottom is not smooth, a layer of soil or sand may be placed on the bottom of the trench to protect the pipe using a padding machine or excavator with a "shaker bucket," which separates rocks from satisfactory padding materials. Concrete-coated pipe or aggregate filled sacks (pipe weights) will be used if necessary for negative buoyancy in areas prone to flooding or with a high groundwater table.

(g) Padding and Backfilling

After the pipe is lowered into the trench, the Project will backfill the trench. Previously excavated materials will be pushed back into the trench using equipment or backhoes. Where the previously excavated material contains large rocks or other materials that could damage the pipe or coating, clean fill will be used to protect the pipe. Due to concerns about the acidity of fly ash and its potential impacts on cathodic protection, fly ash will not be used as backfill material. However, limestone dust or sand, which is typically basic and will often aid in the cathodic protection of the pipeline, may be used as backfill material. The remaining fill of the trench will be the aggregate of the excavation material removed at the time of the excavation. If additional fill is required, it will be either flowable fill or clean fill. After the subsoil is placed in the trench, segregated topsoil will be placed in the trench above the subsoil. Following backfilling in agricultural land, and open land, a small crown may be left to account for any future soil settling that might occur. In wetlands, a crown will not be left to ensure restoration of ground and surface water hydrology to pre-existing conditions. Excess soil will be distributed evenly on the right-of-way in accordance with landowner and agency requirements, only in upland areas and only to meet the pre-construction surface elevations.

(h) Hydrostatic Pressure Testing and Final Tie-In

Following backfilling of the trench, the Project will hydrostatically test the pipeline to ensure that it is capable of safely operating at the design pressure. Test segments of the pipeline will be capped and filled with water. Test water is anticipated to be procured from municipal sources. The water in the pipe will be pressurized and held for a minimum of 8 hours in accordance with the U.S. Department of Transportation ("USDOT") Pipeline and Hazardous Materials Safety Administration Office of Pipeline Safety requirements identified in 49 CFR Part 192 prior to being placed in service. Any loss of pressure that cannot be attributed to other factors, such as temperature changes, will be investigated. Leaks detected will be repaired and the segment will be retested.

The total estimated volume of water used for hydrostatic testing is proposed to be approximately 8,500,000 gallons. Each of the construction spreads will likely be broken down into smaller test sections. The hydrostatic test has been designed such that the water should only need to be drawn from the identified source once. From there, it will be transferred into the next test section, which has been chosen to be smaller than the first. By this method, no additional water will be needed within a construction spread, since the large volume initially drawn will be transferred to increasing smaller sections that require less volume.

Test water will contact only new pipe, and no chemicals will be added to the test water unless otherwise approved by FERC and applicable federal and/or state regulatory agencies. If a municipal water source with chlorinated water is used for testing, addition of an approved dechlorinating agent may be required prior to release depending on the release location. These measures will be implemented to ensure that hydrostatic test water releases will not have the potential to cause or contribute to an exceedance of any water quality standards, consistent with 15A NCAC 02H.0106(f). Upon completion of the test, the water may be pumped to the next segment for testing, or the water may be released. The test water will be released through an energy-dissipating device to a vegetated upland area. To the extent practicable, the Project will

release test water within the same watershed from which water was withdrawn, to an upland, well vegetated area, directed through containment structures such as hay bale structures and filter bags. The release will be monitored and the rate will be regulated using valves and energy dissipation devices to prevent erosion.

Once a segment of pipe has been successfully tested and dried, the test cap and manifold will be removed, and the pipe will be connected to the remainder of the pipeline. No desiccant or chemical additives will be used to dry the pipe. The Project will implement Section VII of the Southgate Procedures regarding hydrostatic testing.

(i) Cleanup and Restoration

The Project will conduct post-construction restoration activities in accordance with the measures specified in the Southgate Plan and Procedures as required. After a segment of pipe is installed, backfilled, and successfully tested, the Project will final-grade the right-of-way, temporary ATWS, and other disturbed areas, and construction debris will be disposed of properly. The Project will grade the surface of the right-of-way disturbed by construction activities to match original contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion, scour, and possible exposure of the pipeline. The Project will return segregated topsoil to its original horizons in agricultural areas and install temporary and permanent erosion and sediment control measures where necessary, including silt fencing, diversion trenches, and vegetation. The Project will also restore, to original or better condition, all private and public property impacted by the Project such as fences, gates, driveways, and roads that have been disturbed by the pipeline construction.

2.4.3 Typical Wetland Pipeline Construction

The Southgate Project will cross wetlands in accordance with state and federal permit conditions and the Southgate Procedures. Pending site conditions, the Project may request alternative measures to the Southgate Procedures, and these would require approval by FERC prior to construction in these areas. In accordance with the Southgate Procedures, fuel will not be stored within 100 feet of wetlands.

Hydrological conditions along the construction corridor in areas proposed for open ditch construction will likely dictate the use of either open ditch lay or open ditch push/pull lay methods. Selection of the most appropriate method will depend on site-specific weather conditions, inundation, soil saturation, and soil stability at the time of construction. The conventional open ditch lay method will be the most frequently used technique for installation of the pipeline in wetlands. The Project will use the push/pull method, as described in the Southgate Procedures, in inundated or saturated wetland areas where groundwater conditions preclude conventional construction. Selection of the push/pull method will be decided during construction by the construction manager or Project representative depending on the conditions at the time of construction. Appendix G (Wetland and Waterbody Crossing Analysis) provides a practicability assessment for wetland and waterbody crossing methods. Practicable is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. The Southgate Project will continue to consult with the USACE, USFWS, NCDEQ, NCDEMLR, and NCWRC on the appropriate crossing method for each wetland. If the Project moves forward with an alternative crossing method that is not practicable, it is due to the request of a regulatory agency that does not consider practicability. Descriptions of the crossing methods are provided below.

(a) Unsaturated Wetland Crossings

When crossing unsaturated wetlands (wetlands without standing water or saturated soils), construction will be similar to the typical upland construction described in Typical Upland Pipeline Construction Procedures above, with some exceptions. Only one traffic lane will be provided for construction equipment. The Project will use low ground pressure equipment if normal construction equipment causes rutting or mixing of wetland topsoil and subsoil, or install temporary equipment mats to allow passage of equipment with minimal disturbance of the surface and vegetation. Trees will be cut to grade, but stumps will only be removed within 15 feet of the edge of the pipe trench, or where safety concerns dictate otherwise.

The Project will segregate the topsoil from subsoil in wetlands where hydrologic conditions permit this practice, and all excavated material will be placed in an upland area if possible. All excavated material stockpiled in wetlands will be placed on filter cloth, mats, or other semipermeable surface to prohibit mixing with underlying material. Excavated soil material in wetlands will be stabilized with filter cloth to prevent re-entry into wetlands or waterbodies and will not be stored in wetlands for more than 30 days after the pipeline has been laid in the trench without permission from the USACE-Wilmington District. Segregated topsoil will be placed in the trench following subsoil backfilling to restore the original contour.

The Project will install and maintain erosion control measures to minimize sedimentation within the wetland. Trench plugs will be installed at the entry and exit points of wetlands and waterbodies to prevent the modification of subsurface hydrology.

(b) Saturated Wetland Crossings

For the purposes of this report, saturated wetlands include wetlands with standing water, but not those wetlands that are constantly or regularly completely submerged. Topsoil segregation will not be practical in saturated wetlands. Otherwise, construction will be similar as described for unsaturated wetlands to provide for anticipated widths of the pipeline trench and trench spoil areas. The Project will use low ground pressure equipment (e.g., rubber tire excavator) or timber mats to facilitate equipment movement through, and work within, the wetland. Equipment not associated with the pipeline construction within the wetland will be allowed to pass through the wetland when there is no other reasonable access, as provided in the FERC Procedures. The Project will use the push/pull lay method in inundated or saturated wetland areas where groundwater conditions preclude conventional construction. Upon completion of construction, the right-of-way will be restored and revegetated. Following construction, the Project will only maintain tree clearing within 15’ on either side of the pipeline centerline, and a 5’ wide corridor on either side of the pipeline centerline will be routinely mowed.

2.4.4 Typical Waterbody Crossings

The Southgate Project will conduct construction across waterbodies in accordance with the Southgate Procedures and state and federal permit requirements. In accordance with the Southgate Procedures, fuel will not be stored within 100 feet of waterbodies. Multiple variables were evaluated when determining the appropriate crossing method (e.g., waterbody width, waterbody depth, riparian impact, available workspace, sensitive species, duration to complete the crossing, safety, and cost) that would avoid or minimize impacts to the greatest extent practicable. The normal trenching operations will skip the waterbody crossing, stopping on each side near the top of bank. The Project will install the waterbody section of the pipeline by one of the methods described below. In general, pipe will be bent and fabricated

as the work progresses along the right-of-way so that the excavation of the waterbody crossing is completed prior to pipe installation by the tie-in crew.

Construction methods at each waterbody will vary based upon the characteristics of the waterbody encountered and applicable regulatory approvals. Conventional crossing methods where there is discernable flow (wet crossing methods) were not considered for any waterbody crossings because of potential impacts to aquatic resources and water quality. Dry open cut crossings combine traditional trench construction techniques with erosion and sediment control best management practices (silt fence, compost filter socks, turbidity curtains, pumped water filter bags) and water management techniques (damming, pumping, etc.) to install pipeline across waterways.[6] The construction manager's decision whether to use a dam and pump, flume, or cofferdam stream crossing method will be largely dependent upon the following at the time of construction: width and depth of the stream, flow rate, flow velocity, weather forecast, and anticipated time required to complete the crossing. As such, this decision is typically made just before the installation begins with significant consideration given to the above factors.

Blasting for pipeline facilities grade or trench excavation and interconnect site development will be considered only after all other reasonable means of excavation have been evaluated and determined to be unlikely to achieve the required results. Before any blasting occurs, Contractor will complete a project/site-specific blasting plan and provide it to MVP for review. No blasting shall be done without prior approval of MVP. Appendix R (MVP Southgate General Blasting Plan) outlines blasting procedures for the proposed pipeline route alignment and associated Project facilities.

Based on the data collected to date, trenchless crossing methods (i.e., conventional bore and HDD) have been selected as the appropriate crossing alternative for a few waterbodies. More detail on trenchless crossing methods and why these waterbodies were selected are provided below. The planned crossing method and practicability of the methods for each stream can be found in Appendix G (Wetland and Waterbody Crossing Analysis). Practicable is defined as available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes. Prior to construction, any previously identified crossing conditions (mussel relocation or time of year restrictions) will be satisfied. The Southgate Project will continue to consult with the USACE, USFWS, NCDEQ, NCDEMLR, and NCWRC on the appropriate crossing method for each waterbody. If the Project moves forward with an alternative crossing method that is not practicable, it is due to the request of a regulatory agency that does not consider practicability.

The Project will require construction activities parallel to and within 10 feet of the top of bank of several waterbodies and also includes crossings that are not perpendicular (between 75 and 105 degrees) based on site-specific conditions in Table 2-4. The Project requests authorization from NDEQ to perform these necessary construction activities.[7]

[6] It is possible to cross streams with discernible flow using a wet open cut method. The primary difference with the wet open cut method is that the trench is cut through the stream without diverting the flow around the excavation. The wet open cut method has not been considered for the Project as a crossing method. References to "open cut" in this application refer solely to the dry open cut method.

[7] Although NDEQ's Water Quality General Certification (No. 4133) does not expressly apply to this application for an individual 401 Water Quality Certification, the Project is using its conditions as guidance for developing this application.

(a) Conventional Crossing

The Project will cross intermittent or ephemeral waterbodies with no discernable flow at the time of construction using the conventional crossing methods, unless otherwise required, if the Environmental Inspector verifies that water is unlikely to flow between initial disturbance and final stabilization of the feature. Conventional crossing requires the least amount of time to complete pipeline installation and restore the waterbody, the least amount of ground disturbance, and is the most cost effective. Minimizing the time in which riparian areas remain disturbed and the extent of the disturbed area is required in the Jordan Lake buffer rules for utility, non-electric projects that include non-perpendicular crossings of streams and other surface waters (15A NCAC 0sB.0267(9), n.4). The ability to use conventional crossing methods when there is no discernable flow would allow the Project to meet this requirement. Materials will be available to implement a dry crossing method should flow be anticipated due to precipitation events or other conditions.

Trench spoil will be segregated and placed on the bank above the high-water mark for use as backfill. A prefabricated segment of pipeline will be laid horizontally across the waterbody bed past the high banks on each side of the waterbody before raising in elevation to the normal trench level. If necessary, the pipeline may be weighted with concrete weights, and/or aggregate filled sacks to obtain sufficient negative buoyancy.

Compaction percentage of backfill will be equal to or above that of the adjacent undisturbed areas. Trench plugs consisting of sandbags or foam may also be used to keep backfill from sloughing in toward the center of the waterbody. The Project will restore waterbody banks to their original grades and remove and dispose of excavated material not required for backfill at an upland site. The Project will follow the Southgate Procedures to limit water quality and aquatic resource impacts during and following construction. The Project will schedule construction activities so that the pipeline trench is excavated immediately prior to pipe laying activities.

(b) Dam and Pump Crossing Method

The dam and pump method involves installation of temporary dams upstream and downstream of the proposed waterbody crossing. The temporary dams will typically be constructed using materials such as sandbags and synthetic sheeting. Following dam installation, all fishes will be removed from within the structure prior to completely dewatering, appropriately sized pumps will be used to dewater and transport the stream flow around the construction work area and trench. Pumps will be placed within secondary containment. Intake screens will be installed at the pump inlets to prevent entrainment of aquatic life, and energy dissipating devices will be installed at the pump discharge point to minimize erosion and streambed scour. See Figure 3 below for a typical dam and pump design. Trench excavation and pipeline installation will then commence through the dewatered portion of the waterbody. Following completion of pipeline installation, backfill of the trench, and restoration of stream banks, the temporary dams will be removed, and flow through the construction work area will be restored. This method is generally only appropriate for those waterbody crossings where pumps can adequately transfer the stream flow volume around the work area and there are no concerns about the passage of sensitive aquatic species. This crossing method generally minimizes the duration of downstream turbidity by allowing excavation of the pipeline trench under relatively dry conditions.

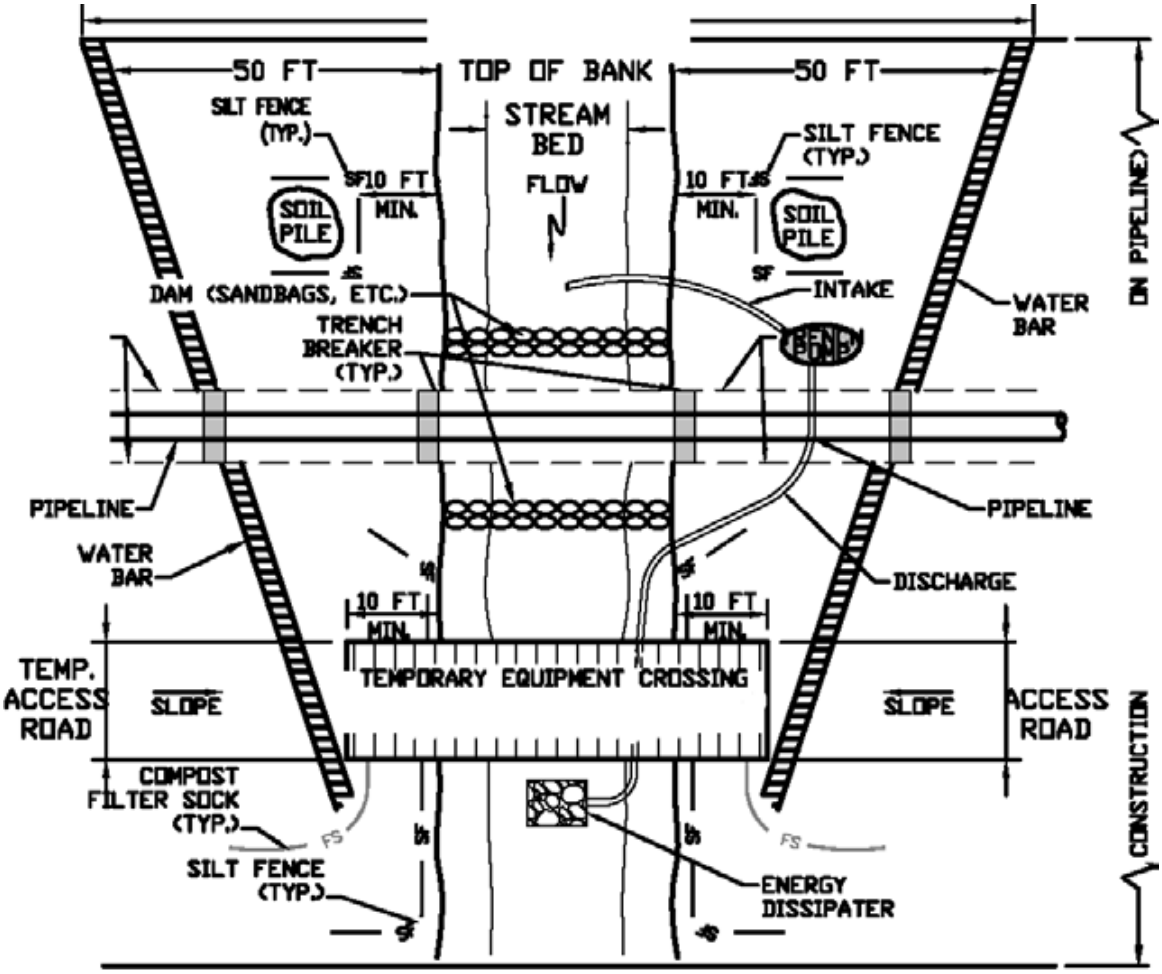

Figure 3. Dam and Pump Crossing Method Typical

(c) Flume Crossing Method

The flume crossing method will consist of temporarily directing the flow of water through one or more flume pipes placed over the area to be excavated (See Figure 4). This method will allow excavation of the pipe trench across the waterbody completely underneath the flume pipes without disruption of water flow in the stream. Stream flow will be diverted through the flumes by constructing two bulkheads and using sand bags or synthetic dams to direct the stream flow through the flume pipes. If necessary, dewatering pumps may be used to pump excess water to ensure stream flow is adequately moved past the work area. If used, dewatering pumps will be placed within secondary containment. Intake screens will be installed at the pump inlets to prevent entrainment of aquatic life, and energy dissipating devices will be installed at the pump discharge point to minimize erosion and streambed scour. The Project will remove bulkheads and flume pipes following completion of pipeline installation, backfill of the trench, and restoration of waterbody banks. This crossing method generally minimizes the duration of downstream turbidity by allowing excavation of the pipeline trench under relatively dry conditions.[8]

[8] The difference between the dam and pump and flume crossing methods is based on how streamflow is temporarily diverted around the work area to allow trenching and pipeline installation to occur in dry conditions. Streamflow conditions at the time of construction generally dictate which method is preferable. However, they are not considered true crossing "alternatives" because there is no material difference in the relative water quality impacts between the two methods

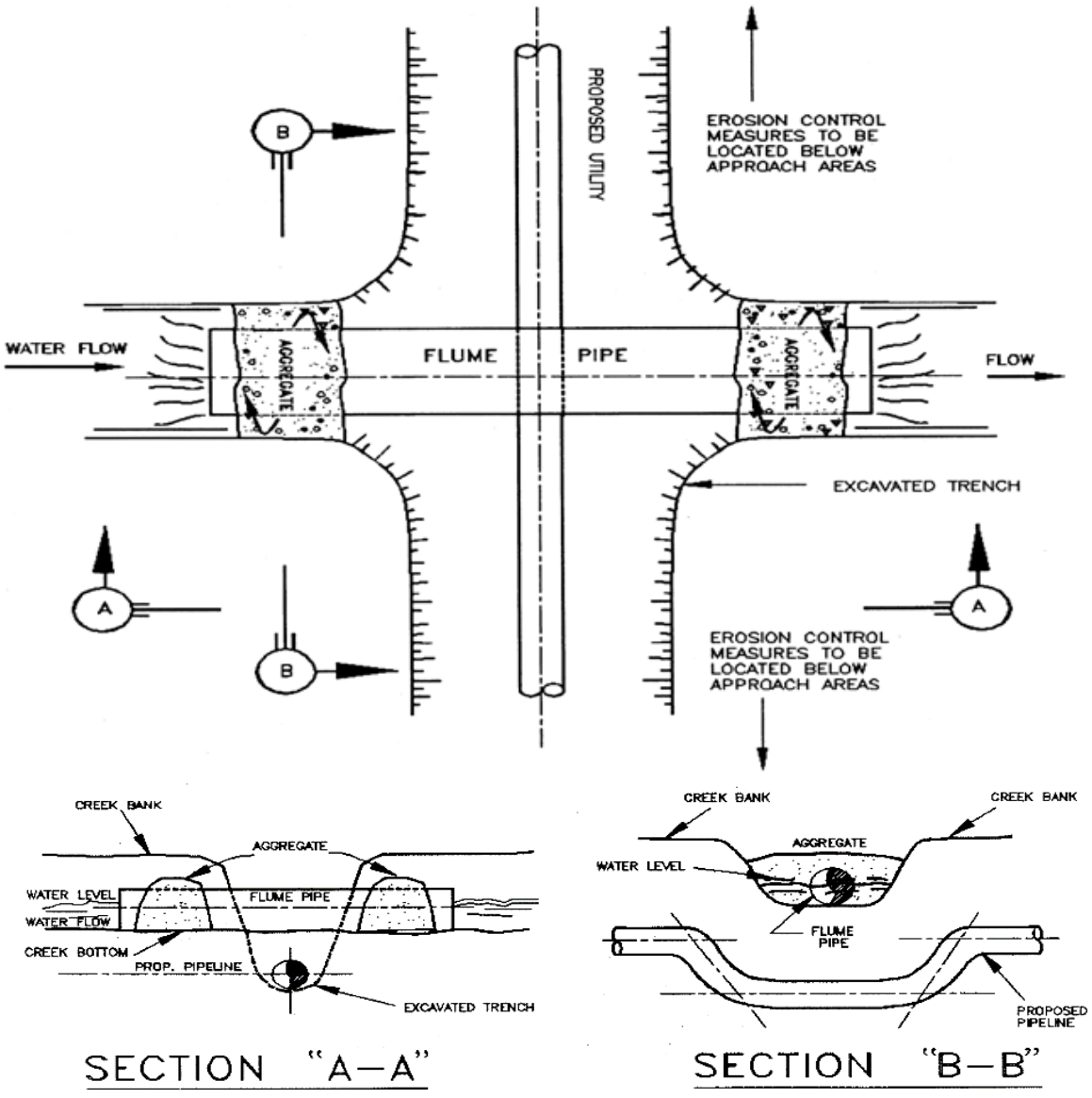

Figure 4. Flume Crossing Method Typical

(d) Cofferdam Crossing Method

The cofferdam crossing method may be used for crossing channels 10 feet or wider where the dam and pump and flume methods will be inadequate to safely convey the volume of streamflow around the crossing and will be designed so as not to prevent the flow of the stream. A cofferdam will be constructed within the construction right-of-way (e.g., using cofferdam products), enclosing approximately half the streambed in a semi-circle. The cofferdam seals tightly to the streambed to minimize water from entering the construction area. Pumps are used to remove water from within the cofferdam and to keep water out of excavations. This water is pumped to the upland area adjacent to the crossing and is released through pumped water filter bags places behind silt fence or similar devices. All earth disturbance will occur in the dry area behind the cofferdam. The pipe will be installed, and the disturbed area backfilled and stabilized. Sediment barriers at the waterline will be installed and functional before the cofferdam is removed.

Following construction, banks will be stabilized with either riprap or vegetation. The cofferdam is then set up from the opposite bank and extends far enough to include the tie-in point in mid-stream. The remainder of the pipe is installed, and the tie-in weld is made. Clean up follows the same procedures described above. See Figure 5 below for an example.

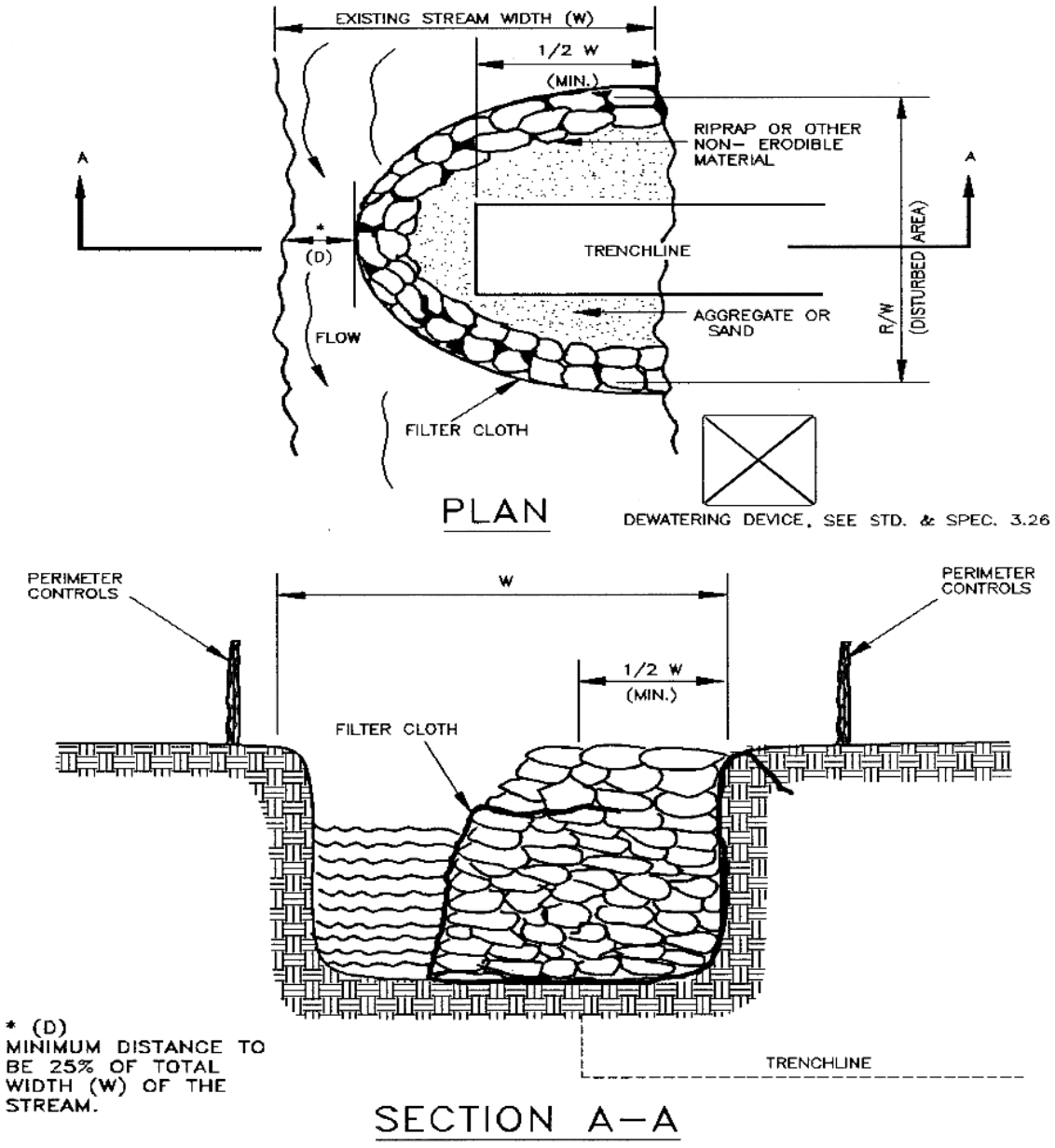

Figure 5. Cofferdam Crossing Typical

(e) Conventional Bore Crossing Method

Some waterbodies crossed by the Southgate Project are directly associated with or adjacent to roads or railroads. Where these roads or railroads are to be crossed using a horizontal or conventional boring machine, the waterbody will typically be included within the length of the bore to avoid the need to excavate a bore bit in the waterbody. Some elevated or channelized waterbodies, such as irrigation ditches, may also be successfully bored, depending upon the groundwater level in the area. This crossing method avoids instream disturbance and therefore is proposed for three crossings where consultation with the USFWS and NCWRC indicated sensitive aquatic species could be present: Cascade Creek, Wolf Island Creek, and Deep Creek. To complete a horizontal or conventional bore, two pits will be excavated, one on each side of the feature to be bored. A boring machine will be lowered into one pit, and a horizontal hole will be bored to a diameter equal to the diameter of the pipe (or casing, if required) at the depth of the pipeline installation. The pipeline section and/or casing will then be pushed through the bore to the opposite pit (See Figure 4). If additional pipeline sections are required to span the length of the bore, they will be welded to the first section of the pipeline in the bore pit before being pushed through the bore.

Issues which must be considered during evaluation of conventional bore for potential use during crossing of waterways and wetlands include:

- Worker safety, especially when high groundwater poses risk to stability of bore pits.
- Significantly more workspace required due to the boring machines, drill string and pipe storage and storage of spoil from the bore pits (as much as 900 cubic yards for a 20-foot deep pit). Topography in stream valleys significantly reduces (or eliminates) the amount of space available.
- Groundwater must be managed due to proximity of the bore pit to the feature being bored.
- Bore pits situated on a slope, the depth of the upslope wall of the pit will increase quickly creating the need for additional surface disturbance and associated workspace as the pit walls must be graded (laid back) for worker safety.
- Geology may hinder or eliminate the potential use of conventional bore due to the hardness of rock encountered, the presence of varying different materials in the bore path (i.e. large boulders in sand and gravel) or changes in bedding thickness.
- Disturbance of riparian buffer associated with workspace and excavation of bore pits.

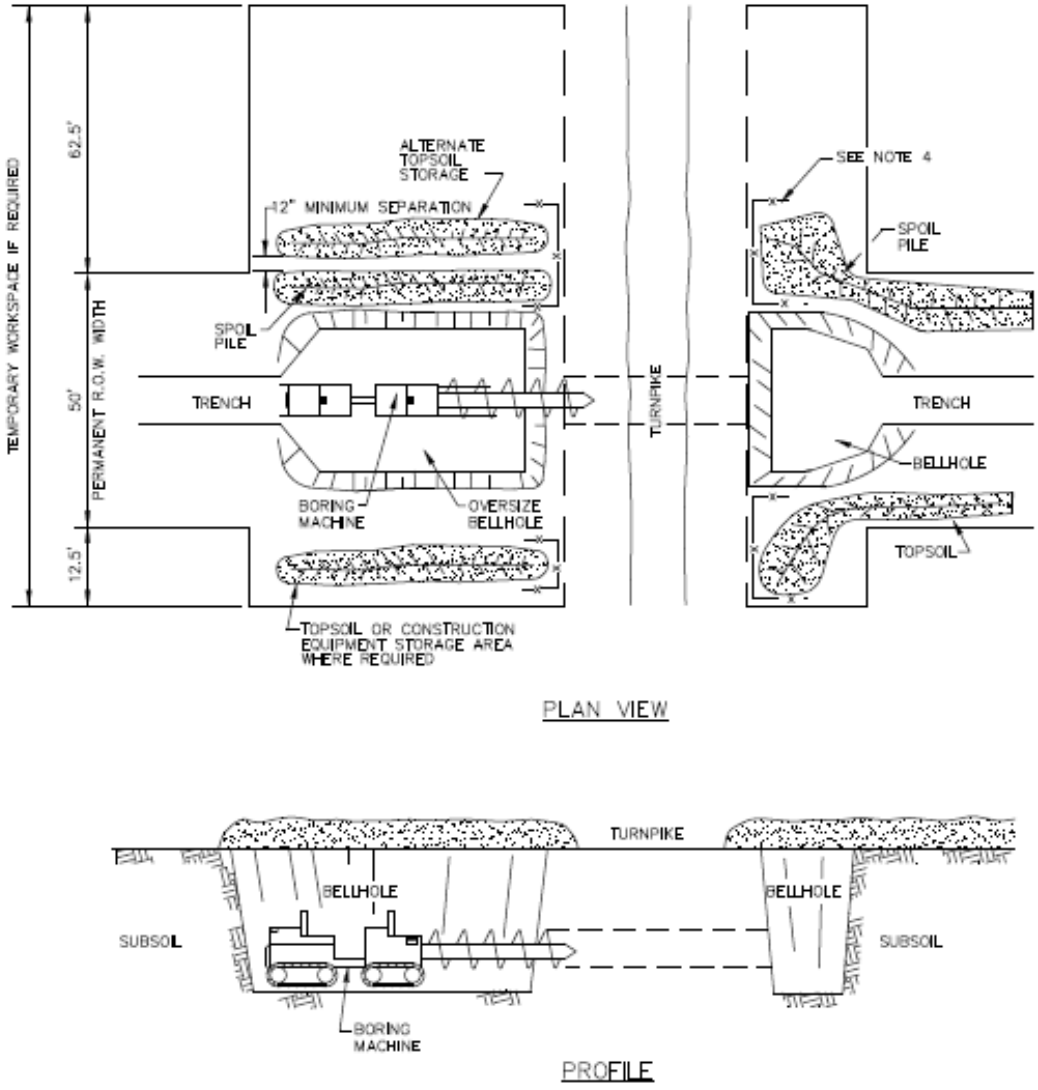

Figure 6. Conventional Bore Typical

(f) Horizontal Directional Drilling Crossing Method

Horizontal directional drilling ("HDD") is a method that allows for trenchless construction across an area by pre-drilling a hole below the depth of a conventional pipeline lay and then pulling the pipeline through the pre-drilled borehole (See Figure 5). Currently, the Project is proposing an HDD at the Dan River and Stony Creek Reservoir crossings. The HDD was selected at the Dan River due to crossing length, depth of the river, fluctuation of water levels, and threatened and endangered species concerns. The Stony Creek Reservoir HDD was selected due to the length of crossing, depth of the reservoir, and to limit impact on the recreational uses of the waterbody. Equipment will not be required to cross either the Dan River or The Stoney Creek Reservoir to complete an HDD. HDD Site-specific Plans are provided in Appendix H.

The HDD method has been in use since the 1970s as a means to install pipelines across rivers and at shore approaches to mitigate for construction activities within a waterbody. Pipelines up to 60 inches in diameter have been successfully installed using this method. The length of pipeline that can be installed by HDD depends upon topography, soil conditions, geology, and pipe diameters and is limited by available technology and equipment sizes.

Typically for HDD crossings, electric-grid guide wires will be hand-laid across the land surface along the pipeline right-of-way to help guide the drill bit along the predetermined HDD route. In thickly vegetated riparian areas, a swath approximately two to three feet wide may be hand-cleared across the land surface for the placement of guide wires to monitor the track of the drill alignment, resulting in minimal ground and vegetation disturbance. This may occur over the pipe or temporary access may be utilized if it does less harm to the vegetation. Following guide wire installation, a directional drilling rig will be set up and a small-diameter pilot hole will be drilled along a prescribed profile.

Electromagnetic sensors located on the tip of the drill bit will follow an electromagnetic field created by the guide wires along the prescribed path. Where guide wires cannot be used, bit tip positioning sensors will be used to guide the drill bit. In either case, once the pilot hole is completed, it will be enlarged, using reaming tools to provide access for the pipe. The reaming tools will be attached to the drill string at the exit point of the pilot hole and then rotated and drawn back to the drilling rig, thus progressively enlarging the pilot hole with each pass.

During this process, drilling fluid consisting of water and bentonite clay (typically a 97:3 mixture) will be continuously pumped into the hole to remove cuttings and maintain the integrity of the hole. Bentonite clay is classified as a non-toxic/non-hazardous substance. Due to the unique characteristics of bentonite, the slurry is capable of absorbing 10 times its own weight in water and swells up to 19 times its dry volume. The combined bentonite and water mixture serves the following purposes: lubricate and cool the drill head; seal and fill the porous space on the circumference of the drilled hole; form a cake-like substance to help prevent the walls of the drill hole from collapsing inward; and suspend the cuttings for removal through the drilling process. Water for HDDs is anticipated to be obtained from municipal sources. If necessary, additional potential sources of water for HDDs may include other municipal systems, groundwater supply wells, and/or approved surface waters. Additional additives that are approved by agencies may be needed dependent upon viscosity readings. These additives will be determined by a mud engineer on site. The Project will only use additives for HDDs that are certified for conformance with NSF International/American National Standards Institute Standard 60, Drinking Water Treatment Chemicals – Health Effects, which provides assurances that the product is safe for use in drinking water (NSF International, 2018). These fluids will comply with state and federal requirements. HDD fluid will be

disposed of per the HDD Contingency Plan (Appendix I). Water containing mud, silt, drilling fluid, or other materials from equipment washing or other activities, will not be allowed to enter wetlands and waterbodies. The bentonite used in the drilling process will be either disposed of at an approved disposal facility or recycled in an approved manner. Once the hole has been sufficiently enlarged, a prefabricated segment of pipe will be attached behind the reaming tool on the exit side of the crossing and pulled back through the drill hole to the drill rig, completing the crossing. The Project will dispose of all HDD cuttings and fluids at approved disposal facilities.

The primary advantage of the HDD method is that there is minimal planned disturbance of the surface between the entry and exit points of the HDD (limited to the temporary deployment of telemetry cable and water pipe), provided there is reasonable access to the entry and exit points for the drilling rig and fluids handling equipment. Where the HDD and the adjacent right-of-way are in or near parallel alignment, the pull section will be pre-fabricated within the construction right-of-way to the greatest extent practical; minimal ATWS will be required for this pull section. In areas where pullback space is limited due to topographic constraints, adjacent resources, encroachment, or other utilities, the pullback string may be broken into several segments for assembly during the pullback activity. However, the process of breaking an HDD in multiple pullback sequences significantly increases the amount of time the bore pits and associated disturbance exist due to the time required for welding the seams mid-pull. This in turn can also increase the potential for failure of the HDD due to pipe failure and borehole caving. Potential failures can be avoided or mitigated by conducting geotechnical analysis prior to construction or by making appropriate adjustments during operation of the HDD equipment.

In addition to the potential for an inadvertent return, the minimum bend radius of the pipe must also be considered in design. Based on the conservative industry practice of calculating a bending radius using the formula of 100 feet times a multiplier equivalent to the pipe outer diameter in inches for a HDD, for example the allowable bending radius for 24-inch steel pipe is 100 feet times a multiplier of 24, which equals 2,400 feet. The bend radius will affect the catenary, or the curve formed where the pipe is hanging at the pullback point. Topography, bend radius, and entry/exit angles will all be factors in the catenary height from the ground. A pipeline depth of at least 25 feet below waterbodies for HDD construction will also be employed based on minimizing the potential for inadvertent returns.

At a minimum, any HDD below a waterbody would be at least 2,400 feet long and therefore require 2,400 feet of straight stringing space without introducing additional risks. Additional factors to consider when selecting the HDD crossing method practicality include significantly higher costs, duration to complete the crossing, increased safety concerns, and increased workspace. Because of the complexities and variables described above, HDD is not an appropriate crossing alternative for all waterbodies.

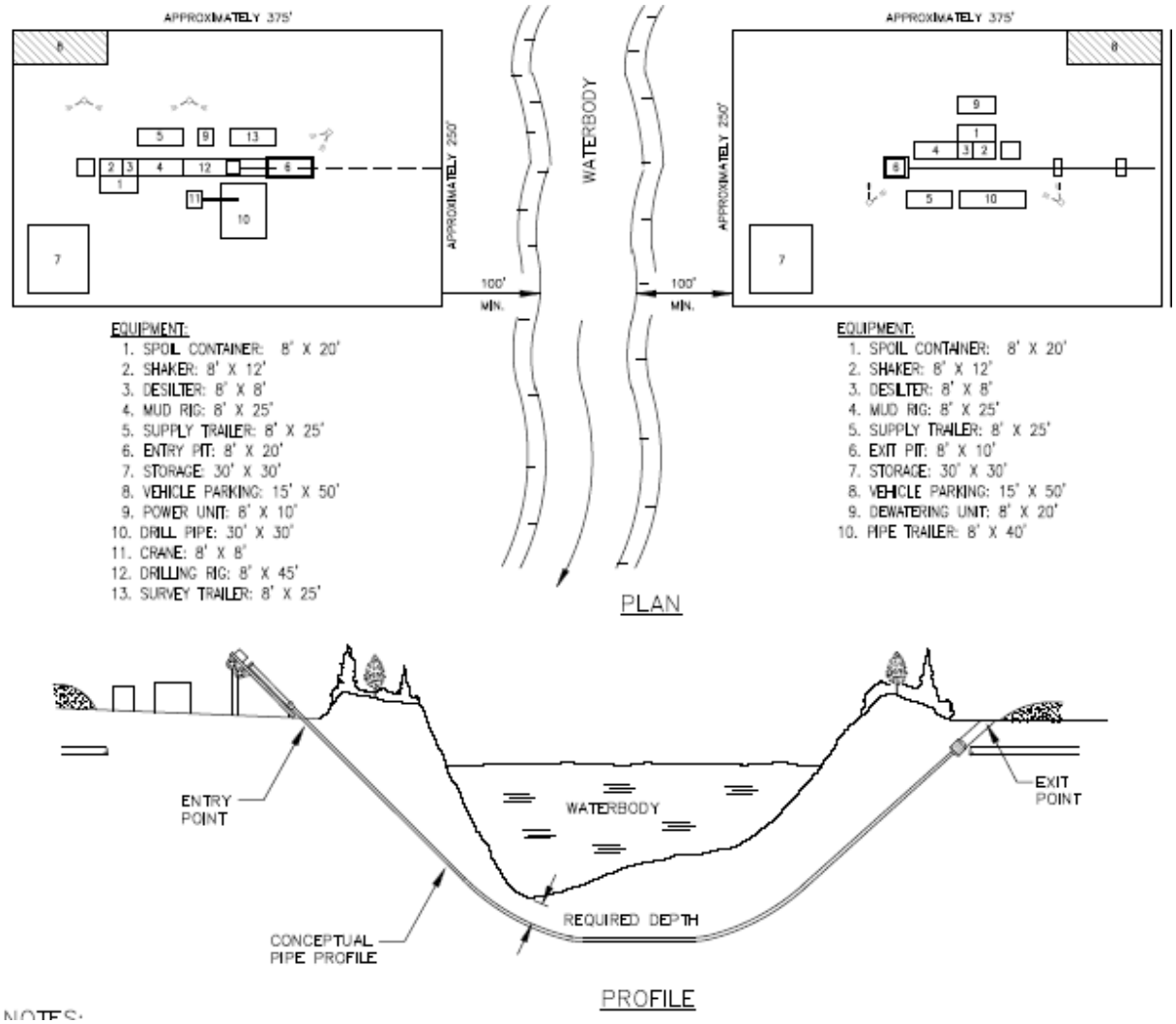

Figure 7. Horizontal Directional Drill Typical.

2.4.5 Aboveground Facilities

Construction activities and storage of construction materials and equipment will be confined within the designated workspace areas associated with the aboveground facilities. Debris and waste generated from construction will be disposed of as appropriate. Disturbed surface areas will be restored in a timely manner. The facilities will be constructed in accordance with the Project construction standards and specifications as more generally described in the paragraphs that follow.

The compression, piping and other equipment will be shipped to the sites by truck. The equipment will be offloaded using cranes and/or front-end loaders. The equipment will then be positioned on the foundations, leveled, grouted where necessary, and secured with anchor bolts, as required. Non-screwed piping associated with the aboveground facilities will be welded, except where connected to flanged components. Welders and welding procedures will be qualified in accordance with API standards. Welds in gas piping systems will be examined using radiography, ultrasound, or other approved non-destructive examination methods to ensure compliance with code requirements. Aboveground piping surfaces will be cleaned and painted in accordance with the Project construction specifications. Paint inspection and cleanup will be conducted in accordance with regulatory requirements and best engineering practices.

Components in high-pressure natural gas service will be tested prior to placing in service. Pressure testing will follow all applicable federal and state requirements. Before being placed in service, controls and safety equipment and systems including emergency shutdown, relief valves, gas and fire detection, and engine over speed and vibration protection will be calibrated and tested.

2.4.6 Access Roads

New and existing roads will be used to provide access to the pipeline right-of-way during construction and/or operation of the Southgate Project. Access road widths will be the minimum necessary to provide access for construction equipment while maintaining safe travel conditions. Maintenance or upgrades may be required on some of the existing roads prior to use by construction equipment. Upgrades may include grading to prevent rutting, widening or placement of additional stabilization means including but not limited to gravel or crushed stone on the existing surface to ensure safe travel conditions in uplands. Matting or a similar material would be used for access roads through wetlands. A filter fabric will be laid down prior to installing matting in order to facilitate restoration.

Existing culverts that are damaged or otherwise not properly functioning will be repaired or replaced with an in-kind structure to ensure they are functional during construction activities. Permanent culverts or temporary flumes installed as part of the Project will include measures to promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a culvert will not be modified by altering the width or depth of the stream profile in connection with the construction activity. The width, height, and gradient of a proposed culvert will be sufficient to pass the average historical low flow and spring flow without adversely altering flow velocity. Access will be constructed such that the length of the road minimizes impacts on waters of the United States and will be maintained as close as possible to pre-construction contours and elevations.

2.5 RESTORATION

Following construction of the Southgate Project, the areas disturbed by construction will be restored to their original grades, condition, and use, to the greatest extent practicable. The Project will complete restoration in accordance with the Southgate Plan and Procedures, the Project-specific E&SCP, stormwater

management plans (SWMP), applicable regulatory approvals, and landowner agreements. Restoration will be considered successful if the disturbed surface condition is similar to adjacent undisturbed lands, construction debris is removed (unless requested otherwise by the landowner in upland areas), revegetation is successful, proper drainage has been restored, and the appropriate federal and state agencies approve. The Project will reseed areas disturbed by construction in accordance with and proposed seed mixes that will be developed for the Project and provided in an additional submittal.

2.5.1 Pipeline

Upon completion of the pipeline installation, the surface of the right-of-way disturbed during construction activities will be graded to match original contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion, scour, and possible exposure of the pipeline. Segregated topsoil will be replaced, and soils that have been compacted by construction equipment traffic will be de-compacted. Permanent stormwater management measures will be installed in accordance with the Project's SWMP. Temporary erosion control measures may be left in place, where appropriate, until sufficient vegetative cover is re-established to prevent significant erosion or sedimentation.

2.5.1.1 Uplands

In most upland locations, excluding actively cultivated cropland, herbaceous vegetative cover will be re-established by spreading a grass seed and hydro or straw-mulch mixture over the disturbed surface. The type of seed will be selected to match the mix required by applicable regulatory agencies, or as otherwise requested by the landowner. Depending upon the time of year, a temporary seed mix may be broadcast or drilled until a more permanent cover can be established. Steep slopes (e.g., stream banks) may require additional stabilization using erosion control fabric, revetments, or sod. Vegetation success in these areas will be monitored by the Project, and reseeding, fertilizing, hydroseed (where allowed), or other supplemental revegetation measures may be implemented until the density and cover of non-nuisance vegetation is similar in density and cover to adjacent undisturbed lands.

2.5.1.2 Wetlands

Original surface hydrology will be re-established in wetlands by backfilling the pipe trench and grading the surface to pre-construction contours with equipment operating from timber mats or equivalent or using low-ground-pressure tracked vehicles working in the spoil pile depending upon degree of soil saturation and the bearing capacity. Segregated topsoil will be replaced in unsaturated wetlands. Once the trench is backfilled and ground surface restored to its natural grade, the soils will be mechanically loosened to a depth of 12 inches, if necessary, and allowed to naturally revegetate. In emergent wetlands, the herbaceous vegetation is expected to regenerate quickly (typically within one growing season). The Project will conduct restoration and monitoring of wetland crossings in accordance with the Southgate Procedures to ensure successful wetland revegetation. Wetland revegetation will be considered successful when the cover of herbaceous and/or woody species is at least 80 percent of the type, density, and distribution of the vegetation in adjacent wetland areas that were not disturbed by construction. Revegetation efforts will continue until wetland revegetation is successful based on the Southgate Procedures and other applicable regulatory approvals. If revegetation is unsuccessful, the wetlands will be seeded with appropriate native wetland species in consultation with USACE and NCDEQ.

2.5.1.3 Waterbodies

Cleanup and restoration activities commence as soon as practicable following completion of the waterbody crossing. Waterbody substrate will be segregated from other soils and will be replaced as the uppermost layer of backfill in the trench once the pipeline is laid. Excavated streambed material will be placed in uplands to the extent practicable, and where not practicable will be placed on filter cloth or another semi-impervious surface. Riparian areas that are disturbed will be restored to pre-construction or better conditions. Original streambed and bank contours will be re-established for surface water and groundwater flow, and mulch, jute thatching, or bonded fiber blankets will be installed on the stream banks, which are preferential to plastic erosion control blankets because they reduce wildlife entrapment and are biodegradable. Streambank grading would only occur where stream banks are incised to ensure the bank is stable and tapered to tie back into the adjacent bank area. The Project will continue to evaluate if riprap is necessary to maintain the stream contours to pre-construction grade and safety of the pipeline. Where the flume technique is used, stream banks will be stabilized before removing the flume pipes and returning flow to the waterbody channel. Additionally, the Project is conducting a scour analysis on perennial streams with widths greater than or equal to 10-feet, which are crossed by the pipeline to ensure that the placement depth is sufficient to prevent erosion by expected high flows. Engineers are also evaluating other streams to ensure that they will not require additional controls to stabilize the streambed post-construction.

Seeding of disturbed stream approaches will be completed in accordance with the Southgate Procedures after final grading, weather and soil conditions permitting. Other Federal and State permit seeding requirements will be considered where applicable. Where necessary, slope breakers will be installed adjacent to stream banks to minimize the potential for erosion. Sediment barriers, such as silt fence and/or straw bales will be maintained across the right-of-way until permanent vegetation is established. Temporary equipment bridges will be removed following construction.

2.5.2 Access Roads

Previously existing access roads that were modified and used during construction will be returned to original or better condition upon completion of the pipeline facilities installation. Temporary access roads constructed specifically for the Project installation will be removed, the surface graded to original contours, and the land restored to its original use unless otherwise requested by the landowner and approved by NCDEMLR. Temporary erosion control measures will be removed upon final stabilization and approval from applicable regulatory agencies and installation of permanent erosion control measures, if necessary.

2.5.3 Aboveground Facilities

Aboveground facilities will be fenced. The areas inside the fence at the aboveground facilities will be permanently converted to industrial use. Most areas in and around the buildings, meters, and associated piping and equipment will be covered with an approved stabilization method (typically crushed rock or equivalent) to minimize the amount of maintenance required. Roads and parking areas may be crushed rock, concrete, or asphalt. Other ground surfaces will be seeded with a grass that is compatible with the climate and can be easily maintained. Temporary workspace areas outside the fence will be restored as described above for the pipeline right-of-way.

2.5.4 Contractor Yards

Upon completion of construction, all temporary facilities (e.g., trailers, sheds, latrines, pipe racks, fencing, and gates) will be removed from the contractor yards. Unless otherwise requested by the landowner and

approved by NCDEMLR, each site will be graded to original contours and the land restored to its original use, to the greatest extent possible. The site will be revegetated, permanent erosion control measures will be installed, and temporary erosion control measures will be removed.

2.6 QUALITY ASSURANCE MEASURES

To ensure that construction of the facilities will comply with measures identified in the FERC Certificate and applicable regulatory permits and clearances, the Project will include implementation details in its construction drawings and specifications. Copies of permit requirements, known conditions and related drawings will be added to the Construction Bid Package.

Consistent with the Southgate Plan and Procedures and the Project-specific E&SCP, environmental training will be given to the Project personnel and to contractor personnel whose activities may impact the environment during pipeline and aboveground facility construction. The level of training will be commensurate with the type of duties of the personnel. All construction personnel from the Chief Inspector, EI, craft inspectors, and contractor job superintendent to clearing crews, welders, equipment operators, and laborers will be given the appropriate level of environmental training. The training will be given prior to the start of construction and throughout the construction process, as needed. The training program will cover job-specific permit conditions (NWP 12, 401 Water Quality Certification, NPDES, etc.), contaminated sediment and groundwater management, health and safety, company policies, cultural resource procedures, threatened and endangered species restrictions, the SPCC Plan (Appendix F), HDD Contingency Plan (Appendix H), and any other pertinent information related to the Project. The Invasive Species Plan will be provided at a later date. In addition to the EIs, all other construction personnel will play an important role in maintaining strict compliance with all permit conditions to protect the environment during construction.

To ensure quality assurance and compliance with mitigation measures, a Chief Inspector will represent the Project assisted by another Inspector, and one or more craft inspectors. In addition, there will be at least one EI who will report to the Chief Inspector, who in turn reports to the Construction Manager. The EI's duties are consistent with those contained in Section II.B (Responsibilities of the Environmental Inspector) of the Southgate Plan; the EI will be:

- Responsible for monitoring and documenting compliance with all mitigation measures required by the FERC's Order and any other grants, permits, certificates, or other authorizing documents;
- Responsible for evaluating the construction contractor's implementation of the environmental mitigation measures required in the contract or any other authorizing document;
- Empowered to order correction of acts that violate the environmental conditions of the FERC's Order, or any other authorizing document (e.g., USACE Section 404 permit), including stop work authority;
- A full-time position, separate from all other activity inspectors; and
- Responsible for maintaining status reports and training records.

Copies of the Construction Drawing Package will be distributed to inspectors and to contractors' supervisory personnel. If a contractor's performance is unsatisfactory, the terms of the contract will allow for work stoppage and will require the contractor to begin remedial work.

The Project's engineering and construction departments are responsible for designing and constructing certificated facilities in compliance with regulatory and contractual requirements and agreements. If technical or management assistance is required, the responsible Construction Manager and/or Chief Inspector will request assistance from the appropriate company department. The operations department will be responsible for long-term Project maintenance and regulatory compliance once the Project is in-service.

2.7 SCHEDULE

The order in which each facility will be constructed may vary, depending upon numerous factors, including the receipt of necessary authorizations, the capabilities of each contractor, available work force, and optimized logistics. The Southgate Project anticipates clearing to start in the first quarter of 2020 contingent upon receipt of necessary approvals, and pipeline construction will begin in early 2020 to achieve a target in-service date of December 2020. A preliminary construction schedule is provided below in Table 2-5.

Table 2-5

Construction Schedule for Major Components of the MVP Southgate Project

Component	Commence Activity	Complete Activity
Clearing	Q1 2020	Q1 2020
Pipeline Construction	Q1 2020	Q4 2020
Compressor Stations	Q1 2020	Q4 2020
Restoration	Q2 2020	Q4 2022
Hydrostatic Testing	Q4 2020	December 2020
Anticipated full in-service date of December 2020		

2.8 OPERATION AND MAINTENANCE

The Southgate Project will be operated and maintained in compliance with Department of Transportation Pipeline and Hazardous Materials Safety Administration's regulations at 49 CFR Part 192, FERC regulations at 18 CFR § 380.15, and maintenance provisions of the Southgate Plan and Procedures and its Project-specific E&SCP. Operational activity on the pipeline will be limited primarily to vegetation management within the permanent easement and inspection, repair, and cleaning of the pipeline. Periodic aerial and ground inspections by the Project will identify:

- soil erosion that may expose the pipe;
- dead vegetation that may indicate a leak in the line;
- conditions of the vegetation cover and erosion control measures;
- unauthorized encroachment on the right-of-way, such as buildings and other substantial structures; and
- other conditions that could present a safety hazard or require preventive maintenance or repairs.

Following construction, certain areas along the pipeline alignment (and at aboveground facilities) will have an associated permanent right-of-way or operational area. For pipeline facilities, the Project will maintain

a typical permanent right-of-way of 50 feet in width. Vegetation on the permanent right-of-way will be maintained by mowing, cutting, and trimming. Herbicide treatment will only be used to control invasive species, as necessary, and will not be allowed within 100 feet of a waterbody or wetland unless specifically allowed by the appropriate federal or state agency.

In uplands, routine vegetation mowing or clearing over the full width of the permanent right-of-way will occur no more than once every three years. However, to facilitate periodic corrosion/leak surveys, the Project may clear a corridor not exceeding 10 feet in width centered on the pipeline at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. See Appendix C for a typical construction detail of the maintenance corridor.

In wetlands and riparian buffers, routine vegetation mowing or clearing over the full width of the permanent right-of-way will not occur. However, to facilitate periodic corrosion/leak surveys, the Project may clear a corridor centered on the pipeline up to 10 feet in width at a frequency necessary to maintain the 10-foot corridor in an herbaceous state. In addition, trees within 15 feet on either side of the pipeline may be selectively cut and removed from the permanent right-of-way to ensure that root systems do not affect the exterior coating of the pipeline.

2.9 FUTURE PLANS AND ABANDONMENT

The Project currently has no plans for either future expansion or abandonment of the facilities. Should the Project propose any future expansion or abandonment of Project facilities, the Project will seek the appropriate authorizations from FERC and other federal and state agencies as applicable.

2.10 ROUTE ALTERNATIVES ANALYSIS

Due to the linear nature of this Project, there are no practical alternatives that fulfill the project purpose, while avoiding all impacts to surface waters and wetlands. Impacts have been avoided and minimized to the extent practicable through the routing alternatives analysis discussed in this section, the right-of-way area limitations discussed in Section 2.3.1, and the impact avoidance and minimization measures outlined in Section 4.4.

During development of the Southgate Project, an extensive review of potential routes was evaluated to identify viable corridors for placement of the pipeline. Potentially viable corridors were reviewed for a variety of potential constraints including environmental impacts, effects on landowners, and constructability and further refined to determine the most feasible route within the least impactful corridor. One of the Project's primary objectives with respect to pipeline routing was to avoid or minimize, to the extent possible, crossings of major population centers and significant environmental resources, including waterbodies and wetlands. The Project also attempted to route its pipeline adjacent to existing rights-of-way, where feasible, to minimize new land impacts. The Project used field reconnaissance, aerial photography, topographic maps from the U.S. Geological Survey, and National Wetland Inventory maps during the route identification and evaluation processes. Appendix J is the FERC Draft Environmental Statement that was filed on July 26th, 2019. Appendix G provides a cost analysis of wetland and waterbody crossing methods.

The Project evaluated four major route alternatives (including the preferred route) as part of the planning and design process (See Appendix J). The evaluation was based on environmental and land use impacts, as well as permanent easement acquisitions and overall Project costs. The primary objective of the evaluation was to develop the most direct route that could connect customers to the available supply system while

avoiding or minimizing potential adverse environmental impacts and engineering constraints to the greatest extent practicable. The Project evaluated pipeline routing options based on potential adverse environmental impacts, existing land usage, constructability, safety, and feasibility considerations.

The selection of the major route alternatives involves several steps.

- Development of routing criteria;
- Identification of potential routing alternatives;
- Collection of data relative to each alternative;
- Evaluation of potential environmental and land use impacts;
- Evaluation of routing alternatives against routing criteria; and
- Determination of the most cost-effective technical solution

The route best meeting the selection criteria was selected as the preferred route. The preferred route was selected primarily for these reasons:

- Shortest length and, therefore, least area of land disturbance during construction and operation;
- Greatest percent of route collocated with existing rights-of-ways;
- Least mileage of forested land crossing; and
- Least area of forested land construction or operation impacts.

Minor Route Variations

The Project evaluated a 300 to 400-foot wide "study area" around the preferred route. The purpose of the study was to allow for minor route deviations within the corridor to avoid or minimize impacts to sensitive resources, including wetlands and waterbodies. The Project has currently identified 280 route variations during preliminary routing, stakeholder outreach efforts, and landowner and/or and agency requested route deviations. Of these, the Project has incorporated 191 of these into the proposed current preferred route. Those that are relevant to avoiding or minimizing impacts to wetlands or waterbodies are summarized in Table 2-6. Additionally, the Project has made several adjustments in collaboration with the DEQ since the initial November 2018 Application to address areas of concern and reduce impacts to wetlands, waterbodies, and riparian areas.

Table 2-6

Minor Route Variations to Avoid or Minimize Impacts to Wetlands or Waterways in North Carolina

Reroute Number	Begin Milepost	End Milepost	Length (miles)	Variation Description	Justification
MVP-RA-153-1309	28.3	28.3	0	ATWS adjustment	Wetland avoidance
MVP-RR-193-1030	34.95	35.35	0.4	Centerline adjustment	Avoidance of multiple stream crossings and side-slope construction
MVP-RR-193-1501	39.2	39.6	0.4	Centerline adjustment	Avoid wetland / pond complex
MVP-RA-163-1116	40	40.2	0.2	Centerline adjustment	Avoidance of waterbody
MVP-RA-186-1423	57.35	57.75	0.4	Centerline adjustment	Avoidance of pond

Table 2-6

Minor Route Variations to Avoid or Minimize Impacts to Wetlands or Waterways in North Carolina

Reroute Number	Begin Milepost	End Milepost	Length (miles)	Variation Description	Justification
MVP-RA-143-1534	63.1	63.5	0.4	Centerline adjustment	Move point of inflection out of pond
MVP-RR-186-1407	67.9	68.2	0.3	Centerline adjustment	Avoidance of pond
MVP-VRR4-158-1228	52.1	52.15	0.5	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of riparian buffer impacts
MVP-VRR4-158-1233	55.12	55.41	0.3	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of riparian buffer impacts
MVP-VRR4-158-1240	56.4	56.7	0.3	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of wetland and riparian buffer impacts
MVP-VRR4-158-1242	58.55	58.72	0.2	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of riparian buffer impacts
MVP-VRR4-158-1246	60.7	60.81	0.1	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of wetland and riparian buffer impacts
MVP-VRR4-143-0740	62.15	62.5	0.4	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of wetland and riparian buffer impacts
MVP-VRR4-158-1251 & MVP-VRR4-143-0743	62.9	63.3	0.4	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of wetland and riparian buffer impacts
MVP-VRR4-149-1432	63.9	64.1	0.2	Centerline adjustment	Avoidance of non-perpendicular stream crossing and reduction of riparian buffer impacts
MVP-VRR4-158-1224	70.2	70.3	0.1	Centerline adjustment	Avoidance of non-perpendicular stream crossings and reduction of riparian buffer impacts

3.0 EXISTING SITE CONDITIONS

3.1 WETLAND AND WATERBODY DELINEATION

The Southgate Project performed a wetland and waterway delineation for the Project environmental survey area that consisted of a typical 300 to 400-foot-wide corridor along the 47 miles of proposed pipeline. The survey area included limits of additional temporary workspaces, above ground facilities, construction yards, staging areas, and access roads. A typical 50-foot wide corridor centered over the proposed access road was surveyed for all access roads. Overall, the survey area for the North Carolina portion of the Project encompasses approximately 2,135 acres.

The wetland and waterbody delineation was conducted using a combination of the desktop and field surveys. To date, the field surveys have covered approximately 90 percent of the North Carolina Project survey area, where survey access was available. The remaining area where survey access was not available was evaluated using existing data resources such as National Wetland Inventory ("NWI") maps, National Hydrography Dataset ("NHD") maps, published US Department of Agriculture- Natural Resources Conservation Service "USDA-NRCS" Soil Surveys for Rockingham and Alamance Counties, North Carolina, and site specific aerial photography and Lidar data flown for the Project area in 2018. Project scientists made observations of the estimated resources from adjacent tracts where survey access was available, to the extent possible. Wetland and waterbody limits estimated using desktop analysis will be field delineated when survey access is available. Wetlands and waterbody boundaries were identified based on the interpretation of this data and typically represent an over-estimation of the extent of jurisdictional resources. Details of the survey methodology and results, including data forms, wetland and waterway delineation maps, and photographs, are provided in Appendix K (MVP Southgate Project – North Carolina Wetland and Waterbody Delineation Report – March 2019 Addendum). The areas delineated via desktop methods will be surveyed in the field when access becomes available.

3.1.1 Wetlands

To date, one hundred seventy-four wetlands have been delineated within the North Carolina Project survey area. These wetlands are identified in Appendix K (Wetland and Waterbody Delineation report – Appendix A-1) by resource ID, milepost, and type. None of the delineated wetlands are isolated. The wetlands in the survey area are associated with stream and river floodplains or their headwaters and include a combination of palustrine forested ("PFO"), palustrine scrub-shrub ("PSS"), and palustrine emergent wetlands ("PEM"). Table 3-1 summarizes the wetlands delineated (in the field and by estimated) in the North Carolina Project survey area by watershed and Cowardin cover type.

3.1.2 Waterbodies

Within the North Carolina Project survey area, 380 streams and waterbodies have been delineated to date, including 35 ponds and 345 streams. Of the identified streams, 42 were determined to be ephemeral in nature, 148 are intermittent, and 155 are perennial. None of the delineated resources are isolated waterbodies and none are classified as Section 10 waterways by the USACE-Wilmington District.

To determine whether impaired waterbodies will be affected by the Southgate Project, the Project reviewed the North Carolina 303(d) lists that are included in USEPA Categories 4 and 5. Category 4 lists waterbodies where TMDLs have been completed or cannot be completed due to the nature of the contamination, and Category 5 lists waterbodies where TMDLs need to be developed by the state (USEPA, 2016b).

Similar to Virginia, the Project found that the majority of the waterbodies crossed by the Southgate Project in North Carolina have not been assessed for impairment, or the data collected resulted in a "Category 3a – Inconclusive Data" designation. In North Carolina, the 303(d) list consists of only Category 5 designations. According to the 2016 NCDEQ data, there are no designated impaired waterbodies crossed by the Project in North Carolina.

Appendix A-2 of the Wetland and Waterbody Delineation Report (Appendix K) provides a summary of each delineated waterbody, including resource ID, milepost, stream name, flow type, watershed, and area/linear feet within the North Carolina Project survey area. Table 3-2 (below) summarizes the waterbodies delineated in the Project survey area.

Table 3-1

Summary of Wetlands Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Cowardin Classification a/	Number of Resources b/	Acres of Wetland Type Delineated within Survey Area	Approximated Acres of Wetland within Survey Area c/
MP: 26.1 - 26.23 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Trotters Creek-Dan River (030101030903)	PEM	0	0	0
	PSS	0	0	0
	PFO	1	0.002	0
	Subtotal	**1**	**0.002**	**0**
MP: 26.23 - 28.13 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Cascade Creek (030101030902)	PEM	8	9.06	0.01
	PSS	1	0.17	0.00
	PFO	3	0.17	0.00
	Subtotal	**12**	**9.41**	**0.01**
MP: 28.13 - 36.3 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Town Creek-Dan River (030101030901)	PEM	25	3.07	0.11
	PSS	3	1.10	0.01
	PFO	12	11.08	0.35
	Subtotal	**40**	**15.26**	**0.47**
MP: 36.3 - 39.7 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Upper Wolf Island Creek (030101030904)	PEM	5	1.74	0
	PSS	1	0.14	0
	PFO	8	1.06	0
	Subtotal	**14**	**2.95**	**0**
MP: 39.7 - 42.2 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401) **HUC 12**: Lick Fork (030101040103)	PEM	4	0.19	0
	PSS	0	0	0
	PFO	5	1.46	0.20
	Subtotal	**9**	**1.65**	**0.20**

Table 3-1

Summary of Wetlands Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Cowardin Classification a/	Number of Resources b/	Acres of Wetland Type Delineated within Survey Area	Approximated Acres of Wetland within Survey Area c/
MP: 42.2 - 48.36 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401) **HUC 12**: Upper Hogans Creek (030101040104)	PEM	6	0.54	0
	PSS	1	0.38	0
	PFO	2	0.298	0
	Subtotal	**9**	**0.88**	**0**
MP: 48.36 - 49.48 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202) **HUC 12**: Giles Creek-Haw River (030300020206)	PEM	3	0.22	0
	PSS	1	0.51	0
	PFO	1	0.03	0
	Subtotal	**5**	**0.76**	**0**
MP: 49.48 - 55.75 & 55.97 - 56.12 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202) **HUC 12**: Town of Altamahaw-Haw River (030300020207)	PEM	12	2.17	0.01
	PSS	8	0.28	0.01
	PFO	7	1.56	0.02
	Subtotal	**27**	**4.02**	**0.04**
MP: 55.75 - 55.97; 61.12 - 61.49; 62.82 - 65.35 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Stony Creek-Stony Creek Reservoir (030300020403)	PEM	3	0.73	0
	PSS	0	0	0
	PFO	11	0.67	0.25
	Subtotal	**14**	**1.40**	**0.25**
MP: 56.12 - 61.12; 61.49 - 62.82 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Travis Creek-Haw River (030300020404)	PEM	12	2.23	0.27
	PSS	2	0.15	0
	PFO	15	5.47	0.23
	Subtotal	**29**	**7.86**	**0.51**

Table 3-1

Summary of Wetlands Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Cowardin Classification a/	Number of Resources b/	Acres of Wetland Type Delineated within Survey Area	Approximated Acres of Wetland within Survey Area c/
MP: 65.35 - 72.98 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Boyds Creek-Haw River (030300020408)	PEM	5	1.42	0
	PSS	0	0	0
	PFO	7	0.76	0.07
	Subtotal	**12**	**2.19**	**0.07**
MP: 72.98 to MP 73.17 (end) **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Lower Back Creek (030300020407)	PEM	0	0	0
	PSS	0	0	0
	PFO	0	0	0
	Subtotal	**0**	**0**	**0**
Total	PEM	84	21.48	0.40
	PSS	18	2.41	0.03
	PFO	72	22.59	1.12
	Total	**174**	**46.48**	**1.54**

a/ Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979).
b/ Based on field surveys conducted by the Southgate Project from May 2018 to May 2019.
c/ Based on desktop reviews conducted by the Southgate Project during April-May 2018.
PEM=Palustrine Emergent, PSS= Palustrine Scrub-Shrub, PFO=Palustrine Forested

Table 3-2

Summary of Waterbodies Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Flow Type	Number of Resources Delineated a/	Linear Feet in Survey Area Delineated	Acres of Surface Water Delineated within Survey Area	Number of Resources Desktop Reviewed within Survey Area c/
MP: 26.1 - 26.23 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Trotters Creek-Dan River (030101030903)	Ephemeral	0	0	0	0
	Intermittent	0	0	0	0
	Perennial	0	0	0	0
	Pond	0	0	0	0
	Subtotal	**0**	**0**	**0**	**0**
MP: 26.23 - 28.13 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Cascade Creek (030101030902)	Ephemeral	1	81.55	0	1
	Intermittent	7	538.88	0.19	1
	Perennial	2	0	0.97	0
	Pond	1	0	0.03	0
	Subtotal	**11**	**620.42**	**1.18**	**2**
MP: 28.13 - 36.3 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Town Creek-Dan River (030101030901)	Ephemeral	6	1,560.49	0	2
	Intermittent	22	5,109.20	0	5
	Perennial	13	4,363.76	4.71	2
	Pond	1	0	0.06	0
	Subtotal	**53**	**10,082.400**	**4.77**	**9**

Table 3-2

Summary of Waterbodies Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Flow Type	Number of Resources Delineated a/	Linear Feet in Survey Area Delineated	Acres of Surface Water Delineated within Survey Area	Number of Resources Desktop Reviewed within Survey Area c/
MP: 36.3 - 39.7 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309) **HUC 12**: Upper Wolf Island Creek (030101030904)	Ephemeral	2	153.43	0	0
	Intermittent	4	979.79	0	0
	Perennial	8	3,936.92	0.70	6
	Pond	0	0	0.07	2
	Subtotal	**14**	**5,070.14**	**0.77**	**8**
MP: 39.7 - 42.2 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401) **HUC 12**: Lick Fork (030101040103)	Ephemeral	1	55.14	0	0
	Intermittent	5	1,454.76	0	0
	Perennial	4	1,178.97	0.80	3
	Pond	0	0	0	0
	Subtotal	**10**	**2,688.86**	**0.80**	**3**
MP: 42.2 - 48.36 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401) **HUC 12**: Upper Hogans Creek (030101040104)	Ephemeral	6	1,382.23	0	0
	Intermittent	10	1,465.90	0	0
	Perennial	12	4,608.42	1.03	1
	Pond	0	0	0.09	2
	Subtotal	**28**	**7,456.56**	**1.13**	**3**
MP: 48.36 - 49.48 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202) **HUC 12**: Giles Creek-Haw River (030300020206)	Ephemeral	0	0	0	0
	Intermittent	3	152.81	0	0
	Perennial	2	755.82	0	0
	Pond	0	0	0	0
	Subtotal	**5**	**908.63**	**0**	**0**

Table 3-2

Summary of Waterbodies Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Flow Type	Number of Resources Delineated a/	Linear Feet in Survey Area Delineated	Acres of Surface Water Delineated within Survey Area	Number of Resources Desktop Reviewed within Survey Area c/
MP: 49.48 - 55.75 & 55.97 - 56.12 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202) **HUC 12**: Town of Altamahaw-Haw River (030300020207)	Ephemeral	4	577.06	0	0
	Intermittent	15	3,297.25	0	1
	Perennial	9	4,145.26	0.45	1
	Pond	0	0	1.31	2
	Subtotal	**28**	**8,019.57**	**1.76**	**4**
MP: 55.75 - 55.97; 61.12 - 61.49; 62.82 - 65.35 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Stony Creek-Stony Creek Reservoir (030300020403)	Ephemeral	1	20.13	0	0
	Intermittent	8	1,452.89	0	0
	Perennial	2	852.69	1.02	1
	Pond	0	0	0.20	1
	Subtotal	**11**	**2,325.71**	**1.22**	**2**
MP: 56.12 - 61.12; 61.49 - 62.82 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Travis Creek-Haw River (030300020404)	Ephemeral	6	646.77	0	0
	Intermittent	18	3,751.17	0.09	1
	Perennial	4	2,024.11	0.35	4
	Pond	0	0	1.17	2
	Subtotal	**38**	**6,421.67**	**1.61**	**7**
MP: 65.35 - 72.98 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Boyds Creek-Haw River (030300020408)	Ephemeral	7	1,047.11	0	1
	Intermittent	21	5,372.99	0.11	9
	Perennial	7	1,716.91	2.91	1
	Pond	0	0	0.50	5
	Subtotal	**35**	**8,137.00**	**3.52**	**16**

Table 3-2

Summary of Waterbodies Delineated and Desktop Reviewed in the North Carolina Project Survey Area by Sub-watershed

Milepost (MP) / Watershed	Flow Type	Number of Resources Delineated a/	Linear Feet in Survey Area Delineated	Acres of Surface Water Delineated within Survey Area	Number of Resources Desktop Reviewed within Survey Area c/
MP: 72.98 to MP 73.11 (end) **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204) **HUC 12**: Lower Back Creek (030300020407)	Ephemeral	0	0	0	0
	Intermittent	0	0	0	0
	Perennial	1	14.23	0	0
	Pond	0	0	0	0
	Subtotal	**1**	**14.23**	**0**	**0**
Total	Ephemeral	42	5,790.47	0	4
	Intermittent	148	28,389.37	0.43	17
	Perennial	158	29,030.84	14.53	19
	Pond	35	0	4.62	14
	Total	**380**	**63,210.68**	**19.59**	**54**

a/ Based on field surveys conducted by the Southgate Project from May 2018 to May 2019.

b/ Classification of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979).

c/ Based on desktop reviews conducted by the Southgate Project during April-May 2018. Includes streams shown on Published Soil Survey maps and USGS Topographic Quad maps for Rockingham and Alamance Counties.

PEM=Palustrine Emergent, PSS= Palustrine Scrub-Shrub, PFO=Palustrine Forested

3.1.3 Preliminary Jurisdictional Determination

An application for a preliminary jurisdictional determination ("PJD") was submitted to the USACE-Wilmington District in August of 2018. The Southgate Project has participated in several field review days of the delineated resources with USACE and North Carolina Division of Water Resources ("NCDWR") personnel on September 5th, 11th and 25th, 2018. Additional field reviews with NCDWR took place on July 26th, 2019.

4.0 WETLAND AND WATERBODY IMPACT ASSESSMENT

The majority of the wetland and waterbody impacts associated with construction and operation of the Southgate Project will be temporary. The only permanent impact would be conversion of forested wetland to non-forested wetland in the permanent maintenance easement and 0.02 acre of fill in non-forested (PEM) wetland for a permanent access road. Temporary impacts in wetlands may include temporary loss of vegetation; wildlife habitat disruption; soil disturbance associated with grading, trenching, and stump removal; soil compaction; sedimentation and increased turbidity; and hydrological profile changes. Impacts to forested wetlands may include conversion to emergent and/or scrub/shrub wetland types resulting from tree removal within the construction and operational right-of-way.

A summary of the proposed impacts to wetlands and waters is provided in Tables 4-1 and 4-2 respectively, by resource type and impact type. Details of the proposed impacts for each individual wetland and waterbody crossing are provided in Appendix L-1 and L-2, respectively, and depicted on the Impact Drawings in Appendix M. The following sections outline the potential impacts and measures that the Project will implement to avoid and minimize impacts to the resources to the maximum extent practicable.

Table 4-1

Summary of Proposed Wetland Impacts in North Carolina

Milepost (MP)/Watershed	Wetland Type a/	Number of Affected Resources	Pipeline Crossing Length (feet) b/	Construction Workspace Impacts (acres) c/	Permanent PFO Conversion to PEM/PSS (acres) d/	Permanent Fill for Access Road (acre) e/
MP: 26.1-39.7 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309)	PEM	49	1949	5.23	0	0.02
	PSS	4	153	0.31	0	0
	PFO	23	1834	3.79	1.21	0
	Subtotal	**76**	**3936**	**9.32**	**1.21**	**0.02**
MP: 39.7 – 48.36 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401)	PEM	4	0	0.03	0	0
	PSS	1	0	0	0	0
	PFO	4	137	0.24	0.11	0
	Subtotal	**9**	**137**	**0.28**	**0.11**	**0**
MP: 48.36 - 56.12 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202)	PEM	8	75	0.17	0	0
	PSS	4	40	0.16	0	0
	PFO	5	320	0.57	0.21	0
	Subtotal	**17**	**435**	**0.90**	**0.21**	**0**
MP: 56.12 – 73.11 **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204)	PEM	19	393	1.7	0	0
	PSS	1	52	0.07	0	0
	PFO	23	1050	1.68	0.71	0
	Subtotal	**43**	**1495**	**3.45**	**0.71**	**0**
Project Total	PEM	80	2417	7.13	0	0.02
	PSS	10	245	0.54	0	0
	PFO	55	3341	6.28	2.24	0
	Total	**145**	**6003**	**13.95**	**2.24**	**0.02**

Table 4-1

Summary of Proposed Wetland Impacts in North Carolina

Milepost (MP)/Watershed	Wetland Type a/	Number of Affected Resources	Pipeline Crossing Length (feet) b/	Construction Workspace Impacts (acres) c/	Permanent PFO Conversion to PEM/PSS (acres) d/	Permanent Fill for Access Road (acre) e/

a/ Wetland type based on Classification of Deepwater of Wetlands and Deepwater Habitats of the United States (Cowardin, 1979)

PEM= Palustrine Emergent; PSS=Palustrine Scrub-Shrub; PFO=Palustrine Forested. All wetlands are jurisdictional under Section 404.

b/ Construction impacts based on a 75-foot wide construction workspace within wetlands. Wetlands crossed by Horizontal Directional Drill and outside of construction workspace will not have a construction impact.

c/ Permanent impacts include conversion of forested wetland (PFO) to nonforested wetland (PSS/PEM) for 30 foot wide maintenance easement and fill for a permanent access road. The permanent impacts are a subset of the construction impacts, not an addition to the construction impacts.

Table 4-2

Summary of Proposed Waterbody Impacts in North Carolina

Watershed	Waterbody Type a/	Number of Affected Resources	Waterbody Width at Pipeline Crossing (feet) b/	Stream within Construction Workspace (linear feet) c/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)
MP: 26.1 – 39.7 **HUC 8**: Upper Dan (03010103) **HUC 10**: Cascade Creek-Dan River (0301010309)	Ephemeral	9	13	726.52	0	0	0
	Intermittent	21	55.52	1,794.90	0	0	0
	Perennial	38	861.17	3,433.41	0	0	0
	Pond	0	0	0	0	0	0
	Subtotal	**68**	**929.69**	**5,954.83**	**0**	**0**	**0**
MP: 39.7 – 48.36 **HUC 8**: Lower Dan (03010104) **HUC 10**: Hogans Creek-Dan River (0301010401)	Ephemeral	3	6	239.34	0	0	0
	Intermittent	12	16	773.08	0	0	0
	Perennial	20	272.57	2,154.30	0	0	0
	Pond	0	0	0	0	0	0
	Subtotal	**35**	**294.57**	**3,166.72**	**0**	**0**	**0**
MP: 48.36 - 56.12 **HUC 8**: Haw River (03030002) **HUC 10**: Headwaters Haw River (0303000202)	Ephemeral	3	3	134.07	0	0	0
	Intermittent	11	12	722.23	0	0	0
	Perennial	17	176.77	1,908.14	0	0	0
	Pond	1	0	13.64	0	507.47	0
	Subtotal	**32**	**191.77**	**2,778.08**	**0**	**507.47**	**0**
MP: 56.12 – 73.11 (terminus) **HUC 8**: Haw River (03030002) **HUC 10**: Back Creek-Haw River (0303000204)	Ephemeral	2	3	240.06	0	0	0
	Intermittent	31	98.28	2,706.25	0	0	0
	Perennial	32	504.1	2,736.07	0	0	0
	Pond	2	99.28	144.28	0	6,031.02	0
	Subtotal	**67**	**697.06**	**5,826.66**	**0**	**6,031.02**	**0**

Table 4-2

Summary of Proposed Waterbody Impacts in North Carolina

Watershed	Waterbody Type a/	Number of Affected Resources	Waterbody Width at Pipeline Crossing (feet) b/	Stream within Construction Workspace (linear feet) c/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)
Project Total	Ephemeral	17	25	1,339.99	0	0	0
	Intermittent	76	181.8	5,904.77	0	0	0
	Perennial	113	2159.12	12,880.71	0	0	0
	Pond	3	99.28	157.92	0	6,538.49	0
	Total	**207**	**2,113.09**	**17,726.29**	**0**	**6,538.49**	**0**

a/ Waterbody type: stream classification based on field evaluations using the NCDWQ Stream Identification Form Version 4.11 for delineated resource. For approximated waterbodies, flow type was estimated based on aerial imagery unless the approximated stream is directly associated with a delineated waterbody in which the approximated waterbody was assigned the same flow type as the associated delineated waterbody. All waterbodies are Section 404. None are Section 10.
b/ Width of the pond or stream channel (at ordinary high water mark) at the intersection of the pipeline. For estimated waterbodies, aerial imagery was used to estimate the channel width if wide enough to discern, and defaulted to 5 feet if too narrow to be measured using aerial imagery.
c/ Stream crossings by HDD or conventional bore have "0" linear feet in construction workspace

4.1 WETLAND IMPACTS

4.1.1 Temporary Construction Impacts

The Project will temporarily impact approximately 13.95 acres of wetlands during the construction process from typical pipeline construction procedures, described in Section 2.4. These temporary impacts will result from vegetation clearing, stump and root removal above the proposed trench, excavation and stockpiling of wetland soils, and ground disturbance from construction vehicles. The impacts will temporarily affect 7.67 acres of non-forested (PEM and PSS) wetland, and 6.28 acres of forested (PFO) wetland (Table 4-1).

4.1.2 Permanent Conversion of Forested Wetlands to Non-forested Wetlands

As required by the Southgate Procedures, the Southgate Project will maintain no more than a 10-foot-wide strip centered over the pipeline in an herbaceous state and will only remove woody vegetation within a 30-foot-wide strip (15' on either side) centered over the pipeline. This will result in a 10-foot wide strip of herbaceous vegetation centered over the pipeline flanked by a potential shrub (PSS wetland type) strip of 10-foot width on either side. Woody species removal from the 30-foot wide maintenance corridor would be performed periodically as needed and would be done on a selective basis, only removing woody species with potential to compromise the integrity of the buried pipeline. Maintaining this 30-wide maintenance corridor is necessary for the safety and protection of the pipeline in accordance with the applicable federal standards. This operational requirement would result in the conversion of approximately 2.24 acres of forested wetlands to emergent and/or scrub/shrub wetland types in North Carolina. Crossing of the pipeline through forested wetlands has been minimized to the extent practicable through Project siting as described in Section 2.8.

The Southgate Project will provide compensatory mitigation for the conversion of approximately 2.24 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur.

4.1.2.1 Permanent Fill for Access Road

The Project avoided siting permanent access roads in wetlands to the extent possible. There is one permanent access road where wetland impacts were not avoidable. This is an existing access road that leads to a permanent cathodic protection ground bed to be used during operation of the pipeline. Access Road (PA-RO-000) at MP 28.7 will permanently fill approximately 0.02 acre of non-forested (PEM) wetland. The access road is an existing farm road that crosses a PEM/PSS wetland and will provide access to ground bed #3. The additional fill is required to improve the road such that equipment can access the ground bed area during operation of the pipeline. Since the Project will use the existing road, the proposed upgrade will minimize impacts to wetlands since the alternative would be to develop a new road that would cross a portion of the wetland that is currently undisturbed. To compensate for the permanent wetland fill associated with the access road upgrade, the Southgate Project will purchase credits at a 1:1 ratio from an approved wetland mitigation bank.

4.2 WATERBODY IMPACTS

4.2.1 Temporary Construction Impacts

The Project will temporarily impact three ponds (6,538.49 square feet) and 207 streams (17,726.29 linear feet) from typical pipeline construction activities, described in Section 2.4. No single and complete project will exceed 300 linear feet of temporary disturbance. These waterbodies will be restored to their pre-construction condition, as closely as possible, after construction and will be monitored to ensure they remain stabilized and restoration is successful per the Southgate Procedures.

4.2.2 Permanent Impacts

The Project will not result in any permanent impacts to waterbodies (Table 4-2). A scour analysis on perennial streams with widths greater than or equal to 10-feet, which are crossed by the pipeline is currently underway to ensure that the pipeline placement depth is sufficient to prevent erosion by expected high flows. Engineers are also evaluating other streams to ensure that they will not require additional controls to stabilize the streambed post-construction.

4.3 RIPARIAN BUFFER IMPACTS

The Jordan Lake Impoundment (Jordan Lake) was created in 1983 by damming the Haw River near its confluence with the Deep River. Jordan Lake spans several county boundaries and supplies drinking water to approximately 500,000 people and offers recreational opportunities (e.g. swimming, boating, fishing) to residents (TCH, 2018, USACE, 2018). In December of 1963, the U.S. Army Corps of Engineers ("USACE") Wilmington District took stewardship of Jordan Lake, proposing an earthen dam with a multi-level intake tower in the interest of flood control, water supply, water quality control, recreation and other purposes (USACE, 2018). In a joint effort to improve the low water quality of Jordan Lake, the Wilmington District and NCDWR have enacted the Jordan Lake Nutrient Strategy, consisting of the Jordan Lake Rules that are a nutrient management strategy designed to restore the water quality in the lake by reducing the amount of pollution entering upstream (15A NCAC 02B .0267). Specific issues addressed by the rules include reducing pollution from wastewater discharges, stormwater runoff from new and existing development, agricultural and fertilizer application (NCDWR, 2018). In an effort to further define the Jordan Lake Nutrient Strategy program, a riparian buffer zone watershed upstream of Jordan Lake was developed which outlines the stormwater and buffer permit program for the watershed. The Jordan Lake watershed is divided into three Jordan subsheds, the Lower New Hope, Upper New Hope and the Haw subshed (NCDWR, 2018).

Although Jordan Lake is located approximately 25 miles southeast of the southern extent of the Southgate Project, the Project crosses the Jordan Lake riparian buffer zone watershed (Jordan Lake watershed), specifically the Haw subshed, for a total of approximately 24 miles in Rockingham (4 miles) and Alamance (20 miles) counties. The Project will abide by state requirements / permit conditions for the Jordan Lake riparian buffer ("riparian buffer') zone watershed, and submitted a Major Variance application on February 8th, 2019 identifying where hardships occur with the Jordan Lake riparian buffer conditions for construction of the pipeline. The Major Variance application will be updated with the most current route included in this submittal and will continue to be updated as additional feedback is received from the DEQ, landowners, and other stakeholders.

The riparian buffer applies to intermittent streams, perennial streams, lakes, ponds, estuaries and modified natural streams within natural drainageways that are depicted on the most recent published version of the

soil survey map prepared by the Natural Resources Conservation Service or the 1:24,000 scale topographic map prepared by the USGS (Appendix A). In September of 2018 and July 26th, 2019, Project staff have visited a number of the mapped Natural Resources Conservation Service soil survey streams with NCDWR staff in order to confirm presence/absence of these streams.

As outlined in 15A NCAC 02B.0267(7)(a), the Zone One buffer consists of a vegetated area that is undisturbed except for allowed uses initiating at the bank of a waterbody and extending 30 feet horizontally. The Zone Two buffer extends from the outer limit of the Zone One buffer and measures 20 feet horizontally, which comprises the outer portion of the 50-foot buffer zone for waterbodies that qualify for the riparian buffer protection within the portion of the Southgate Project area that is inside the Jordan Lake watershed. The Southgate Project's temporary impacts within the riparian buffer zone are classified as either "Allowable" or "Allowable with mitigation" uses for non-electric, utility line projects (NCDEQ, 2010a). Therefore, the Project is seeking a buffer authorization for construction and operation-related impacts within the Zone One and Zone Two buffers associated with jurisdictional waterbodies. Surface waters that are exempt from the buffer requirements include man-made ponds and lakes that are not part of a natural drainage way; ephemeral streams and ditches or other man-made water conveyances (15A NCAC 02B .0267(5)). Proposed impacts to waterbodies in the Jordan Lake watershed subject to the riparian buffer rules are summarized in Table 4-3 below and in Appendix M (Impact Drawings).

Table 4-3

North Carolina Riparian Buffer Impacts within the Jordan Watershed

Milepost	ID	Flow type	Meets Perpendicular Crossing Standard (yes/no)	Construction Impacts within Zone 1 Buffer (Square feet)	Operational Impacts within Zone 1 Buffer (Square feet)	Construction Impacts within Zone 2 Buffer (Square feet)	Operational Impacts within Zone 2 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Operational Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 2 Buffer (Square feet)	Required Mitigation (Square feet)
48.7	S-A18-60	Perennial	No* (1VAR)	5,224.93	3,276.64	3,343.92	2,241.33	0.00	0.00	0.00	9,829.91
49.3	S-A18-55	Perennial	Yes	4,742.47	3,166.65	3,173.28	2,114.22	0.00	0.00	0.00	18,987.32
49.9 RR	S-A18-183	Perennial	No* (2VAR)	8,507.29	5,605.36	4,778.43	2,948.90	136.16	12.78	1,238.89	16,777.72
49.9 RR	AS-A18-182, AS-A18-183	Intermittent, Perennial	Zone 2 Impact Only	0.00	0.00	32.82	0.00	0.00	0.00	0.00	0.00
50.1 RR	SS-SOIL19-04	Perennial	Yes (Workspace Only)	843.10	0.00	1,353.33	0.00	0.00	0.00	0.00	4,559.30
50.3 RR	S-A18-243	Perennial	Yes (Workspace Only)	1,442.45	0.00	1,179.76	0.00	0.00	0.00	0.00	6,096.99
50.5 RR	SS-SOIL18-02	Perennial	No* (3VAR)	10,526.58	5,790.11	6,834.82	3,289.39	0.00	0.00	0.00	17,370.32
50.8 RR	S-A19-286	Perennial	No* (4VAR)	15,741.69	4,044.43	8,632.91	3,337.40	0.00	0.00	0.00	12,133.28
51.4 RR	S-C18-21, WB-C18-19	Perennial, Pond	No* (5VAR)	5,619.88	3,132.87	6,830.36	3,408.04	2,012.48	617.63	3,489.80	7,545.74
52.2 RR	S-C18-15	Intermittent	Yes	5,080.44	3,341.60	3,213.41	2,128.22	0.00	0.00	0.00	20,061.42
52.2 RR	S-C18-15-2	Intermittent	Yes (Workspace Only)	1,642.89	0.00	1,031.78	0.00	0.00	0.00	0.00	6,476.33
52.4 RR	AS-A18-219	Perennial	Yes	6,459.97	1,044.21	4,317.63	2,141.04	0.00	0.00	0.00	25,856.35
52.7	AS-B18-94	Perennial	Zone 2 Impact Only	0.00	0.00	487.07	0.00	0.00	0.00	0.00	0.00
52.7	S-B18-94	Perennial	No* (6VAR)	6,894.28	4,511.11	4,235.06	2,879.52	0.00	0.00	0.00	13,533.34
53.7	S-A18-84	Perennial	Yes	5,006.17	3,373.75	3,297.74	2,144.65	0.00	0.00	0.00	19,965.11
53.7	S-A18-87	Perennial	No* (7VAR)	10,168.77	6,128.50	5,729.05	4,012.51	0.00	0.00	0.00	18,385.50
54.4	WB-C18-64	Pond	Zone 2 Impact Only	0.00	0.00	344.57	0.00	0.00	0.00	0.00	0.00
54.5	S-C18-63	Perennial	No* (8VAR)	8,507.07	6,046.77	5,198.96	3,501.41	0.00	0.00	0.00	18,140.32
54.6	S-C18-62	Perennial	No* (9VAR)	6,403.49	4,530.05	3,562.85	2,397.15	0.00	0.00	0.00	13,590.15
54.6	AS-A18-215 / S-A18-215	Perennial	Yes (Workspace Only)	1,541.71	0.00	1,026.20	0.00	0.00	0.00	0.00	6,164.44
54.7	AS-APP-8005, SS-SOIL19-30	Pond, Perennial	Yes (Workspace Only)	4,558.43	0.00	5,352.37	0.00	0.00	0.00	0.00	21,703.84
54.9	S-C18-60	Intermittent	No* (10VAR)	4,925.41	3,302.42	3,277.24	2,201.22	0.00	0.00	0.00	9,907.27
55.3 RR	AS-C18-68	Perennial	Yes	4,650.71	3,104.20	3,115.53	2,069.63	0.00	0.00	0.00	18,625.42
55.6 RR	AS-B18-59	Perennial	Yes	4,654.69	3,104.95	3,118.78	2,071.21	0.00	0.00	0.00	18,642.24

Table 4-3

North Carolina Riparian Buffer Impacts within the Jordan Watershed

Milepost	ID	Flow type	Meets Perpendicular Crossing Standard (yes/no)	Construction Impacts within Zone 1 Buffer (Square feet)	Operational Impacts within Zone 1 Buffer (Square feet)	Construction Impacts within Zone 2 Buffer (Square feet)	Operational Impacts within Zone 2 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Operational Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 2 Buffer (Square feet)	Required Mitigation (Square feet)
55.6	S-A18-162	Intermittent	Zone 2 Impact Only	0.00	0.00	1,066.42	0.00	0.00	0.00	0.00	0.00
55.6	S-A18-162	Intermittent	Zone 2 Impact Only	0.00	0.00	437.81	0.00	0.00	0.00	0.00	0.00
56.4 RR	S-A18-120, S-B18-65	Perennial, Intermittent	Yes	7,110.45	3,200.12	2,960.97	2,099.18	5,358.67	2,671.41	3.49	9,691.56
56.6 RR	S-A18-129	Ephemeral	No* (11VAR)	7,319.77	3,590.01	4,890.01	3,094.22	4,232.98	1,623.96	1,055.87	5,898.15
56.7 RR	WB-A18-128	Pond	Yes	5,330.79	1,017.71	3,102.31	2,042.06	791.89	0.00	0.00	18,270.17
57.1	S-A18-132, S-A18-136	Perennial, Intermittent	No*, Zone 1 Workspace Only (12VAR)	8,209.38	4,961.89	8,724.81	4,133.62	22.40	0.00	423.43	14,885.67
57.2	S-A18-136	Intermittent	No*, Zone 1 Workspace Only (13VAR)	651.46	136.09	2,846.14	1,755.49	425.34	4.69	868.99	394.22
57.9	SS-SOIL19-05	Perennial	Yes (Workspace Only)	2,680.23	0.00	1,615.13	0.00	0.00	0.00	0.00	10,463.37
58	S-C18-4	Ephemeral	Zone 2 Impact Only	0.00	0.00	159.57	0.00	0.00	0.00	0.00	0.00
58.4	SS-SOIL18-07	Perennial	Yes	6,001.91	3,000.97	4,001.23	2,000.62	0.00	0.00	0.00	24,007.59
58.7 RR	AS-C18-11	Perennial	Yes	4,792.00	1,036.78	3,216.14	2,161.12	0.00	0.00	0.00	19,200.21
59.2	AS-APP-1573	Pond	No*, Zone 1 Workspace Only (14VAR)	685.65	0.00	4,568.37	0.00	0.00	0.00	0.00	0.00
59.2	AS-APP-1573	Pond	Zone 2 Impact Only	0.00	0.00	119.90	0.00	0.00	0.00	0.00	0.00
59.3	SS-SOIL19-02	Perennial	No*, Zone 1 Workspace Only (15VAR)	9,717.39	0.00	4,666.37	0.00	0.00	0.00	0.00	0.00
59.6	AS-NHD-1549	Intermittent	No* (16VAR)	5,321.10	3,495.43	3,512.62	2,352.85	0.00	0.00	0.00	10,486.30
60.7	S-C18-30	Intermittent	Yes	4,744.22	945.82	3,114.79	1,642.77	2,396.10	401.59	1,560.16	9,376.28
60.8 RR	S-C18-28	Intermittent	Yes	5,485.62	2,965.31	3,326.22	2,203.61	2,647.59	759.40	330.22	13,008.08
61	WB-C18-31	Pond	Zone 2 Impact Only	0.00	0.00	723.28	0.00	0.00	0.00	0.00	0.00
61.3	SS-SOIL18-08	Perennial	Yes	6,016.15	3,007.95	4,010.80	2,005.31	0.00	0.00	0.00	24,064.65
61.7	S-A18-76	Perennial	No*, Zone 1 Workspace Only (17VAR)	580.99	1.86	2,611.24	1,152.08	0.00	0.00	0.00	5.59

Table 4-3

North Carolina Riparian Buffer Impacts within the Jordan Watershed

Milepost	ID	Flow type	Meets Perpendicular Crossing Standard (yes/no)	Construction Impacts within Zone 1 Buffer (Square feet)	Operational Impacts within Zone 1 Buffer (Square feet)	Construction Impacts within Zone 2 Buffer (Square feet)	Operational Impacts within Zone 2 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Operational Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 2 Buffer (Square feet)	Required Mitigation (Square feet)
61.8	S-A18-76	Perennial	Zone 2 Impact Only	0.00	0.00	1,010.98	14.62	0.00	0.00	0.00	0.00
61.8	S-A18-76	Perennial	No*, Zone 1 Workspace Only (18VAR)	291.97	0.00	2,292.27	765.64	0.00	0.00	0.00	0.00
62	SS-SOIL19-15	Perennial	Zone 2 Impact Only	0.00	0.00	497.05	0.00	0.00	0.00	0.00	0.00
62.5	S-A18-70, S-A18-71	Perennial, Intermittent	Yes & Workspace Only	4,639.66	1,017.58	3,513.05	2,050.40	0.00	0.00	0.00	19,188.57
62.5	S-A18-71	Intermittent	Zone 2 Impact Only	0.00	0.00	358.97	0.00	0.00	0.00	0.00	0.00
63.0 RR	AS-B18-24	Perennial	No* (19VAR)	6,464.40	3,168.40	4,422.49	2,233.09	0.00	0.00	0.00	9,505.20
63.4 RR	AS-NHD-100	Perennial	No* (20VAR)	4,682.27	3,139.12	3,121.68	2,088.80	0.00	0.00	0.00	9,417.37
63.6	AS-B18-16 / S-B18-16	Perennial	No* (21VAR)	226.42	0.00	145.43	0.00	0.00	0.00	0.00	0.00
63.7	S-B18-137	Intermittent	Yes (Workspace Only)	1,659.11	0.00	1,065.75	0.00	0.00	0.00	0.00	6,575.97
63.8	S-B18-138	Perennial	Yes (Workspace Only)	1,548.58	0.00	1,057.18	0.00	0.00	0.00	0.00	6,231.52
64.1 RR	AS-NHD-1547	Perennial	Yes	5,369.00	1,187.58	4,016.33	2,774.94	0.00	0.00	0.00	22,131.50
64.5	AS-NHD-3040	Intermittent	No* (22VAR)	4,763.50	3,158.10	3,150.23	2,114.51	0.00	0.00	0.00	9,474.31
65.5	S-B19-160	Intermittent	Zone 2 Impact Only	0.00	0.00	1,184.00	5.85	0.00	0.00	0.00	0.00
65.1 RR	S-A19-321	Intermittent	No* (23VAR)	8,050.70	4,137.17	4,470.74	2,310.28	0.00	0.00	0.00	12,411.51
65.6	S-A18-250	Perennial	No* (24VAR)	5,419.33	3,439.80	4,058.49	2,609.75	0.00	0.00	0.00	10,319.40
66.2 RR	SS-SOIL19-08	Perennial	Zone 2 Impact Only	0.00	2,368.17	318.95	3,089.87	0.00	0.00	0.00	0.00
66.5 RR	AS-NHD-7002	Intermittent	No* (25VAR)	6,522.08	3,253.78	4,336.80	2,173.92	0.00	0.00	0.00	9,761.33
66.6 RR	AS-APP-8006	Pond	Zone 2 Impact Only	0.00	0.00	983.11	0.00	0.00	0.00	0.00	0.00
66.7 RR	AS-NHD-3025	Intermittent	Yes	4,546.70	3,033.32	3,031.11	2,021.97	0.00	0.00	0.00	18,186.78
67.1 RR	AS-NHD-1555	Intermittent	Yes (Workspace Only)	1,357.23	0.00	1,079.19	0.00	0.00	0.00	0.00	5,690.47
67.2 RR	AS-A18-177	Perennial	No* (26VAR)	8,790.11	5,832.97	7,552.42	3,777.92	0.00	0.00	0.00	17,498.91
67.2 RR	S-B18-80	Intermittent	Yes	5,730.81	3,889.21	3,446.02	2,292.29	0.00	0.00	0.00	22,361.46

Table 4-3

North Carolina Riparian Buffer Impacts within the Jordan Watershed

Milepost	ID	Flow type	Meets Perpendicular Crossing Standard (yes/no)	Construction Impacts within Zone 1 Buffer (Square feet)	Operational Impacts within Zone 1 Buffer (Square feet)	Construction Impacts within Zone 2 Buffer (Square feet)	Operational Impacts within Zone 2 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Operational Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 2 Buffer (Square feet)	Required Mitigation (Square feet)
67.3 RR	WB-B19-144	Pond	Yes (Workspace Only)	3,133.78	0.00	5,241.60	0.00	0.00	0.00	0.00	17,263.75
67.6	AS-A18-233 / S-A18-233	Perennial	No* (27VAR)	5,212.08	1,096.36	3,470.33	2,307.34	0.00	0.00	0.00	3,289.08
67.6	SS-SOIL19-10	Perennial	No*, Zone 1 Workspace Only (28VAR)	5,324.47	0.00	2,430.96	0.00	0.00	0.00	0.00	0.00
67.7	SS-SOIL19-10	Perennial	Zone 2 Impact Only	0.00	0.00	438.52	0.00	0.00	0.00	0.00	0.00
69.2	WB-A18-16	Pond	Zone 2 Impact Only	0.00	0.00	864.02	0.00	0.00	0.00	0.00	0.00
67.9	SS-SOIL19-12	Perennial	No* (29VAR)	7,307.11	4,098.80	4,764.11	2,356.69	0.00	0.00	0.00	12,296.41
68.1	AS-NHD-1551	Intermittent	No* (30VAR)	5,299.16	3,528.98	3,552.03	2,356.29	0.00	0.00	0.00	10,586.95
68.3	S-B18-3	Intermittent	No*, Zone 1 Workspace Only (31VAR)	608.28	5.66	2,072.26	1,185.73	0.00	0.00	0.00	16.97
68.3	S-B19-145 / AS-B19-145	Perennial	Yes (Workspace Only)	2,672.87	0.00	2,327.92	0.00	0.00	0.00	0.00	11,510.48
68.4	S-B18-7	Perennial	Yes	4,739.20	1,015.62	3,265.27	2,100.17	0.00	0.00	0.00	19,115.52
68.6	AS-NHD-1552	Intermittent	Yes	5,598.17	3,554.36	4,631.59	2,967.54	0.00	0.00	0.00	23,741.91
68.9	S-B18-11	Intermittent	No* (32VAR)	5,847.49	3,476.38	4,056.80	2,953.03	0.00	0.00	0.00	10,429.13
68.9	AS-B18-11	Intermittent	Zone 2 Impact Only	0.00	0.00	11.55	0.00	0.00	0.00	0.00	0.00
69.5	AS-B18-132	Perennial	Yes	4,760.75	1,062.83	3,163.35	2,090.80	0.00	0.00	0.00	19,027.27
70.0 RR	S-A18-115	Perennial	Yes	5,727.57	1,046.76	5,356.45	2,118.65	0.00	0.00	0.00	25,217.37
70.3	S-B18-133	Perennial	Yes	4,562.59	1,009.96	3,044.49	2,021.48	0.00	0.00	0.00	18,254.52
70.7	S-C18-81	Perennial	No* (35VAR)	4,973.66	1,106.43	3,311.06	2,207.73	0.00	0.00	0.00	3,319.30
70.9	SS-SOIL18-09	Perennial	Yes (Workspace Only)	1,725.56	0.00	858.45	0.00	0.00	0.00	0.00	6,464.36
71.6	S-B18-58	Perennial	Zone 2 Impact Only	0.00	0.00	893.28	879.54	0.00	0.00	0.00	0.00
71.8	S-A18-68	Perennial	Yes	4,773.35	3,170.72	3,104.20	2,071.93	0.00	0.00	0.00	18,976.36
72.1	AS-NHD-1560	Intermittent	Yes	4,562.77	3,038.86	3,047.63	2,025.90	0.00	0.00	0.00	18,259.74
72.4	S-B18-125	Intermittent	No* (36VAR)	6,040.60	4,073.49	4,123.73	2,677.99	0.00	0.00	0.00	12,220.47

Table 4-3

North Carolina Riparian Buffer Impacts within the Jordan Watershed

Milepost	ID	Flow type	Meets Perpendicular Crossing Standard (yes/no)	Construction Impacts within Zone 1 Buffer (Square feet)	Operational Impacts within Zone 1 Buffer (Square feet)	Construction Impacts within Zone 2 Buffer (Square feet)	Operational Impacts within Zone 2 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Operational Zone 1 Buffer (Square feet)	Area of PFO Wetland Overlap within Construction Zone 2 Buffer (Square feet)	Required Mitigation (Square feet)
72.9 RR	S-B18-58 / AS-B18-58	Perennial	Zone 2 Impact Only	0.00	0.00	373.25	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	No*, Zone 1 Workspace Only (37VAR)	8.53	0.00	1,135.25	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	Zone 2 Impact Only	0.00	0.00	99.91	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	Zone 2 Impact Only	0.00	0.00	6.53	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	Zone 2 Impact Only	0.00	0.00	7.16	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	Zone 2 Impact Only	0.00	0.00	1.77	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26B	S-A19-308	Perennial	Zone 2 Impact Only	0.00	0.00	115.02	0.00	0.00	0.00	0.00	0.00
71.2 - CY-26A&B	S-A19-308	Perennial	Yes (Workspace Only)	1,761.26	0.00	1,114.52	0.00	0.00	0.00	0.00	6,955.55
Total:				**357,871.42**	**163,156.23**	**270,763.97**	**135,170.97**	**18,023.62**	**6,091.45**	**8,970.85**	**889,950.36**

*Crossings that do not meet the perpendicular standard have been submitted to NCDWR as a Major Variance application and are currently under review.

4.3.1.1 Diffuse Flow Requirement

The Jordan Lake Rules state that 'diffuse flow of runoff shall be maintained in the riparian buffer by dispersing concentrated flow prior to its entry into the buffer and reestablishing vegetation'. To ensure compliance with this requirement, the Project will implement its E&SCP during construction and adhere to the Southgate Plan and Procedures. Both of these documents provide for stormwater best management practices during construction and detail post-construction stabilization and revegetation measures. In addition, the Project will comply with applicable federal and state stormwater management requirements and approvals.

4.3.1.2 No Practicable Alternatives

Since the use associated with the Project is designated as 'allowable' or 'allowable with mitigation', Southgate is including a request for a 'no practicable alternatives' determination. The Project is linear in nature and, as such, cannot completely avoid impacts within the riparian buffer. Since the Project terminus is located within the Jordan Lake watershed, there is no practical alternative that could avoid activities within the buffers. As detailed within this narrative, the Southgate Project certifies that the Project meets the following criteria for a determination of 'no practical alternatives':

- The basic project purpose cannot be practically accomplished in a manner that would better minimize disturbance, preserve aquatic life and habitat, and protect water quality;
- The use cannot practically be reduced in size or density, reconfigured or redesigned to better minimize disturbance, preserve aquatic life and habitat, and protect water quality; and
- Best management practices shall be used if necessary to minimize disturbance, preserve aquatic life and habitat, and protect water quality.

4.3.1.3 Compliance with Performance Standards

The Jordan Lake Rules provide for specific performance standards associated with Utility, non-electric projects that cross streams at both perpendicular and non-perpendicular angles. The allowable use table within the Jordan Lake Rules identifies 5 footnotes containing performance standards that are applicable to the various types of projects. Footnote 2 is not applicable to utility projects. Footnote 3 pertains to the installation of poles or aerial infrastructure within 10 feet of a waterbody. Since the Project is an underground utility, this Footnote is not applicable.

Footnote 1 is applicable to utility, non-electric, other than perpendicular crossings with impacts in Zone One. Based on site-specific conditions, engineering standards and construction / operational safety considerations, the Project includes several waterbody crossings at angles outside of the range defined as perpendicular (between 75 to 105 degrees) in the Rules (See Table 4-3). Therefore, the performance standards associated with Footnote 1 apply to the Project. The following is a listing of those performance standards with information regarding Project compliance:

No heavy equipment is used in Zone One.

Due to the nature of natural gas pipeline construction, heavy equipment is required to prepare the workspace, excavate and backfill the trench and hoist and lower the pipeline. The Project has reduced the construction workspace within Zone One to the extent practicable while maintaining safe working conditions and has also requested a no practical alternative determination from NCDEQ.

- *Vegetation in undisturbed portions of the buffer is not compromised.*

  In accordance with the Southgate Plan and Procedures, the Project is not allowed to exceed its proposed workspace and limits of disturbance. The only vegetation removed within the buffer will be located within the construction workspace. Vegetation within undisturbed portions of the buffer will not be impacted.

- *Felled trees are removed by chain.*

  The Project will comply with this performance standard.

- *No permanent felling of trees occurs in protected buffers or streams.*

  Trees will only be permanently removed within the 50-foot permanent right-of-way to allow for periodic monitoring of the pipeline as well as maintenance during operation. Within wetlands and riparian buffers, the Project will periodically maintain the vegetation through mechanical mowing for a 10-foot section over the pipeline where the pipeline was not installed by horizontal directional drill. As necessary, lasting until the pipeline is abandoned, trees will be selectively removed within 15 feet of the pipeline to ensure that the root systems do not contact the pipeline and potentially adversely affect the pipe coating and cathodic protection.

- *Stumps are removed only by grinding.*

  Trees will be cut to ground level within the construction workspace within the Zone One riparian buffer and only removed over the trenchline and in areas where allowing the stumps to remain in place would result in a safety concern during construction. To the extent possible, stumps will be ground below grade versus removed to allow for re-sprouting

- *At the completion of the project the disturbed area is stabilized with native vegetation.*

- Within riparian buffers, herbaceous vegetative cover will be re-established by spreading a native grass seed and hydro or straw-mulch mixture over the disturbed surface. The type of seed will be selected to match the mix required by applicable regulatory agencies, or as otherwise requested by the landowner. Depending upon the time of year, a temporary seed mix may be broadcast or drilled until a more permanent cover can be established. Steep slopes (e.g., stream banks) may require additional stabilization using erosion control fabric, revetments, or sod. Vegetation success in these areas will be monitored by the Project, and reseeding, fertilizing, hydroseed (where allowed), or other supplemental revegetation measures may be implemented until the density and cover of non-nuisance vegetation is similar in density and cover to adjacent undisturbed lands.

- *Zones One and Two meet the requirements of Sub-Items (7) and (8) of this Rule.*

  Sub-Items (7) and (8) establish the criteria for the riparian buffer zones (Sub-Item 7) and the Diffuse Flow Requirements (Sub-Item 8). The Project will comply with the Diffuse Flow Requirements, which is detailed further in Section 4.3.1.1.

Footnote 4 is applicable to utility, non-electric projects that included non-perpendicular crossings of streams and other surface waters. The Project includes these types of crossings that do not intersect the surface water at an angle of 75 to 105 degrees; therefore, the performance standards associated with Footnote 4

apply to the Project. The following is a listing of those performance standards with information regarding Project compliance:

- *In Zone One, all of the following BMPs for underground utility lines are used. If all of these BMPs are not used, then the underground utility line shall require a no practical alternative evaluation.*

  The Project meets the identified BMPs below to the extent practicable and has also requested a no practical alternative determination from NCDEQ.

- *Woody vegetation shall be cleared by hand. No land grubbing or grading is allowed.*

- The Project proposes to use mechanized equipment for removal of vegetation based on the extent of workspace within the riparian buffer. Land grubbing and grading is required to prepare a safe construction workspace and facilitate the installation of the pipeline. Compliance with this performance standard cannot be completely met as vegetation must be cleared from the trenchline. Following installation of the pipeline, disturbed areas will be returned to their preconstruction grade and contours.

- *Vegetative root systems shall be left intact to maintain the integrity of the soil. Stumps shall remain, except in the trench where trees are cut.*

  The Project will comply with this performance standard with the exception of areas where stumps need to be removed to ensure safe working conditions.

- *Underground cables shall be installed by vibratory plow or trenching.*

  The pipeline will be installed via trenching or trenchless methods.

- *The trench shall be backfilled with the excavated soil material immediately following cable installation.*

  The Project will backfill the trench with excavated soil material upon completion of installation.

- *No fertilizer shall be used other than a one-time application to re-establish vegetation.*

  The Project will comply with this performance standard.

- *Construction activities shall minimize the removal of woody vegetation, the extent of the disturbed area, and the time in which areas remain in a disturbed state.*

  The Project will comply with this performance standard.

- *Measures shall be taken upon completion of construction and during routine maintenance to ensure diffuse flow of stormwater through the buffer.*

  The Project will be constructed and operated in accordance with the Southgate Plan and Procedures, the Project-specific E&SCP, and applicable permits regarding construction and post-construction stormwater management.

- *In wetlands, mats shall be utilized to minimize soil disturbance.*

The Project will comply with this performance standard and will utilize mats in all wetlands that are saturated or inundated.

4.3.1.4 Impact Mitigation

Based on the table of uses within the Jordan Lake Rules, the Project will be regulated under two uses that are allowable with mitigation: (1) Utility, non-electric, perpendicular crossing of streams and other surface waters that disturb greater than 40 linear feet but equal to or less than 150 linear feet of riparian buffer with a maintenance corridor greater than 10 feet in width (applicable in both Zone 1 and Zone 2); and (2) Utility, non-electric, other than perpendicular crossings with impacts located within Zone 1. Based on consultation with NCDEQ, the mitigation ratios for Project-related impacts within Zone 1 are 3 to 1, and 1.5 to 1 in Zone 2 for (1) Utility, non-electric, perpendicular crossing of streams and other surface waters, and the mitigation ratios for Project-related impacts within Zone 1 are 3 to 1, and allowable without mitigation in Zone 2 for (2) Utility, non-electric, other than perpendicular crossings. Updated riparian buffer impacts and associated mitigation estimates are provided in Table 4-3. The Project will continue to consult with NCDEQ regarding the approved form(s) of buffer mitigation for the Project.

4.4 IMPACT AVOIDANCE AND MINIMIZATION MEASURES

Where impacts to wetlands and waterbodies cannot be avoided, the Southgate Project will seek to minimize impacts through use of the following measures, as applicable:

- Clearly marking wetland and waterbody boundaries with signs and flagging in the field prior to the start of construction;
- Limiting the construction right-of-way width to 75-feet through wetlands and waterbodies (unless alternative, site-specific measures are requested by the Project and approved by the FERC and other applicable agencies) and extending this reduced width 50 feet on each side of the resource;
- Limiting the operation of construction equipment within wetlands to only equipment essential for clearing, excavation, pipe installation, backfilling, and restoration;
- Cutting trees to grade, and only removing stumps from directly over the trench, or where safety concerns dictate otherwise, thus allowing existing vegetation to recover more rapidly in the remainder of the right-of-way once the equipment mats and spoil piles have been removed;
- Installing and maintaining sediment barriers, such as silt fences or other approved barriers throughout the construction process per the Southgate Plan and Procedures and Project-specific E&SCP;
- Preventing the compaction and rutting of wetland soils by operating equipment off of equipment mats or equivalent in wetlands that are not excessively saturated;
- Restricting grading in wetlands to the area directly over the trench, except where necessary for safety concerns;
- Locating ATWS at least 50 feet away from wetland and waterbody boundaries (unless alternative, site-specific measures are requested by the Project and approved by the FERC and other applicable agencies);

- Selecting the most appropriate FERC-approved crossing procedure, based on site specific conditions at the time of crossing;
- Dewatering the trench, if needed, in a manner designed to prevent heavily silt-laden water from entering a waterbody or undisturbed portions of wetlands within and adjacent to the Project limits;
- Segregating topsoil from the trench in non-saturated wetlands and returning topsoil to its original location during backfilling to avoid changes in the subsurface hydrology and to promote re-establishment of the original plant community by replacing the seed bank found in the topsoil;
- Placing excavated soils in wetlands on filter cloth, mats, or similar semi-permeable surface to avoid mixing of with underlying materials and stabilizing the soils with filter cloth, straw bales or other appropriate measure to prevent re-entry into adjacent wetlands or waters;
- Limiting storage of excavated soil material in wetlands to no longer than 30 days after the pipe has been laid in the trench, without prior approval from the USACE;
- Installing trench breakers or trench plugs at the boundaries of wetlands, as needed, to prevent draining of wetlands;
- Backfilling the ditch with the spoil excavated from the wetland;
- Spreading segregated topsoil over the area from which it was stripped and restoring the ground surface to approximate pre-construction contour;
- Mechanically loosening the upper 12 inches of soils backfilled in wetlands;
- Seeding wetland areas that are not inundated with annual rye to provide soil stabilization while allowing the natural seedbank to revegetate the wetland area.
- Seeding wetlands with appropriate native wetlands species if natural revegetation is not successful;
- Removing all equipment mats, debris, or other material from the wetlands and waterbodies after construction;
- Aligning the crossings as close to perpendicular to the axis of the waterbody channel as engineering and site-specific conditions allow;
- Limiting the operation of construction equipment within waterbodies to only equipment essential for clearing, excavation, pipe installation, backfilling, and restoration;
- In the event that riprap is required for bank stabilization purposes, the Project will adhere to the general conditions;
- Installing temporary bridges for equipment crossings over channels with flowing water and ensuring they are constructed and maintained to allow unrestricted flow and to prevent soil from entering the waterbody;
- Limiting crossing of waterbodies to clearing equipment and equipment necessary for installation of bridges prior to bridge installation;
- Remove temporary equipment bridges as soon as practicable after permanent seeding.

- Aligning culverts to prevent bank erosion or streambed scour. If necessary, install energy dissipating devices downstream of the culverts;
- Adherence to required time of year construction restrictions. If adherence to time of year restrictions is not possible, notification will be provided on a case-by-case basis to the applicable agency with a request for a modification or waiver of the timing restriction;
- Adherence to the Southgate Plan and Procedures and applicable permit requirements;
- Adherence to NWP 12 terms and conditions (see Appendix N).
- Developing and adhering to a Project specific SPCC plan; and
- Use of independent qualified EI's through the construction process to ensure construction adhered to Southgate Plan and Procedures and application permit terms and conditions.
- Prohibiting the use of live concrete as a building material such that wet concrete does not come into contact with water;
- Prohibiting the use herbicides or pesticides within 100 feet of a wetlands or waterbodies, unless specified or approved by a federal or state agency;
- Prohibiting the storage of chemicals, fuels, hazardous materials, and lubricating oils within 100 feet of a wetland;
- Prohibiting parking and/or fueling of equipment within 100 feet of a wetland; unless the Environmental Inspector determines there is no reasonable alternative, and appropriate steps (such as secondary containment structure) are taken;
- Conducting annual monitoring of wetlands and waterbodies and performing maintenance activities, as needed, until the wetlands and waterbodies are successfully restored;
- Preventing the invasion or spread of undesirable exotic vegetation according to a project-specific invasive plant species management plan;
- The Project will conduct pre-construction testing of all private wells located within 150 feet of the construction workspace. The Project will conduct post-construction tests if requested by a landowner who had a pre-construction test (See Appendix O – Water Resources Identification and Testing Plan).

Specific measures to minimize or avoid impacts to waterbodies for the dry or trenchless waterbody crossing methods proposed include:

Dam and Pump

- Sufficient pumps, including on-site backup pumps, will be used to maintain downstream flows;
- Pumps will be placed in secondary containment and properly aligned to prevent streambed scour at pump discharge;
- Dams will be constructed with materials that prevent sediment and other pollutants from entering the waterbody;
- Pump intakes will be screened to minimize entrainment of fish; and

- Dams and pumps will be continuously monitored while in use to ensure proper operation throughout the waterbody crossing.
- In the event that the crossing is dry at the time of construction, this equipment will still be available in the event that conditions change and the waterbody begins to flow.

Flume

- Sand bags, sand bag and plastic sheeting diversion structures, or the equivalent will be used to develop an effective seal and to divert stream flow through the flume pipe;
- Flume pipes will be installed after blasting (if necessary), but before trenching;
- Flume pipes will remain in place until trenching, pipe laying, backfilling, and initial streambed restoration efforts are complete;
- Flume pipes will be properly aligned to prevent bank erosion and streambed scour; and
- All flume pipes and dams that are not part of the equipment bridge will be removed as soon as final cleanup of the streambed and bank is complete.

Cofferdam

- Hydrographic studies of the waterbody
- Sand bags, sand bag and plastic sheeting diversion structures, or the equivalent will be used to develop an effective seal

Conventional Bore

- Desktop analysis of the water table

HDD

- Implementation of HDD Contingency Plan (if needed).

4.4.1 Stormwater Management and Diffuse Flow Plan

Stormwater permit applications and associated Erosion and Sediment Control plans are currently being developed by the Project, and applications are anticipated to be submitted in fall of 2019. The Project team will develop a diffuse flow plan, where required, as part of the Erosion and Sediment Control plans that will be submitted to the appropriate local government and NCDWR responsible for review and approval of construction stormwater permitting.

4.4.1.1 Stormwater Management Plan

Stormwater permit applications and associated Erosion and Sediment Control plans are currently being developed by the Project, and applications are anticipated to be submitted in fall of 2019. The Project team will develop a storm water management plan, where required, as part of the Erosion and Sediment Control plans that will be submitted to the NCDEMLR, as applicable, who is responsible for review and approval of construction stormwater permitting.

4.4.1.2 Certified Local Government Stormwater Review

Stormwater permit applications and associated Erosion and Sediment Control plans are currently being developed by the Project, and applications are anticipated to be submitted in fall of 2019. The Project will develop an Erosion and Sediment Control plan that will be submitted to the appropriate local government or NCDEMLR, as applicable, responsible for review and approval of construction stormwater permitting.

5.0 ADDITIONAL SUPPORTING INFORMATION

5.1 ENVIRONMENTAL DOCUMENTATION

The Project filed an application with FERC for a Certificate of Public Convenience and Necessity under Section 7(c) of the Natural Gas Act on November 6th, 2018 (FERC Docket No. CP19-14-000, Accession No. 20181106-5159). As a part of the FERC filing process, a Draft Environmental Impact Statement ("EIS") prepared by the FERC for the Southgate Project was issued for public review and comment on July 26, 2019. (See Appendix J). The draft EIS includes a comprehensive cumulative impacts analysis and an alternatives analysis. FERC concluded that the currently proposed route (i.e., the one included in this revised application) is the preferred alternative. Any additional documents will be filed as a supplemental that are required to support this joint permit application.

5.2 VIOLATIONS

This section is not applicable to the Project as it consists of new construction. See Section F2 of the Joint Permit Application Form for additional information.

5.3 CUMULATIVE IMPACTS

The Southgate Project has potential to cause cumulative effects to the wetlands or waterbodies from the incremental consequences of the Project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. The scope of the cumulative effects analysis in this permit application is limited to direct or indirect effects on wetlands or waterbodies from projects having potential to affect surface waters within the same HUC 10 or 12 as the Southgate Project. The draft EIS, which includes a comprehensive cumulative impacts analysis, was issued by FERC on July 26th, 2019.

Projects included in this assessment were limited to those with publicly available information pertaining the proposed undertaking and potential impacts. Sources of information used to collect data about relevant projects included federal, state, and local agencies permitting databases or websites. Projects with potential cumulative impacts on wetlands or waterbodies within the North Carolina portion of the Southgate Project area are listed in Table 5-1.

The Southgate Project need originated from a forecasted growing demand in the region of the Project in North Carolina. This is an open access pipeline; therefore, other companies have the option to request gas service from the pipeline system. An increase in demand beyond the current scope would likely require modifications to the pipeline and/or its facilities. PSNC Energy solicited interest because it requires additional pipeline capacity to meet forecasted incremental demand on its distribution system. Over the past four years, PSNC Energy has experienced a 15 percent increase in peak daily throughput on its system. This trend will carry forward into the future, as PSNC Energy expects its design day requirements to increase an additional 11 percent over the next five years. This past, present, and future demand growth on PSNC Energy's system reflects, at least in part, the substantial population increase in North Carolina. North Carolina's population is expected to increase by nearly 2 million people between 2020 and 2035. In Alamance County, where the project terminates, the population is anticipated to grow approximately 11

percent from July 2020 to July 2029.[9] Secondary impacts as a result of this Project are currently anticipated through new developments that will be serviced by PSNC (e.g., residential communities, industrial facilities). Construction of these developments could affect surface waters or wetlands that would not occur if the Project were not built as the result of a newly available natural gas supply. The potential water quality impacts from any induced new development in the Roanoke River Basin and Cape Fear River Basin will be mitigated by federal and state specific permitting requirements, and often including municipal stormwater management programs. If the Project were not constructed, it is likely that at least some of the forecasted growth would still occur without a new gas supply. Future expansion plans are not discussed because Mountain Valley has no plans to expand the pipeline beyond the terminus at the Haw River Interconnect in Graham, North Carolina.

Cumulative effects on surface water resources affected by the Project would be limited to waterbodies that are affected by other projects located within the same major watersheds. No permanent diversions or dams are planned, so any impacts from construction on surface waters would be temporary. The greatest potential impacts of pipeline construction on surface waters would result from an increase in sediment loading to surface waters and an increase in internal sediment loading due to channel/floodplain instability as a result of a change in erosion deposition patterns. Each of the project proponents will minimize these effects by implementing wetland and waterbody construction and mitigation measures, including erosion control measures by complying with applicable federal and state permit requirements.

Construction of the Project facilities will result in temporary impacts to wetlands. However, each proponent for the projects listed in Table 6-1 that affects wetlands will be required, by the terms and conditions of their respective Section 404 permits, to provide compensatory mitigation for unavoidable wetland impacts. The cumulative effect on water resources and wetlands will be temporary and minor.

The primary factors associated with the Southgate Project that will minimize its contribution to cumulative impacts are as follows:

- The impacts resulting from the Project pipeline facilities will primarily be short-term and constitute temporary impacts associated with construction.
- Approximately 34 percent of the Project pipeline facilities will be parallel to existing utility corridors and other rights-of-way; thereby minimizing impacts associated with construction.
- The Project has been designed to avoid and minimize impacts to the extent practicable and will implement various plans and techniques to ensure potential impacts are further minimized (e.g., Project-specific E&SCP and SWMP).
- The Project E&SCP and SWMP will address post-construction stormwater management associated with the permanent right-of-way.
- In addition to the cumulative Project (i.e., all Project facilities including interconnect/meter stations) and other project effects on water resources and wetlands, the Project assessed cumulative impacts from the Project interconnect / meter stations along the proposed pipeline. Three interconnect/meter stations are proposed for the Project in North Carolina: 1) LN 3600 Interconnect

[9] See North Carolina Office of State Budget and Management population projections, available at: https://files.nc.gov/ncosbm/demog/countytotals_populationoverview.html

at MP 28.2RR in Rockingham County; 2) T-15 Dan River Interconnect at MP 30.4 in Rockingham County; and, 3) T-21 Haw River Interconnect at MP 73.2RR in Alamance County. Of these, only the LN 3600 Interconnect and the T-15 Dan River Interconnect impact wetlands and waterbodies. Additionally, the LN 3600 and T-15 Dan River Interconnect are located within the same HUC 10 and 12 watersheds (Cascade Creek – Dan River and Town Creek – Dan River, respectively). Wetland impacts from these two interconnects are temporary and include 0.54 acre of PEM wetland and 0.15 acre of PFO wetland. The wetlands are not located within the operational footprint of the facilities, no permanent fill will be placed in wetlands, and the wetlands will be restored post construction in accordance with the Project Wetland and Waterbody Construction and Mitigation Procedures and North Carolina Erosion and Sediment Control Plan.

Additionally, one ephemeral stream (S-B18-38) will be impacted by the temporary construction workspace for the T-15 Dan River Interconnect. The Project will implement its Wetland and Waterbody Construction and Mitigation Procedures and its North Carolina Erosion and Sediment Control Plan, to minimize impacts on the stream. The stream will be restored post-construction and no permanent impacts on the stream will result from operation of the T-15 Dan River Interconnect. Based on the minor amount of wetland resources affected, and that no permanent impacts or conversion of wetland is proposed, construction of the Project interconnect/meter stations in North Carolina would not result in cumulatively significant impacts on wetland or waterbody resources.

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Transportation Projects								
Future I-73 / North Carolina Department of Transportation ("NCDOT")	Construction of a 9.4-mile, four-lane interstate from Joseph M. Bryan Boulevard/Airport Parkway interchange to U.S. 220 near the Haw River	Guilford	N/A	25 miles	West	Complete October 2017	Cumulative impacts on wetlands and waterbodies not anticipated, not located in the same HUC 10	State and Local
Greensboro Urban Loop / NCDOT	Completion of the Greensboro Urban Loop to help relieve I-40 congestion at I-85 Business and U.S. routes 29, 70, 220 and 421. Four projects to complete the remaining 15 miles of the 44-mile loop around the city.	Guilford	N/A	10 miles	West	Under Construction; Anticipated Completion December 2020	Cumulative impacts on wetlands and waterbodies not anticipated, not located in the same HUC 10	State and Local
Macy Grove Road Improvements / NCDOT	Proposed improvements and an extension to Macy Grove Road in Forsyth and Guilford counties	Forsyth/ Guilford	N/A	32 miles	West	In Development	Cumulative impacts on wetlands and waterbodies not anticipated, not located in the same HUC 10	State and Local
NC 119 Relocation / NCDOT	Proposed relocation of a portion of N.C. 119 in Mebane – from I-85 to existing the N.C. 119 near Mrs. White Lane	Alamance	Back Creek-Haw River	5 miles	East	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
N.C. 62 Widening - Ramada Road to U.S. 70 / NCDOT	Proposed widening an approximately 1-mile stretch of N.C. 62 to improve traffic flow and safety	Alamance	Big Alamance Creek	4 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
U.S. 158 (Reidsville Road) Improvements / NCDOT	Proposed 18.8-mile widening of U.S. 158 from U.S. 421/Business 40 in Winston-Salem to U.S. 220 in Guilford County	Guilford	Headwaters Haw River	18 miles	West	In Development	No resources expected to be cumulatively affected given the unknown construction timeframe	State and Local
Solar Projects								
Sigora Solar NCUC SP 15803	7.44 kW residential rooftop installation – 2144 Waterview Drive Graham, NC 27253	Alamance	Back Creek – Haw River	1.5 miles	Southeast	Application filed 2019	No impact anticipated, no ground disturbance proposed	State and local
Sigora Solar at 1900 Kimrey Road NCUC SP 16880	7.6 kW residential rooftop installation – 1900 Kimrey Road, Haw River, NC	Alamance	Back Creek – Haw River	1.5 miles	East	In Development; Application filed 2016. Pending intent to construct approval.	No impact anticipated, no ground disturbance proposed	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Kimrey Road Solar NCUC SP 8494	1.99 Solar photovoltaic system installed on the ground – 1800 Kimrey Road, Haw River, NC	Alamance	Back Creek – Haw River	1.5 miles	East	The projected in-service date was March 2018. Project has not been constructed as of June 2019; no facility footprint provided in application. Application filed, registered, and amended in 2016	Wetlands and Waterbodies	State and local
Southwick Solar Farm, LLC NCUC SP 7968	4,000 MW (AC) Solar photovoltaic electric generation facility - Southwick Solar Farm – 3110 Boywood Road, Graham, NC	Alamance	N/A	2.5 miles	South	Application filed 2017; pending planning site review	Cumulative impacts on wetlands and waterbodies not anticipated, not located in the same HUC 10	State and local
Woodgriff Solar Farm NCUC SP 7992	4,000 MW (AC) Solar photovoltaic electric generation facility - Woodgriff Solar Farm, 221 Southern High School Road, Graham NC	Alamance	Big Alamance Creek	3.2 miles	Southwest	Intent to construct permit expires June, 2019	Wetlands and Waterbodies	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Cypress Creek Renewables Solar Farm - Williamsburg Solar, LLC NCUC SP 11809	Cypress Creek Renewables Williamsburg Solar, LLC 174,000 MW 600 acre solar farm. Adjacent to Project at MP 50	Rockingham	Headwaters Haw River	0 miles	East/West	Permitted; Construction to begin in 2019	Wetlands and Waterbodies	State and local
Husky Solar Farm - Husky Solar, LLC NCUC SP 2848	Husky Solar Farm, a 7.02 megawatt DC solar photovoltaic facility located on both sides of North Carolina Highway 87 adjacent to Project at MP 49	Rockingham	Headwaters Haw River	0 miles	North/South	In operation; Permitted prior to 2015	Wetlands and Waterbodies	State and local
Gallant Solar Farm NCUC SP 10241	45,000 MW (AC) PV array – Koger Road and Meadow Branch Road, Reidsville, NC	Rockingham	Headwaters Haw River	10 miles	West	The projected in-service date is 6/1/2019 Annual Certification issued 4/2/2019	Wetlands and Waterbodies	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Washington Solar NCUC SP 6053	5.0 MW (AC) PV array - South side of US Route 158 in Reidsville, NC	Rockingham	Headwaters Haw River	13 miles	West	The projected in-service date was December 2016 – no constructed facility visible on aerials – timeframe unknown. Annual Certification issued 4/1/2016, 3/17/2017, 3/23/2018, and 3/21/2019	Wetlands and Waterbodies	State and local
Old Road Solar NCUC SP 6991	4.99 MW (AC) system - Off Mt. Herman Church Road	Rockingham	Cascade Creek – Dan River	8 miles	East	The projected in-service date was October 15, 2016 – no constructed facility visible on aerials – timeframe unknown. Annual Certification issued 3/16/2018	Wetlands and Waterbodies	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Green Level-Charles Drew Solar Energy Farm NCUC SP 13214	5 MW PV array – 1248 Yanceyville Road, Green Level, NC	Alamance	Back Creek – Haw River	0.9 mile	East	The projected in-service date was March 30, 2019 Application filed 8/24/2018	Wetlands and Waterbodies	State and local
Osceola Solar Project NCUC SP 7976	4.9 MW (AC) System – 3935 Osceola Road, Elon, NC	Alamance	Headwaters Haw River	1.8 mile	West	The projected in-service date was September 1, 2017 – no constructed facility visible on aerials – timeframe unknown. Annual Certification issued 3/30/2017, 3/16/2018, and 4/1/2019	Wetlands and Waterbodies	State and local
Bakatsias Solar Farm NCUC SP 7457	4.9 MW (AC) System – 150 Kronbergs Ct. Haw River, NC	Alamance	Back Creek – Haw River	0.4 mile	East	Constructed; Amended Certificate issued 11/6/2017	Wetlands and Waterbodies	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Norris Solar Farm NCUC SP 7785	5.0 MW (AC) solar PV system – 1865 US 70 Highway, Mebane, NC	Alamance	Back Creek – Haw River	1.9 mile	East	The projected in-service date was 12/31/2017- no constructed facility visible on aerials – timeframe unknown. Annual Certification issued 4/13/2017 and 1/9/2018	Wetlands and Waterbodies	State and local
Necal Solar Farm NCUC SP 8039	5.0 MW (AC) Solar PV System – South of NC Highway 49, Pleasant Grove, NC	Alamance	Back Creek – Haw River	5.3 miles	Northwest	The projected in-service date was August 2017 - no constructed facility visible on aerials – timeframe unknown. Annual Certification issued 5/30/2018	Wetlands and Waterbodies	State and local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Commercial, Industrial, Residential Projects								
Carter Ridge	Carter Ridge new construction homes, Carter Ridge Drive, Reidsville, NC	Rockingham	Headwaters Haw River	5 miles	West	Under Construction; land associated with the development appears cleared since 2005 on Google Earth imagery; all house lots currently constructed except for two.	Wetlands and Waterbodies	State and Local
Brassfield Meadows	New construction housing development; 18 units	Alamance	Back Creek – Haw River	1.7 miles	South	Under Construction; land associated with development appears cleared in 2017/2018 on Google Earth Imagery; all units to be constructed	Wetlands and waterbodies	State and Local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
Granite Mill Project	Redevelopment of an abandoned mill including 176 apartments and 15,000 square feet of commercial space located at 122 East Main Street, Haw River, NC	Alamance	Back Creek – Haw River	0 (TA-AL-187)	West	Completion of the residential units on north side of Main Street along the river anticipated in December 2019. Mixed use portions on the south side of Main Street is scheduled to start construction in late 2020/early 2021, with completion anticipated for the end of 2022.	Wetlands and waterbodies	State and Local

Table 5-1

Projects with Potential Cumulative Impacts

Project	Description	County	Shared Watershed (5th Level/ HUC10)	Approximate Distance from Project	Direction	Status	Potential/ Anticipated Impacts	Potential Permits
LGI Homes-Bedford Hills / LGI Homes	New construction housing development single family homes near 111 Pillow Ln., Burlington, NC	Alamance	Back Creek-Haw River	1.5 miles	East	Under Construction; land associated with the development appears cleared since 2016/2017 on Google Earth imagery; approximately half of the house lots currently constructed.	Wetlands and Waterbodies	State and Local
Forest Creek	New construction housing development 5 new homes in development	Alamance	Back Creek-Haw River	3.5 miles	Southwest	Under Construction; majority of land associated with the development appears cleared since 2006 on Google Earth imagery; five house lots left under construction	Wetlands and Waterbodies	State and Local

5.4 SEWAGE DISPOSAL

The Project does not include a wastewater disposal system; therefore, this section is not applicable.

5.5 ENDANGERED SPECIES AND DESIGNATED CRITICAL HABITAT

The Endangered Species Act (ESA) of 1973 (16 United States Code A-1535-1543, P.L. 93-205) provides for the listing, conservation, and recovery of endangered and threatened species of plants and wildlife. Under the ESA, plants and animals provide aesthetic, ecological, educational, historic, and scientific value to the United States. The US Fish and Wildlife Service (USFWS) is mandated to monitor and protect all federally listed freshwater and terrestrial species, whereas the National Marine Fisheries Service (NMFS) is responsible for marine species. A federally listed endangered species is any species in danger of extinction throughout all or a significant portion of its range. A federally listed threatened species is any species likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

The ESA also provides protection for "critical habitat" that, as defined by the USFWS, are (1) specific areas within the geographical area occupied by the species, at the time of listing, on which are found those physical or biological features essential to the conservation of the species and which may require special management considerations or protections; and (2) specific areas outside the geographical area occupied by the species at the time it is listed and are determined to be areas essential for the conservation of the species.

Under provisions of the ESA, all states were granted the authority to enact their own endangered species protection policies. The North Carolina Endangered Species Act (G.S. 113-331 to 113-337 Act 25) states that the NCWRC is the regulatory authority over state-listed endangered, threatened, or species of special of concern. The regulation allows the NCWRC to adopt the federal list of endangered and threatened species and develop a list of state "protected species." State protected species are separated into three separate categories; North Carolina Endangered, North Carolina Threatened, and North Carolina Special Concern. The definitions are as follows:

North Carolina Endangered: "Any native or once-native species of wild animal whose continued existence as a viable component of the State's fauna is determined by the Wildlife Resources Commission to be in jeopardy or any wild animal determined to be an "endangered species" pursuant to the Endangered Species Act."

North Carolina Threatened: "Any native or once-native species of wild animal that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range or one that is designated as a threatened species pursuant to the Endangered Species Act.

North Carolina Special Concern: "Any species of wild animal native or once native to North Carolina that is determined by the Wildlife Resources Commission to require monitoring but that may be taken under regulations adopted under the provisions of Article 25."

5.5.1 Consultation

The Southgate Project reviewed USFWS online Information for Planning and Conservation (IPaC) system and requested records of any known federally listed, state-listed, rare or special concern species within the Project area from the United States Fish and Wildlife Service (USFWS), North Carolina Wildlife Resource

Commission (NCWRC), and North Carolina Natural Heritage Program (NCNHP). The Project submitted listed bat, plant, and freshwater mussel survey plans detailing locations and methods to the applicable agencies for approval. Similar study plans for other taxonomic groups may be developed as necessary, following further coordination with federal and state agencies. Concerns regarding nesting eagle and colonial nesting birds are also addressed herein.

5.5.2 Findings

Based on initial consultation with the USFWS, NCWRC, and NCNHP and review of spatial data provided by NCNHP, a total of 10 federally listed (8 endangered and 2 threatened), 14 state listed (4 state endangered, 2 state threatened, and 8 special concern); and 4 state rare species were identified that could potentially occur within 2 miles of the Project area.

5.5.3 Wildlife Species

Based on coordination with the USFWS Raleigh and Gloucester Field Offices and NCWRC, nine species of bats are of concern in North Carolina, including three federally endangered bat species: Indiana bat (*Myotis sodalis*), gray bat (*Myotis grisescens*), Virginia big-eared bat (*Corynorhinus townsendii virginianus*), and one threatened species, northern long-eared bat (*Myotis septentrionalis*); one state threatened species, Rafinesque's big-eared bat (*Corynorhinus rafinesquii rafinesquii*); and four state special concern species, including eastern big-eared bat (*Corynorhinus rafinesquii macrotis*), eastern small-footed bat (*Myotis leibii*), Florida yellow bat (*Lasiurus intermedius floridanus*), and southeastern bat (*Myotis austroriparius*). None of these is known to occur in Rockingham or Alamance counties. Based on lack of bat survey data available within the Project area, the Project proposed targeted mist netting and acoustic surveys in accordance with 2018 *Range-wide Indiana Bat Survey Guidelines* (USFWS 2018) as a voluntary conservation measure. In consultation with USFWS and NCWRC, the Project submitted a revised study plan detailing survey type, effort, and locations to the USFWS, NCWRC and VDGIF on July 24, 2018 with a request for concurrence and site-specific authorization. Written study plan concurrence was received from the USFWS Raleigh Field Office and NCWRC on July 24, 2018 and August 3, 2018, respectively.

Fifty-two mist net sites (minimum of 6 net nights per site) and 11 acoustic survey sites (minimum of 2 detector nights per site) were completed between July 13 and August 14, 2018. Three hundred and twenty complete and 114 partial net nights resulted in the capture of 551 bats, including 344 eastern red (*Lasiurus borealis*), 153 big brown (*Eptesicus fuscus*), 37 evening (*Nycticeius humeralis*), 11 Seminole (*Lasirus seminolus*), 3 tri-colored (*Perimyotis subflavus*), 2 hoary (*Lasiurus cincereus*), and 1 Mexican free-tailed (*Tadarida brasiliensis*). Winter habitat (e.g., portals) was assessed concurrently with other environmental surveys from June 1 through August 7, 2018 and was not found within the Project study corridor. Based on the lack of species occurrence during summer sampling, all federally listed species are assumed absent or present in such low density as for impacts to be inconsequential and Federal requirements for the Project under Section 7(a)(2) of the ESA are met.

The Project is within geographic ranges of the bald eagle (*Haliaeetus leucocephalus*) and golden eagle (*Aquila chrysaetos*), which are protected under the Bald and Golden Eagle Protection Act of 1940 (16 U.S. Code 668-688d). A review of the North Carolina Natural Heritage Program database for bald and golden eagles did not identify element occurrences in Rockingham or Alamance counties. Prior to construction, the Project intends to conduct an aerial survey in the winter of 2019-2020 for nesting eagles and colonial nesting bird rookeries within 1 mile of the Project. If eagle nests are identified within 0.5 mile of Project activities, the Project will implement the USFWS Bald Eagle Management Guidelines (USFWS 2007). If

colonial nesting birds are observed during survey, the Project will cease all activities within a buffer of 0.5-mile around each rookery between February 15 and July 30. Implementation of these measures will avoid impacts on eagles and colonial nesting birds.

Two state rare invertebrates were identified by NCNHP, including helicta satyr (*Neonympha helicta*) and coppery emerald (*Somatochlora georgiana*). Surveys for these species were not requested; however, implementation of the Southgate Plan & Procedures and the Project's Invasive Species Control Plan will minimize impacts to these species.

Five federally listed aquatic species were identified during consultation and review of the NCNHP database, including the endangered Roanoke logperch (*Percina rex*), Cape Fear shiner (*Notropis mekistocholas*), and James spinymussel (*Parvaspina collina*) and the threatened yellow lance (*Elliptio lanceolata*). On October 11, 2018 the Atlantic pigtoe (*Fusconaia masoni*) was proposed for listing as threatened with a 4(d) designation. In addition, critical habitat for the Atlantic pigtoe was proposed in the Dan River drainage; however, the Project does not cross proposed critical habitat for Atlantic pigtoe nor any federally listed aquatic species.

5.5.4 Aquatic Species

Five state listed species were identified, including four state endangered freshwater mussels: yellow lampmussel (*Lampsilis cariosa*), green floater (*Lasmigona subviridis*), Carolina creekshell (*Villosa vaughaniana*), Savannah lilliput (*Toxolasma pullus*); and two state threatened freshwater mussels: eastern lampmussel (*Lampsilis radiata*) and creeper (*Strophitus undulatus*). Four special concern species include the notched rainbow (*Villosa constricta*), Greensboro burrowing crayfish (*Cambarus catagius*), mole salamander (*Ambystoma talpoideum*), and four-toed salamander (*Hemidactylium scutatum*). Three state rare species include: riverweed darter (*Etheostoma podostemone*), eastern creekshell (*Villosa delumbis*), and Carolina ladle crayfish (*Cambarus davidi*).

Early coordination with USFWS and NCWRC identified three waterbodies known or likely to harbor Roanoke logperch and rare mussel species, including the Dan River, Cascade Creek, and Wolf Island Creek. The Project is proposing to use HDD or conventional bore methods to cross these waterbodies to avoid instream impacts on federal and state listed fish and mussel species. During consultation, NCWRC also requested HDD or conventional bore of Deep Creek to avoid impacts on eastern lampmussel. The Project is proposing the use of HDD or conventional bore at the Deep Creek crossing.

NCWRC requested surveys for mussel streams and identified 17 streams (21 crossings) for survey. NCWRC and USFWS reviewed the Project's mussel study plan and provided comments on September 20, 2018. Two stream crossings were later avoided due to alignment shifts, resulting in a revised total of 19 stream crossings requiring mussel survey. Surveys were authorized to commence as soon as possible; however, surveys were cancelled for the fall 2018 due to Hurricane Florence and restricted access to survey sites. Freshwater mussel surveys are scheduled for 2019, and results of these surveys will be submitted to USFWS and NCWRC for review and comment.

As of July 2019, mussel surveys have been completed in 10 stream crossings of which 2 stream crossings (i.e., Dan River and Stony Creek) resulted in the collection of live mussels. Neither state listed nor federally listed mussel species have been collected. Restricted land access has prevented access to the remaining 9 stream crossings. Upon completion of 2019 field surveys, results will be submitted to USFWS and NCWRC for review and comment, and filed with FERC.

The Project will implement and strictly adhere to applicable federal and state erosion and sediment control/storm water management laws and regulations. If live native freshwater species are observed during surveys, mussels will be relocated prior to construction in coordination with NCWRC. If federal species are observed during survey, the Project will notify USFWS and evaluate appropriate avoidance and minimization measures. Measures taken to avoid and minimize impacts on federal listed species also benefit state species and unlisted species. The Project is committed to working with the agencies to determine applicable avoidance, minimization or mitigation strategies to minimize impacts to these species.

The NCWRC requested surveys for the Greensboro burrowing crayfish within 200 feet of any mapped stream, both intermittent and perennial in the Haw River basin; and requested surveys for Carolina ladle crayfish in all first to third order streams in the Dan and Haw river basins. The Project is evaluating potential habitats and continues to coordinate with NCWRC. Implementation of the Southgate Plan & Procedures and strict adherence to applicable federal and state erosion and sediment control/storm water management laws and regulations will minimize impacts to these species.

Surveys for Carolina ladle crayfish are concurrently planned at mussel survey stream locations identified as first to third order stream crossings. In total, Carolina ladle crayfish surveys are anticipated at 17 total stream crossings. As of July 2019, Carolina ladle crayfish surveys have been completed at 8 stream crossings of which all stream crossings (100%) resulted in the collection of live Carolina ladle crayfish individuals. Restricted land permission has prevented access to the remaining 9 stream crossings. Upon completion of 2019 field surveys, results will be submitted to USFWS and NCWRC for review and comment and filed with FERC.

The NWCRC requested a desktop habitat evaluation of potential habitats of the four-toed and mole salamanders. The Project is evaluating potential habitats and continues to coordinate with the NCWRC. Implementation of the Southgate Plan & Procedures and strict adherence to applicable federal and state erosion and sediment control/storm water management laws and regulations will minimize impacts to these species, including abiding by applicable time of year construction restrictions.

5.5.5 Plant Species

Consultation identified three federally endangered plants, including small whorled pogonia (*Isotria medeoloides*),smooth coneflower (*Echinacea laevigata*), and Schweinitz's sunflower (*Helianthus schweinitzii*). A study plan was submitted to USFWS and NCWRC on July 17, 2018, and concurrence was received from USFWS on August 21. A desktop assessment identified 261 acres of potential habitat of federal listed plants along the Project. Surveys for Schweinitz's sunflower were determined to be unnecessary following consultation with representatives of NCWRC on December 2, 2018.

Small whorled pogonia is best surveyed May-July when in flower; smooth coneflower can be surveyed between June-October. Surveys were conducted between July and September 2018. No individuals of the target species were observed; however, several small whorled pogonia potential habitats were flagged for re-survey in summer 2019. Due to limited access, surveys in 2018 ended before all potential habitats could be completed. Approximately 47.5 acres of potential small whorled pogonia habitat and 25 acres of potential smooth coneflower habitat were planned for survey in summer 2019. Surveys to date during 2019 have assessed 63% of the total required tracts, and no individuals of either target species were identified during survey to date. Surveys for the remaining 37% of tracts will be completed upon receipt of ROW access. Upon completion of 2019 field surveys, results will be submitted to USFWS and NCWRC for review and comment and filed with FERC. If listed species are identified, the Project will develop a

relocation plan in coordination with USFWS Raleigh Field Office and NCWRC. The final plan will be submitted to USFWS and NCWRC for review and approval. The Project is committed to working with the agencies to determine applicable avoidance, minimization or mitigation strategies to minimize impacts to these species.

One additional plant, the state rare cliff stonecrop (*Sedum glaucophyllum*), was identified during review of the NCNHP database. Surveys for this species were not requested; however, implementation of the Southgate Plan & Procedures and the Project's Invasive Species Plan will minimize impacts to this species should it be encountered during construction.

5.5.6 Conclusions

The Project will provide Section 7 clearance as soon as it is obtained.

5.6 ESSENTIAL FISH HABITAT

According to the NMFS online Essential Fish Habitat Mapper tool (NMFS, 2017), the Project does not cross any waterbodies identified as Essential Fish Habitat. Because the Project is located well inland of saltwater and tidal waters and does not cross known anadromous or diadromous fish migration routes, none of the waterbodies crossed by the Project contain, or have the potential to support, species managed by the NMFS.

5.7 CULTURAL RESOURCES INFORMATION

MVP Southgate is currently conducting archaeological surveys of the direct area of potential effect for Project facilities, including the pipeline corridor and all ancillary facilities such as access roads, contractor yards, and ATWS. As of July 17, 2019, archaeological survey has been completed for approximately 91.2 percent of the pipeline route. Survey for aboveground historic resources is also being conducted, and as of July 17, 2019 has been completed for an estimated 98.0 percent of the pipeline route. Detailed reports on cultural resource surveys were submitted to the North Carolina State Historic Preservation Office, applicable federally-recognized tribes as requested and the FERC along with the FERC Certificate Application. The Project is currently assessing avoidance or assessment options for those properties that may be eligible for the National Register of Historic Places and will develop treatment plans for any such properties that may be affected by the Project. If necessary, the FERC will develop a Programmatic Agreement (PA) to provide a process for completing surveys on no access properties and implementation of the treatment plans, if any. A draft unanticipated cultural resources discovery plan is included in Appendix P. The Project will provide Section 106 concurrence once it is obtained.

5.8 FLOOD ZONE DESIGNATION

The Southgate Project has reviewed Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Mapping for areas crossed by the Project and recorded the location of 100-year flood zones (FEMA, 2018). A summary of 100-year flood zones crossed by the Project is listed below in Table 5-2, and shown in the FEMA Figure set in Appendix Q. There are four permanent access roads and two interconnects located within the FEMA 100-year flood zone. Temporary access roads located within floodplains may have a temporary effect on flood storage but will be restored after construction unless requested to be maintained by the landowner or agency. All applicable floodplain permits will be obtained from the relevant issuing authorities.

Table 5-2

100-Year Floodplain areas crossed

State/County	Flood Zone a/	Entry Mile Post	Exit Mile Post	Length Crossed (feet)
North Carolina				
Rockingham	AE	27.1	27.8 RR	3,774
	AE	27.8 RR	27.8 RR	56
	AE	27.9 RR	28.1 RR	770
	AE	28.4 RR	28.4 RR	201
	AE	29.6	29.6	22
	AE	29.6	30.5	4,741
	AE	30.5	30.6	315
	AE	30.7	30.7	150
	AE	30.7	30.9	941
	AE	32.1	32.2	37
	AE	32.2	32.2	196
	AE	32.2	32.2	10
	AE	32.6	32.7	526
	AE	33	33.1	470
	AE	33.1	33.1	32
	AE	38.6	38.8	886
	AE	41.1	41.2	320
	AE	43.2	43.3	551
	AE	46.4	46.5	88
	AE	46.9	47	341
	AE	48.6	48.7	353
	AE	50.8 RR	50.8 RR	264
Alamance	AE	53.6	53.7	198
	AE	54.6	54.6	125
	AE	56.7 RR	56.7 RR	68
	AE	57	57.1	304
	AE	57.9	57.9	8
	AE	58.7 RR	58.7 RR	188
	AE	60.7 RR	60.7 RR	31
	AE	63.6	63.6	4
	AE	63.6	63.6	350
	AE	63.8	63.9	100
	AE	64 RR	64.1 RR	271
	AE	65.6	65.6	115
	AE	67.6	67.6	153
	AE	69.1	69.1	222
	AE	69.1	69.3	894
	AE	69.9 RR	70.0 RR	222
	AE	70.2 RR	70.3 RR	243
	AE	70.7	70.8	254
	AE	70.9	70.9	253
	AE	70.9	71	115

Table 5-2

100-Year Floodplain areas crossed

State/County	Flood Zone a/	Entry Mile Post	Exit Mile Post	Length Crossed (feet)
	AE	71.3	71.3	328
	AE	71.3	71.8	2,536
	AE	72.5	72.7	1,279
	AE	72.9 RR	73.1 RR	1,077

a/ Flood Zone A – Areas subject to inundation by the 1-percent annual chance flood event determined using approximate methodologies.

Flood Zone AE – Areas subject to inundation by the 1-percent annual chance flood event determined by detailed methods.

6.0 REFERENCES

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MVP Southgate Project

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Appendix A

North Carolina USGS 7.5-Minute Topographic Map Excerpts

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Appendix B

North Carolina Alignment Sheets

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Appendix C

Typical Construction Detail Drawings

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Appendix D

Southgate Upland Erosion Control, Revegetation, and Maintenance Plan

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Appendix E

Southgate Wetland and Waterbody Construction and Mitigation Procedures

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Appendix F

Spill Prevention and Countermeasure Control Plan

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Appendix G

Wetland and Waterbody Crossing Analysis

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Appendix H

HDD Site-Specific Crossing Plans

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Appendix I

HDD Contingency Plan

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Appendix J

FERC Draft EIS – July 26th, 2019

MVP Southgate Project

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Appendix K

North Carolina Wetland and Waterbody Delineation Report – March 2019

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North Carolina Department of Environmental Quality, Division of Water Resources

Appendix L-1

Proposed Wetland Impacts by ID and Type of Impact

Appendix L-1
Proposed Wetland Impacts by ID and Type of Impact

Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
Pipeline (Rockingham County)										
W-C18-96-2: PFO	26.1	Cascade Creek-Dan River (0301010309)	36.541688	-79.632557	PFO	0	<0.01	<0.01	0.000	Workspace Only
W-B18-98: PFO	26.5	Cascade Creek-Dan River (0301010309)	36.536541	-79.637494	PFO	15	0.03	0.01	0.000	Conventional
W-A18-22: PEM	26.7 RR	Cascade Creek-Dan River (0301010309)	36.534583	-79.638961	PEM	72	0.15	0.000	0.000	Conventional
W-A18-44: PEM	27.0 RR	Cascade Creek-Dan River (0301010309)	36.530434	-79.642596	PEM	0	<0.01	0.000	0.000	Conventional
W-A18-44-2: PEM	27.1	Cascade Creek-Dan River (0301010309)	36.5297	-79.64466	PEM	1,197	3.07	0.000	0.000	Conventional
W-A18-44: PFO	27.3	Cascade Creek-Dan River (0301010309)	36.528099	-79.646143	PFO	38	0.05	0.01	0.000	Conventional
W-A19-274: PEM	27.6	Cascade Creek-Dan River (0301010309)	36.525575	-79.648779	PEM	42	0.19	0.000	0.000	Conventional
W-A19-274-2: PEM	27.6	Cascade Creek-Dan River (0301010309)	36.525149	-79.649005	PEM	38	0.04	0.000	0.000	Conventional
W-A19-274-3: PEM	27.6	Cascade Creek-Dan River (0301010309)	36.525173	-79.649581	PEM	0	0.17	0.000	0.000	Conventional
W-A18-39: PEM	28.0 RR	Cascade Creek-Dan River (0301010309)	36.520864	-79.653336	PEM	0	0.02	0.000	0.000	Conventional
W-A18-26: PEM	28.1 RR	Cascade Creek-Dan River (0301010309)	36.51914	-79.654786	PEM	24	0.06	0.000	0.000	Conventional
W-A18-30: PEM	28.3 RR	Cascade Creek-Dan River (0301010309)	36.517081	-79.656412	PEM	26	0.03	0.000	0.000	Conventional
W-A18-30: PFO	28.3 RR	Cascade Creek-Dan River (0301010309)	36.516645	-79.65647	PFO	18	0.01	0.01	0.000	Conventional
W-A18-38: PEM	28.6 RR	Cascade Creek-Dan River (0301010309)	36.513261	-79.660106	PEM	0	0.02	0.000	0.000	Conventional

Appendix L-1
Proposed Wetland Impacts by ID and Type of Impact

Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
W-A18-38: PFO	28.6 RR	Cascade Creek-Dan River (0301010309)	36.513211	-79.659994	PFO	41	0.04	0.03	0.000	Workspace Only
W-B18-48: PFO	29.1	Cascade Creek-Dan River (0301010309)	36.508367	-79.665188	PFO	23	0.05	0.02	0.000	Conventional
W-B18-48: PEM	29.1	Cascade Creek-Dan River (0301010309)	36.508421	-79.665299	PEM	0	0.01	0.000	0.000	Workspace Only
W-A18-18: PFO	29.7	Cascade Creek-Dan River (0301010309)	36.500614	-79.672663	PFO	935	2.33	0.64	0.000	Conventional
W-A18-18: PEM	29.9	Cascade Creek-Dan River (0301010309)	36.499656	-79.673716	PEM	50	0.07	0.000	0.000	Conventional
W-B18-39: PEM	30.2	Cascade Creek-Dan River (0301010309)	36.496101	-79.677639	PEM	25	0.03	0.000	0.000	HDD
W-B18-39-2: PEM	30.2	Cascade Creek-Dan River (0301010309)	36.495973	-79.677734	PEM	40	0.04	0.000	0.000	HDD
W-B18-39-3: PEM	30.2	Cascade Creek-Dan River (0301010309)	36.495819	-79.677892	PEM	30	0.03	0.000	0.000	HDD
W-B18-39-4: PEM	30.2	Cascade Creek-Dan River (0301010309)	36.49571	-79.678008	PEM	32	0.04	0.000	0.000	HDD
W-B18-36: PEM	30.2	Cascade Creek-Dan River (0301010309)	36.495507	-79.678228	PEM	36	0.04	0.000	0.000	HDD
W-B18-36-2: PEM	30.3	Cascade Creek-Dan River (0301010309)	36.495364	-79.678402	PEM	16	0.02	0.000	0.000	HDD
W-B18-36: PFO	30.3	Cascade Creek-Dan River (0301010309)	36.495171	-79.678559	PFO	32	0.11	0.000	0.000	HDD
W-B18-36-3: PEM	30.3	Cascade Creek-Dan River (0301010309)	36.494746	-79.679118	PEM	18	0.05	0.000	0.000	HDD
W-B18-36-4: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.49434	-79.679615	PEM	0	0.000	0.000	0.000	HDD

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Proposed Wetland Impacts by ID and Type of Impact

Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
W-B18-36-5: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.494219	-79.679657	PEM	27	0.03	0.000	0.000	Conventional
W-B18-36-6: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.494116	-79.679934	PEM	0	<0.01	0.000	0.000	Conventional
W-B18-34: PFO	30.5	Cascade Creek-Dan River (0301010309)	36.493049	-79.680044	PFO	180	0.3	0.12	0.000	Conventional
W-A18-54: PEM	30.7	Cascade Creek-Dan River (0301010309)	36.490849	-79.683335	PEM	11	0.01	0.000	0.000	Conventional
W-B18-103: PEM	31.1	Cascade Creek-Dan River (0301010309)	36.485665	-79.68523	PEM	0	<0.01	0.000	0.000	Workspace Only
W-A18-141: PFO	32	Cascade Creek-Dan River (0301010309)	36.476993	-79.696049	PFO	183	0.34	0.13	0.000	Conventional
W-A18-141: PEM	32	Cascade Creek-Dan River (0301010309)	36.477148	-79.696159	PEM	0	0.02	0.000	0.000	Workspace Only
W-A18-149: PEM	32.2	Cascade Creek-Dan River (0301010309)	36.474621	-79.698334	PEM	53	0.16	0.000	0.000	Conventional
W-A18-149: PSS	32.2	Cascade Creek-Dan River (0301010309)	36.474593	-79.698263	PSS	51	0.07	0.000	0.000	Conventional
W-A18-152: PEM	32.6	Cascade Creek-Dan River (0301010309)	36.4698	-79.702487	PEM	21	0.06	0.000	0.000	Conventional
W-A18-152: PFO	32.6	Cascade Creek-Dan River (0301010309)	36.46964	-79.702513	PFO	29	0.030	0.02	0.000	Conventional
W-A18-155: PEM	33.1	Cascade Creek-Dan River (0301010309)	36.464024	-79.702911	PEM	0	0.06	0.000	0.000	Workspace Only
W-A18-155-2: PSS	33.1	Cascade Creek-Dan River (0301010309)	36.463768	-79.702847	PSS	0	<0.01	0.000	0.000	Workspace Only
W-A18-155: PSS	33.1	Cascade Creek-Dan River (0301010309)	36.463484	-79.702655	PSS	68	0.16	0.000	0.000	Conventional

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W-A18-222: PFO	33.4	Cascade Creek-Dan River (0301010309)	36.459381	-79.700236	PFO	43	0.08	0.03	0.000	Conventional
W-A18-222: PEM	33.4	Cascade Creek-Dan River (0301010309)	36.459274	-79.700288	PEM	0	<0.01	0.000	0.000	Workspace Only
W-A18-224: PFO	33.7	Cascade Creek-Dan River (0301010309)	36.455977	-79.697766	PFO	11	0.02	0.01	0.000	Conventional
W-A18-224: PEM	33.7	Cascade Creek-Dan River (0301010309)	36.455931	-79.697819	PEM	0	<0.01	0.000	0.000	Workspace Only
W-C18-40: PEM	34.6	Cascade Creek-Dan River (0301010309)	36.445616	-79.689527	PEM	0	<0.01	0.000	0.000	Workspace Only
W-A18-95: PEM	37.0	Cascade Creek-Dan River (0301010309)	36.425012	-79.657628	PEM	8	0.02	0.000	0.000	Conventional
W-A18-98: PFO	37.2	Cascade Creek-Dan River (0301010309)	36.423306	-79.65623	PFO	0	0.01	0.000	0.000	Workspace Only
W-S18-1: PFO	37.3	Cascade Creek-Dan River (0301010309)	36.422114	-79.655108	PFO	8	0.01	0.01	0	Conventional
W-A18-6: PFO	38.5	Cascade Creek-Dan River (0301010309)	36.407396	-79.649469	PFO	130	0.15	0.08	0.000	Conventional
W-A18-6-2: PFO	38.5	Cascade Creek-Dan River (0301010309)	36.407067	-79.649165	PFO	0	0.01	0.000	0.000	Workspace Only
W-A18-6-3: PFO	38.5	Cascade Creek-Dan River (0301010309)	36.406781	-79.648669	PFO	92	0.09	0.06	0.000	Conventional
W-A18-6: PEM	38.5	Cascade Creek-Dan River (0301010309)	36.406695	-79.648415	PEM	46	0.09	0.000	0.000	Conventional
W-A18-7: PFO	38.6	Cascade Creek-Dan River (0301010309)	36.405557	-79.648122	PFO	0	<0.01	0.000	0.000	Workspace Only
W-A18-7: PEM	38.6	Cascade Creek-Dan River (0301010309)	36.40538	-79.648206	PEM	76	0.18	0.000	0.000	Conventional

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Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
W-A18-7: PSS	38.6	Cascade Creek-Dan River (0301010309)	36.40525	-79.648097	PSS	34	0.08	0.000	0.000	Conventional
W-A18-7-2: PEM	38.6	Cascade Creek-Dan River (0301010309)	36.405113	-79.648149	PEM	0	<0.01	0.000	0.000	Workspace Only
W-A18-7-3: PEM	38.7	Cascade Creek-Dan River (0301010309)	36.404994	-79.647869	PEM	16	0.05	0.000	0.000	Conventional
W-A18-7-4: PEM	38.7	Cascade Creek-Dan River (0301010309)	36.404784	-79.647599	PEM	29	0.07	0.000	0.000	Conventional
W-A18-7-5: PEM	38.7	Cascade Creek-Dan River (0301010309)	36.404414	-79.647238	PEM	16	0.04	0.000	0.000	Conventional
W-A19-270: PFO	38.8	Cascade Creek-Dan River (0301010309)	36.40362	-79.646599	PFO	0	0.02	<0.01	0	Workspace Only
W-B18-78: PFO	39.7	Cascade Creek-Dan River (0301010309)	36.39375	-79.638317	PFO	56	0.060	0.03	0.000	Conventional
W-B18-112: PEM	40.1	Hogans Creek-Dan River (0301010401)	36.387125	-79.636599	PEM	0	0.01	0.000	0.000	Workspace Only
W-B18-110: PFO	40.2	Hogans Creek-Dan River (0301010401)	36.386777	-79.63634	PFO	0	0.02	0.01	0.000	Workspace Only
W-B18-55: PEM	41.1	Hogans Creek-Dan River (0301010401)	36.378086	-79.625234	PEM	0	<0.01	0.000	0.000	Workspace Only
W-B18-55: PFO	41.1	Hogans Creek-Dan River (0301010401)	36.377936	-79.625312	PFO	84	0.13	0.06	0.000	Conventional
W-B18-46: PFO	41.7	Hogans Creek-Dan River (0301010401)	36.371464	-79.620671	PFO	6	0.02	0.01	0.000	Conventional
W-C18-77: PFO	47	Hogans Creek-Dan River (0301010401)	36.305304	-79.587735	PFO	47	0.08	0.03	0.000	Conventional
W-B18-139: PFO	48.5	Headwaters Haw River (0303000202)	36.290957	-79.572486	PFO	24	0.03	0.02	0.000	Conventional

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Proposed Wetland Impacts by ID and Type of Impact

Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
W-A18-62: PSS	48.6	Headwaters Haw River (0303000202)	36.288909	-79.571666	PSS	40	0.11	0.000	0.000	Conventional
W-A18-62-2: PSS	48.6	Headwaters Haw River (0303000202)	36.288605	-79.571621	PSS	0	<0.01	0.000	0.000	Workspace Only
W-A18-61: PEM	48.7	Headwaters Haw River (0303000202)	36.288426	-79.571447	PEM	1	0.01	0.000	0.000	Workspace Only
W-A18-184: PEM	49.9 RR	Headwaters Haw River (0303000202)	36.275102	-79.558969	PEM	0	0.01	0.000	0.000	Conventional
W-A18-184-2: PEM	49.9 RR	Headwaters Haw River (0303000202)	36.274963	-79.55886	PEM	0	0.01	0.000	0.000	Workspace Only
W-A18-184: PFO	49.9 RR	Headwaters Haw River (0303000202)	36.274868	-79.558919	PFO	39	0.06	0.03	0.000	Workspace Only
W-A19-284: PSS	51.2 RR	Headwaters Haw River (0303000202)	36.258208	-79.546653	PSS	0	0.01	0.000	0.000	Workspace Only
W-C18-20: PFO	51.4 RR	Headwaters Haw River (0303000202)	36.256726	-79.545781	PFO	19	0.02	0.01	0.000	Conventional
W-C18-20-2: PFO	51.4 RR	Headwaters Haw River (0303000202)	36.256503	-79.545528	PFO	135	0.21	0.09	0	Conventional
W-C18-20: PEM	51.4 RR	Headwaters Haw River (0303000202)	36.256465	-79.545349	PEM	0	<0.01	0.000	0.000	Conventional
					Total	**2968**	**5.486**	**1.297**	**0.000**	
Pipeline (Alamance County)										
W-A18-83: PEM	53.3	Headwaters Haw River (0303000202)	36.23401	-79.529142	PEM	26	0.06	0.000	0.000	Conventional
W-A18-85: PEM	53.6	Headwaters Haw River (0303000202)	36.230085	-79.527424	PEM	9	0.03	0.000	0.000	Conventional
W-A18-85: PSS	53.7	Headwaters Haw River (0303000202)	36.230004	-79.527419	PSS	0	0.04	0.000	0.000	Workspace Only

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W-A18-85-2: PEM	53.7	Headwaters Haw River (0303000202)	36.229981	-79.52711	PEM	0	<0.01	0.000	0.000	Workspace Only
W-C18-67: PFO	54.3	Headwaters Haw River (0303000202)	36.221387	-79.521613	PFO	103	0.26	0.07	0.000	Conventional
W-B18-61: PEM	55.5	Headwaters Haw River (0303000202)	36.20826	-79.512175	PEM	39	0.06	0.000	0.000	Conventional
W-A18-119: PFO	56.4 RR	Back Creek-Haw River (0303000204)	36.199435	-79.500719	PFO	90	0.12	0.06	0.000	Conventional
W-A18-119: PEM	56.4RR	Back Creek-Haw River (0303000204)	36.199389	-79.500841	PEM	0	0.02	0.000	0.000	Workspace Only
W-A18-119-2: PFO	56.5	Back Creek-Haw River (0303000204)	36.198472	-79.499618	PFO	63	0.09	0.05	0.000	Conventional
W-A18-119-2: PEM	56.5	Back Creek-Haw River (0303000204)	36.198466	-79.499761	PEM	0	0.04	0.000	0.000	Workspace Only
W-A18-119-3: PEM	56.6RR	Back Creek-Haw River (0303000204)	36.1983	-79.499033	PFO	0	0.01	0	0	Conventional
W-A18-119-4: PEM	56.6RR	Back Creek-Haw River (0303000204)	36.198148	-79.498683	PFO	77	0.16	0.06	0	Conventional
W-A18-127: PFO	56.6RR	Back Creek-Haw River (0303000204)	36.19736	-79.497888	PFO	128	0.14	0.07	0.000	Conventional
W-A18-127-2: PFO	56.7RR	Back Creek-Haw River (0303000204)	36.196794	-79.497815	PFO	0	0.02	0.000	0.000	Workspace Only
W-A18-130: PEM	56.8	Back Creek-Haw River (0303000204)	36.19409	-79.497683	PEM	0	0.01	0.000	0.000	Workspace Only
W-A18-130: PFO	56.9	Back Creek-Haw River (0303000204)	36.193874	-79.497418	PFO	17	0.09	0.03	0.000	Conventional
W-A18-133: PFO	57.1	Back Creek-Haw River (0303000204)	36.191046	-79.496608	PFO	56	0.01	0.04	0.000	Conventional

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Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
W-A18-133: PEM	57.1	Back Creek-Haw River (0303000204)	36.190868	-79.496659	PEM	0	0.02	0.000	0.000	Workspace Only
W-A18-133-2: PEM	57.1	Back Creek-Haw River (0303000204)	36.190481	-79.49655	PEM	0	0.01	0.000	0.000	Workspace Only
W-A18-135: PFO	57.2	Back Creek-Haw River (0303000204)	36.189488	-79.496096	PFO	146	0.2	0.1	0.000	Conventional
W-A18-135: PEM	57.2	Back Creek-Haw River (0303000204)	36.189625	-79.49626	PEM	0	0.02	0.000	0.000	Workspace Only
W-A18-254: PFO	57.6	Back Creek-Haw River (0303000204)	36.184749	-79.493161	PFO	152	0.22	0.1	0.000	Conventional
W-C18-3: PEM	57.8	Back Creek-Haw River (0303000204)	36.181163	-79.494328	PEM	13	0.04	0.000	0.000	Conventional
W-C18-3: PFO	57.9	Back Creek-Haw River (0303000204)	36.181041	-79.494472	PFO	0	<0.01	0.000	0.000	Workspace Only
W-C18-3-2: PEM	57.9	Back Creek-Haw River (0303000204)	36.180874	-79.494341	PEM	13	0.02	0.000	0.000	Conventional
W-C18-3-2: PFO	57.9	Back Creek-Haw River (0303000204)	36.180844	-79.494345	PFO	8	0.01	0.01	0.000	Conventional
W-C18-5: PSS	58	Back Creek-Haw River (0303000204)	36.178724	-79.493947	PSS	52	0.07	0.000	0.000	Conventional
W-C18-5: PEM	58	Back Creek-Haw River (0303000204)	36.178665	-79.494059	PEM	0	0.03	0.000	0.000	Workspace Only
W-C18-29: PFO	60.7	Back Creek-Haw River (0303000204)	36.160851	-79.454748	PFO	116	0.2	0.07	0.000	Conventional
W-C18-29-2: PFO	60.8RR	Back Creek-Haw River (0303000204)	36.160867	-79.453482	PFO	33	0.07	0.02	0.000	Conventional
W-A18-79: PFO	61.8	Back Creek-Haw River (0303000204)	36.156382	-79.439241	PFO	0	<0.01	0.000	0.000	Workspace Only

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W-A18-74: PFO	62.5	Back Creek-Haw River (0303000204)	36.149929	-79.429316	PFO	8	0.01	0.01	0.000	Conventional
W-A18-80: PEM	62.7	Back Creek-Haw River (0303000204)	36.149688	-79.426785	PEM	64	0.09	0.000	0.000	Conventional
W-B18-32: PEM	62.9	Back Creek-Haw River (0303000204)	36.148216	-79.423966	PEM	0	<0.01	0.000	0.000	Workspace Only
AW-B18-19: PFO	63.8	Back Creek-Haw River (0303000204)	36.146437	-79.407138	PFO	50	0.08	0.03	0.000	Conventional
W-A19-320: PEM	65.0 RR	Back Creek-Haw River (0303000204)	36.145863	-79.387234	PEM	0	0.03	0.000	0.000	Workspace Only
W-A19-326: PFO	65.1 RR	Back Creek-Haw River (0303000204)	36.145383	-79.384036	PFO	6	0.02	0.01	0.000	Conventional
W-B19-168: PEM	65.6	Back Creek-Haw River (0303000204)	36.139849	-79.381373	PEM	0	0.05	0.000	0.000	Workspace Only
W-B18-5: PFO	68.4	Back Creek-Haw River (0303000204)	36.106095	-79.371151	PFO	16	0.02	0.01	0.000	Workspace Only
W-A18-67: PFO	71.8	Back Creek-Haw River (0303000204)	36.062807	-79.361499	PFO	0	<0.01	0	0.000	Conventional
W-A18-67-2: PFO	71.8	Back Creek-Haw River (0303000204)	36.062821	-79.361357	PFO	44	0.04	0.03	0.000	Workspace Only
W-A18-208: PEM	72.2	Back Creek-Haw River (0303000204)	36.056285	-79.364482	PEM	0	<0.01	0.000	0.000	Workspace Only
W-B19-151: PEM	72.9 RR	Back Creek-Haw River (0303000204)	36.046891	-79.366585	PEM	258	0.56	0	0	Conventional
W-A18-111: PEM	73.0 RR	Back Creek-Haw River (0303000204)	36.046117	-79.365977	PEM	0	0.04	0.000	0.000	Workspace Only
W-B19-151-2: PEM	73.0 RR	Back Creek-Haw River (0303000204)	36.046408	-79.366515	PEM	45	0.04	0	0	Conventional
					Total	**1,672**	**3.32**	**0.77**	**0.000**	

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Impact ID a/	Milepost	Watershed HUC 10	Latitude	Longitude	Wetland Type b/	Pipeline Crossing Length (feet) c/	Wetland within Construction Workspace (acres) d/	Permanent Conversion PFO to PSS/PEM (acres) e/	Permanent Fill (acres) f/	Pipeline Crossing Method or Other Impact Type g/
T-15 Dan River Interconnect (Rockingham County)										
W-B18-36-7: PEM	30.3	Cascade Creek-Dan River (0301010309)	36.495345	-79.680027	PEM	0	0.47	0.000	0.000	Workspace Only
AW-B18-36: PEM	30.3	Cascade Creek-Dan River (0301010309)	36.495217	-79.679527	PEM	0	<0.01	0.000	0.000	Workspace Only
W-B18-36-8: PEM	30.3	Cascade Creek-Dan River (0301010309)	36.495739	-79.680659	PEM	0	<0.01	0.000	0.000	Workspace Only
W-B18-36-9: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.494389	-79.679702	PEM	0	0.05	0.000	0.000	Workspace Only
W-B18-36-10: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.494208	-79.679948	PEM	0	0.01	0.000	0.000	Workspace Only
W-B18-36-11: PEM	30.4	Cascade Creek-Dan River (0301010309)	36.494116	-79.679626	PEM	0	<0.01	0.000	0.000	Workspace Only
W-B18-34-2: PFO	30.5	Cascade Creek-Dan River (0301010309)	36.493174	-79.680231	PFO	0	0.15	0	0	Workspace Only
					Total	**0**	**0.181**	**0.000**	**0.000**	
Contractor Yard 25B (Rockingham County)										
W-A19-306	43.9	Hogans Creek-Dan River (0301010401)	36.400485	-79.419105	PSS	0	<0.01	0	0	
					Total	**0**	**0.01**	**0**	**0**	
Temporary Access Road: TA-RO-075 (Rockingham County)										
W-A18-39-3: PEM	27.9 RR	Cascade Creek-Dan River (0301010309)	36.519849	-79.654743	PEM	0	<0.01	0	0	
W-A18-39-4: PEM	27.9 RR	Cascade Creek-Dan River (0301010309)	36.522214	-79.654436	PEM	0	0.01	0	0	
					Total	**0**	**0.01**	**0**	**0**	

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Temporary Access Road PA-RO-113A (Rockingham County)										
W-B18-43: PEM	41.8	Hogans Creek-Dan River (0301010401)	36.369695	-79.619871	PEM	0	<0.01	0	0	
W-B18-43-2: PEM	41.8	Hogans Creek-Dan River (0301010401)	36.369681	-79.619794	PEM	0	0.01	0	0	
					Total	**0**	**0.01**	**0**	**0**	
Permanent Access Road PA-RO-000 (Rockingham County)										
W-A19-280: PEM	28.7	Cascade Creek-Dan River (0301010309)	36.519196	-79.669802	PEM	0	0.01	0	0.01	
W-A19-280-2: PEM	28.7	Cascade Creek-Dan River (0301010309)	36.519109	-79.670171	PEM	0	0.02	0	0.02	
					Total	**0**	**0.03**	**0**	**0.03**	
Permanent Access Road PA-RO-082 (Rockingham County)										
W-B18-34-3: PFO	30.5	Cascade Creek-Dan River (0301010309)	36.493242	-79.680406	PFO	0	<0.01	<0.01	<0.01	
					Total	**0**	**<0.01**	**<0.01**	**<0.01**	

a/ Data are based on wetland field delineations completed through May, 2019 where access has been obtained, National Wetland Inventory (NWI) data, and desktop analysis of approximated resources. Wetland IDs starting with "W" have been field delineated and wetland ID starting with "AW" are approximated based on NWI data, desktop analysis, and field scientists knowledge of the surrounding area/adjacent properties (where accessible).
b/ Wetland type based on Cowardin Classifications PEM = palustrine emergent wetland, PSS = palustrine scrub shrub wetland, PFO = palustrine forested wetland; all wetlands are jurisdictional under Section 404 and Class WL (15A NCAC 02B.0101(c)(8))".
c/ Crossing length is measured at the intersection of the wetland and centerline of the pipeline. Crossing length of "0" indicates the wetland is not crossed by the centerline of the pipeline, but is located within the construction workspace.
d/ Wetlands crossed by HDD or conventional bore have a "0" for construction workspace.
e/ Conversion of PFO (forested wetland) to PSS/PEM (nonforested wetland) is based on a 30-foot-wide woody vegetation maintenance corridor centered over the pipeline.
f/ permanent fill limited to permanent access roads only.
g/ Construction crossing method will ultimately be determined by field supervisor based on field conditions observed during construction. "Workspace Only" indicates that the wetland is not crossed by the pipeline but is located within construction workspace.

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix L-2

Proposed Waterbody Impacts by ID and Type of Impact

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Proposed Waterbody Impacts by ID and Type of Impact

Impact ID a/	Milepost	Waterbody Name	Waterbody Type b/	Pipeline Cross Length (Feet) c/	Stream within Construction Workspace (linear feet) d/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)	Watershed (HUC 10)	Latitude	Longitude	Water Quality Classification e/	Crossing Method f/
Pipeline (Rockingham County)													
S-B18-99	26.5	Trib. To Cascade Creek	Intermittent	1	88.74	0	0	0	Cascade Creek-Dan River (0301010309)	36.536539	-79.637489	Class C	Conventional - Dam and pump, Flume
S-A18-42	27.3	Trib. To Cascade Creek	Intermittent	20.52	95.7	0	0	0	Cascade Creek-Dan River (0301010309)	36.528101	-79.64625	Class C	Conventional - Dam and pump, Flume
S-A18-40	27.5	Cascade Creek	Perennial	108.54	106.03	0	0	0	Cascade Creek-Dan River (0301010309)	36.52612	-79.647984	Class C	Conventional Bore
S-A19-273	27.5	Dry Creek	Perennial	28.95	50.45	0	0	0	Cascade Creek-Dan River (0301010309)	36.525844	-79.64843	Class C	Conventional - Dam and pump, Flume
S-A18-31	28.3 RR	Trib. To Dan River	Intermittent	0	23.22	0	0	0	Cascade Creek-Dan River (0301010309)	36.516791	-79.656438	Class C	Workspace Only
S-A18-34	28.4 RR	Trib. To Dan River	Intermittent	0	21.04	0	0	0	Cascade Creek-Dan River (0301010309)	36.516213	-79.656859	Class C	Conventional - Dam and pump, Flume
S-A18-32	28.4 RR	Trib. To Dan River	Perennial	14.07	84.03	0	0	0	Cascade Creek-Dan River (0301010309)	36.51621	-79.65687	Class C	Workspace Only
S-A18-36	28.4 RR	Trib. To Dan River	Perennial	0	134.51	0	0	0	Cascade Creek-Dan River (0301010309)	36.515519	-79.657542	Class C	Workspace Only
S-A18-37	28.6 RR	Trib. To Dan River	Perennial	2	56.31	0	0	0	Cascade Creek-Dan River (0301010309)	36.513215	-79.66	Class C	Workspace Only
S-B18-49	28.8	Trib. To Dan River	Perennial	3	79.65	0	0	0	Cascade Creek-Dan River (0301010309)	36.511358	-79.662142	Class C	Conventional - Dam and pump, Flume
S-A18-47	29.6	Trib. To Dan River	Perennial	3	85.45	0	0	0	Cascade Creek-Dan River (0301010309)	36.502865	-79.670501	Class C	Conventional - Dam and pump, Flume
S-A18-17	30.1	Dan River	Perennial	247.29	51.52	0	0	0	Cascade Creek-Dan River (0301010309)	36.497031	-79.676456	Class C	HDD
S-B18-38	30.3	Trib. To Dan River	Ephemeral	3	54.24	0	0	0	Cascade Creek-Dan River (0301010309)	36.49528	-79.678502	Class C	HDD
S-B18-104	30.8	Trib. To Rock Creek	Perennial	3	81.43	0	0	0	Cascade Creek-Dan River (0301010309)	36.488765	-79.683931	Class C	Conventional - Dam and pump, Flume
S-B19-153	30.9	Trib. To Rock Creek	Intermittent	2	76.46	0	0	0	Cascade Creek-Dan River (0301010309)	36.487872	-79.684067	Class C	Conventional - Dam and pump, Flume
AS-B18-105	31.1	Trib. To Rock Creek	Intermittent	1	79.26	0	0	0	Cascade Creek-Dan River (0301010309)	36.485991	-79.68454	Class C	Conventional - Dam and pump, Flume
S-B18-102	31.1	Trib. To Rock Creek	Perennial	2	82.33	0	0	0	Cascade Creek-Dan River (0301010309)	36.485605	-79.685131	Class C	Conventional - Dam and pump, Flume
S-B18-95	31.3	Rock Creek	Perennial	28.34	76.02	0	0	0	Cascade Creek-Dan River (0301010309)	36.483454	-79.686791	Class C	Conventional - Dam and pump, Flume
S-B18-120	31.7	Trib. To Machine Creek	Ephemeral	0	27.94	0	0	0	Cascade Creek-Dan River (0301010309)	36.479718	-79.69264	Class C	Conventional - Dam and pump, Flume
S-A18-143	31.9	Trib. To Machine Creek	Intermittent	2	150.89	0	0	0	Cascade Creek-Dan River (0301010309)	36.478398	-79.694914	Class C	Conventional - Dam and pump, Flume

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S-A18-140	31.9	Trib. To Machine Creek	Perennial	4	201.59	0	0	0	Cascade Creek-Dan River (0301010309)	36.477695	-79.695546	Class C	Conventional - Dam and pump, Flume
S-A18-144	32.0	Trib. To Machine Creek	Intermittent	2	102.21	0	0	0	Cascade Creek-Dan River (0301010309)	36.477286	-79.695799	Class C	Conventional - Dam and pump, Flume
S-A18-140-2	32.0	Trib. To Machine Creek	Perennial	4	100.95	0	0	0	Cascade Creek-Dan River (0301010309)	36.476929	-79.696134	Class C	Conventional - Dam and pump, Flume
S-A18-147	32.2	Machine Creek	Perennial	102.6	184.89	0	0	0	Cascade Creek-Dan River (0301010309)	36.475168	-79.697917	Class C	Conventional - Dam and pump, Flume
S-A18-153	32.6	Trib. To Town Creek	Intermittent	2	113.52	0	0	0	Cascade Creek-Dan River (0301010309)	36.469633	-79.702555	Class C	Conventional - Dam and pump, Flume
S-A18-151	32.7	Town Creek	Perennial	103.3	202.32	0	0	0	Cascade Creek-Dan River (0301010309)	36.469505	-79.702867	Class C	Conventional - Dam and pump, Flume
S-A18-151	32.7	Town Creek	Perennial	55.39	117.65	0	0	0	Cascade Creek-Dan River (0301010309)	36.465204	-79.703351	Class C	Conventional - Dam and pump, Flume
S-A18-151-2	33.0	Town Creek	Perennial	47.92	84.66	0	0	0	Cascade Creek-Dan River (0301010309)	36.465094	-79.703075	Class C	Workspace Only
S-A18-154-2	33.0	Trib. To Town Creek	Intermittent	2	128.68	0	0	0	Cascade Creek-Dan River (0301010309)	36.464931	-79.703061	Class C	Workspace Only
S-A18-154-3	33.0	Trib. To Town Creek	Intermittent	0	14.04	0	0	0	Cascade Creek-Dan River (0301010309)	36.464799	-79.702976	Class C	Workspace Only
S-A18-220	33.3	Trib. To Town Creek	Ephemeral	3	60.06	0	0	0	Cascade Creek-Dan River (0301010309)	36.461329	-79.701621	Class C	Conventional - Dam and pump, Flume
S-A18-221	33.3	Trib. To Town Creek	Perennial	4	80.68	0	0	0	Cascade Creek-Dan River (0301010309)	36.460709	-79.701207	Class C	Conventional - Dam and pump, Flume
S-C18-52	33.4	Trib. To Town Creek	Intermittent	5	71.88	0	0	0	Cascade Creek-Dan River (0301010309)	36.459368	-79.700165	Class C	Conventional - Dam and pump, Flume
S-C18-51	33.5	Trib. To Town Creek	Intermittent	4	87.1	0	0	0	Cascade Creek-Dan River (0301010309)	36.458243	-79.699369	Class C	Conventional - Dam and pump, Flume
S-A18-223	33.7	Trib. To Town Creek	Intermittent	4	81.07	0	0	0	Cascade Creek-Dan River (0301010309)	36.456022	-79.697744	Class C	Conventional - Dam and pump, Flume
S-A18-225	33.7	Trib. To Town Creek	Perennial	5	102.37	0	0	0	Cascade Creek-Dan River (0301010309)	36.455521	-79.697347	Class C	Conventional - Dam and pump, Flume
S-C18-49	33.9	Trib. To Town Creek	Intermittent	4	87.01	0	0	0	Cascade Creek-Dan River (0301010309)	36.453061	-79.695572	Class C	Conventional - Dam and pump, Flume
S-C18-38	34.2 RR	Trib. To Town Creek	Perennial	32.88	82.18	0	0	0	Cascade Creek-Dan River (0301010309)	36.449579	-79.693352	Class C	Conventional - Dam and pump, Flume
S-C18-39	34.5	Trib. To Town Creek	Ephemeral	2	107.5	0	0	0	Cascade Creek-Dan River (0301010309)	36.445668	-79.689734	Class C	Conventional - Dam and pump, Flume
S-C18-38-2	34.6	Trib. To Town Creek	Perennial	16.74	333.03	0	0	0	Cascade Creek-Dan River (0301010309)	36.445029	-79.689023	Class C	Conventional - Dam and pump, Flume
S-C18-53	34.7	Trib. To Town Creek	Intermittent	2	214.88	0	0	0	Cascade Creek-Dan River (0301010309)	36.44428	-79.688347	Class C	Conventional - Dam and pump, Flume

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S-C18-38-3	34.8	Trib. To Town Creek	Perennial	23.31	87.35	0	0	0	Cascade Creek-Dan River (0301010309)	36.442972	-79.686847	Class C	Conventional - Dam and pump, Flume
S-C18-74	34.8	Trib. To Town Creek	Ephemeral	3	71.55	0	0	0	Cascade Creek-Dan River (0301010309)	36.442723	-79.686773	Class C	Conventional - Dam and pump, Flume
S-C18-38-4	35.0	Trib. To Town Creek	Perennial	7.5	60.14	0	0	0	Cascade Creek-Dan River (0301010309)	36.440893	-79.684487	Class C	Conventional - Dam and pump, Flume
S-C18-57	35.1	Trib. To Town Creek	Intermittent	2	84.49	0	0	0	Cascade Creek-Dan River (0301010309)	36.439586	-79.682695	Class C	Conventional - Dam and pump, Flume
S-C18-35	36.0	Trib. To Town Creek	Perennial	9.94	72.87	0	0	0	Cascade Creek-Dan River (0301010309)	36.433317	-79.670784	Class C	Conventional - Dam and pump, Flume
S-A18-94	37.0	Trib. To Wolf Island Creek	Perennial	3	125	0	0	0	Cascade Creek-Dan River (0301010309)	36.425044	-79.657717	Class C	Conventional - Dam and pump, Flume
S-A18-97	37.2	Trib. To Wolf Island Creek	Perennial	3	86.64	0	0	0	Cascade Creek-Dan River (0301010309)	36.423293	-79.656083	Class C	Conventional - Dam and pump, Flume
S-A18-101	37.3	Trib. To Wolf Island Creek	Perennial	2	83.86	0	0	0	Cascade Creek-Dan River (0301010309)	36.42209	-79.655133	Class C	Conventional - Dam and pump, Flume
S-B19-157	37.6	Trib. To Wolf Island Creek	Perennial	3	79.69	0	0	0	Cascade Creek-Dan River (0301010309)	36.418238	-79.651901	Class C	Conventional - Dam and pump, Flume
AS-B18-117	37.7	Trib. To Wolf Island Creek	Perennial	12.08	75.58	0	0	0	Cascade Creek-Dan River (0301010309)	36.416332	-79.65073	Class C	Conventional - Dam and pump, Flume
AS-APS-400	38.2	Trib. To Wolf Island Creek	Intermittent	0	113.65	0	0	0	Cascade Creek-Dan River (0301010309)	36.410892	-79.650521	Class C	Conventional - Dam and pump, Flume
S-A18-2	38.2	Trib. To Wolf Island Creek	Perennial	20.49	86.73	0	0	0	Cascade Creek-Dan River (0301010309)	36.410702	-79.650897	Class C	Conventional - Dam and pump, Flume
S-A18-9	38.4	Trib. To Wolf Island Creek	Perennial	3	122.4	0	0	0	Cascade Creek-Dan River (0301010309)	36.407871	-79.649861	Class C	Conventional - Dam and pump, Flume
S-A18-4	38.5	Trib. To Wolf Island Creek	Perennial	0	26.78	0	0	0	Cascade Creek-Dan River (0301010309)	36.407314	-79.649138	Class C	Workspace Only
S-A18-4-2	38.5	Trib. To Wolf Island Creek	Perennial	0	41.47	0	0	0	Cascade Creek-Dan River (0301010309)	36.407119	-79.648883	Class C	Workspace Only
AS-A18-8	38.8	Wolf Island Creek	Perennial	53.13	97.69	0	0	0	Cascade Creek-Dan River (0301010309)	36.404102	-79.64683	Class C	Conventional Bore
S-A19-269	38.8	Trib. To Wolf Island Creek	Intermittent	2	103.5	0	0	0	Cascade Creek-Dan River (0301010309)	36.403781	-79.64669	Class C	Conventional - Dam and pump, Flume
S-B18-72	39.0	Trib. To Wolf Island Creek	Ephemeral	2	81.32	0	0	0	Cascade Creek-Dan River (0301010309)	36.402381	-79.64372	Class C	Conventional - Dam and pump, Flume
S-B18-74	39.1	Trib. To Wolf Island Creek	Perennial	4	86.09	0	0	0	Cascade Creek-Dan River (0301010309)	36.400716	-79.643007	Class C	Conventional - Dam and pump, Flume
S-B18-74-2	39.6	Trib. To Wolf Island Creek	Perennial	4	88.97	0	0	0	Cascade Creek-Dan River (0301010309)	36.393964	-79.638293	Class C	Conventional - Dam and pump, Flume
S-B18-108	40.2	Trib. To Lick Fork	Perennial	26.88	80.36	0	0	0	Hogans Creek-Dan River (0301010401)	36.386918	-79.636514	Class C	Conventional - Dam and pump, Flume

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S-A18-210	40.5 RR	Trib. To Lick Fork	Intermittent	2	68.74	0	0	0	Hogans Creek-Dan River (0301010401)	36.384147	-79.632947	Class C	Conventional - Dam and pump, Flume
S-A18-210-2	40.5 RR	Trib. To Lick Fork	Intermittent	2	82.27	0	0	0	Hogans Creek-Dan River (0301010401)	36.384171	-79.632816	Class C	Conventional - Dam and pump, Flume
S-B18-51	40.6	Trib. To Lick Fork	Perennial	4	76.85	0	0	0	Hogans Creek-Dan River (0301010401)	36.383717	-79.630887	Class C	Conventional - Dam and pump, Flume
S-B18-52	40.7	Trib. To Lick Fork	Perennial	4	97.09	0	0	0	Hogans Creek-Dan River (0301010401)	36.382694	-79.628502	Class C	Conventional - Dam and pump, Flume
S-B18-57	41.1	Trib. To Lick Fork	Perennial	2	85.96	0	0	0	Hogans Creek-Dan River (0301010401)	36.377703	-79.625129	Class C	Conventional - Dam and pump, Flume
S-B18-56	41.2	Lick Fork	Perennial	39.06	82.67	0	0	0	Hogans Creek-Dan River (0301010401)	36.377699	-79.624989	Class C	Conventional - Dam and pump, Flume
S-A18-171	41.2	Trib. To Lick Fork	Intermittent	2	79.02	0	0	0	Hogans Creek-Dan River (0301010401)	36.377448	-79.624979	Class C	Conventional - Dam and pump, Flume
AS-B18-44	41.6	Trib. To Lick Fork	Intermittent	0	57.9	0	0	0	Hogans Creek-Dan River (0301010401)	36.371801	-79.621785	Class C	Workspace Only
S-B18-44	41.7	Trib. To Lick Fork	Intermittent	3	80.28	0	0	0	Hogans Creek-Dan River (0301010401)	36.371445	-79.620603	Class C	Conventional - Dam and pump, Flume
S-B18-41	41.8	Trib. To Lick Fork	Perennial	19.47	83.9	0	0	0	Hogans Creek-Dan River (0301010401)	36.369466	-79.620487	Class C	Conventional - Dam and pump, Flume
S-B18-89	42.3	Trib. To Jones Creek	Ephemeral	1	77.82	0	0	0	Hogans Creek-Dan River (0301010401)	36.365523	-79.614749	Class C	Conventional - Dam and pump, Flume
S-A18-256	42.9	Trib. To Jones Creek	Intermittent	2	85.39	0	0	0	Hogans Creek-Dan River (0301010401)	36.357068	-79.613617	Class C	Conventional - Dam and pump, Flume
S-B18-92	43.1	Trib. To Jones Creek	Perennial	12.04	128.1	0	0	0	Hogans Creek-Dan River (0301010401)	36.354705	-79.61163	Class C	Conventional - Dam and pump, Flume
S-A18-176	43.3	Jones Creek	Perennial	25.85	88.63	0	0	0	Hogans Creek-Dan River (0301010401)	36.352234	-79.610888	Class C	Conventional - Dam and pump, Flume
S-A18-181	43.3	Trib. To Jones Creek	Perennial	2	111.8	0	0	0	Hogans Creek-Dan River (0301010401)	36.351797	-79.61089	Class C	Conventional - Dam and pump, Flume
S-C18-80	43.7	Trib. To Jones Creek	Perennial	4	77.19	0	0	0	Hogans Creek-Dan River (0301010401)	36.34734	-79.606823	Class C	Conventional - Dam and pump, Flume
S-A18-105	43.7	Trib. To Jones Creek	Perennial	53.47	181.8	0	0	0	Hogans Creek-Dan River (0301010401)	36.347364	-79.606696	Class C	Conventional - Dam and pump, Flume
S-C18-25	44.1	Trib. To Jones Creek	Perennial	4	85.27	0	0	0	Hogans Creek-Dan River (0301010401)	36.342508	-79.605795	Class C	Conventional - Dam and pump, Flume
S-A18-102	44.1	Trib. To Jones Creek	Perennial	3	112.45	0	0	0	Hogans Creek-Dan River (0301010401)	36.341526	-79.605701	Class C	Conventional - Dam and pump, Flume
S-A18-228	44.5	Trib. To Jones Creek	Ephemeral	5	90.63	0	0	0	Hogans Creek-Dan River (0301010401)	36.336045	-79.60292	Class C	Conventional - Dam and pump, Flume
S-A18-213	45.7	Trib. To Hogans Creek	Intermittent	0	99.31	0	0	0	Hogans Creek-Dan River (0301010401)	36.322151	-79.594083	Class C	Workspace Only

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S-B18-71	45.7	Trib. To Hogans Creek	Perennial	22.88	97.13	0	0	0	Hogans Creek-Dan River (0301010401)	36.321913	-79.594133	Class C	Conventional - Dam and pump, Flume
S-B18-68	45.8	Trib. To Hogans Creek	Perennial	3	96.18	0	0	0	Hogans Creek-Dan River (0301010401)	36.320378	-79.593663	Class C	Conventional - Dam and pump, Flume
S-A18-231	46.4	Trib. To Hogans Creek	Ephemeral	0	70.89	0	0	0	Hogans Creek-Dan River (0301010401)	36.313276	-79.589363	Class C	Workspace Only
S-A18-235	46.5	Trib. To Hogans Creek	Perennial	3	105.64	0	0	0	Hogans Creek-Dan River (0301010401)	36.312488	-79.589461	Class C	Conventional - Dam and pump, Flume
S-A18-234	46.5	Trib. To Hogans Creek	Intermittent	2	120.56	0	0	0	Hogans Creek-Dan River (0301010401)	36.312334	-79.589534	Class C	Conventional - Dam and pump, Flume
S-C18-76	47.0	Hogans Creek	Perennial	18.81	81.01	0	0	0	Hogans Creek-Dan River (0301010401)	36.305714	-79.587838	Class C	Conventional - Dam and pump, Flume
S-C18-79	47.4	Trib. To Hogans Creek	Perennial	4	216.49	0	0	0	Hogans Creek-Dan River (0301010401)	36.300793	-79.585578	Class C	Conventional - Dam and pump, Flume
S-A18-90	47.6	Trib. To Hogans Creek	Perennial	2	102.96	0	0	0	Hogans Creek-Dan River (0301010401)	36.299431	-79.583033	Class C	Conventional - Dam and pump, Flume
S-B19-167	47.7	Trib. To Hogans Creek	Intermittent	3	50.11	0	0	0	Hogans Creek-Dan River (0301010401)	36.297594	-79.581347	Class C	Conventional - Dam and pump, Flume
S-A18-242	47.7	Trib. To Hogans Creek	Perennial	19.1	101.79	0	0	0	Hogans Creek-Dan River (0301010401)	36.297689	-79.58125	Class C	Conventional - Dam and pump, Flume
S-A18-60	48.7	Giles Creek	Perennial	4	87.8	0	0	0	Headwaters Haw River (0303000202)	36.28843	-79.571456	Class C, WS-IV, NSW	Conventional - Dam and pump, Flume
S-A18-55	49.3	Trib. To Giles Creek	Perennial	3	79.71	0	0	0	Headwaters Haw River (0303000202)	36.282886	-79.563744	Class C	Conventional - Dam and pump, Flume
S-A18-183	49.9 RR	Trib. To Haw River	Perennial	4	159.53	0	0	0	Headwaters Haw River (0303000202)	36.275063	-79.559087	Class C	Conventional - Dam and pump, Flume
S-A18-185	49.9 RR	Trib. To Haw River	Intermittent	1	85.98	0	0	0	Headwaters Haw River (0303000202)	36.274963	-79.55901	Class C	Workspace Only
AS-A18-182	49.9 RR	Trib. To Haw River	Intermittent	1	85.02	0	0	0	Headwaters Haw River (0303000202)	36.274464	-79.558631	Class C	Conventional - Dam and pump, Flume
S-A18-244	50.2	Trib. To Haw River	Perennial	3	83.13	0	0	0	Headwaters Haw River (0303000202)	36.2712	-79.556254	Class C	Conventional - Dam and pump, Flume
SS-SOIL18-02	50.5 RR	Trib. To Haw River	Perennial	Unknown	176.43	0	0	0	Headwaters Haw River (0303000202)	36.267463	-79.553567	Class C	Conventional - Dam and pump, Flume
S-A19-289	50.7 RR	Trib. To Haw River	Intermittent	0	158	0	0	0	Headwaters Haw River (0303000202)	36.264476	-79.551251	Class C	Conventional - Dam and pump, Flume
S-A19-286	50.8 RR	Trib. To Haw River	Perennial	128.81	380.57	0	0	0	Headwaters Haw River (0303000202)	36.264049	-79.551	Class C	Conventional - Dam and pump, Flume
S-A19-285	51.2 RR	Trib. To Haw River	Intermittent	0	28.86	0	0	0	Headwaters Haw River (0303000202)	36.258179	-79.546649	Class C	Workspace Only
S-C18-22	51.3 RR	Trib. To Haw River	Ephemeral	3	85.8	0	0	0	Headwaters Haw River (0303000202)	36.257977	-79.546684	Class C	Conventional - Dam and pump, Flume

Appendix L-2
Proposed Waterbody Impacts by ID and Type of Impact

Impact ID a/	Milepost	Waterbody Name	Waterbody Type b/	Pipeline Cross Length (Feet) c/	Stream within Construction Workspace (linear feet) d/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)	Watershed (HUC 10)	Latitude	Longitude	Water Quality Classification e/	Crossing Method f/
S-C18-21	51.4 RR	Trib. To Haw River	Perennial	0	7.51	0	0	0	Headwaters Haw River (0303000202)	36.256586	-79.545447	Class C	Workspace Only
WB-C18-19	51.4 RR	Trib. To Haw River	Pond	0	13.64	0	507.47	0	Headwaters Haw River (0303000202)	36.256752	-79.545737	Class C	Workspace Only
AS-A18-219	52.4 RR	Trib. To Haw River	Perennial	4.96	106.99	0	0	0	Headwaters Haw River (0303000202)	36.244453	-79.536098	Class C	Conventional - Dam and pump, Flume
S-C18-15	52.2 RR	Trib. To Haw River	Intermittent	3	85.36	0	0	0	Headwaters Haw River (0303000202)	36.246769	-79.539171	Class C	Conventional - Dam and pump, Flume
Pipeline (Alamance County)													
S-B18-94	52.7	Trib. To Haw River	Perennial	4	123.51	0	0	0	Headwaters Haw River (0303000202)	36.241697	-79.530936	Class C	Conventional - Dam and pump, Flume
S-A18-84	53.7	Trib. To Haw River	Perennial	4	83.67	0	0	0	Headwaters Haw River (0303000202)	36.229893	-79.527187	Class C	Conventional - Dam and pump, Flume
S-A18-87	53.7	Trib. To Haw River	Perennial	5	172.22	0	0	0	Headwaters Haw River (0303000202)	36.229072	-79.526605	Class C	Conventional - Dam and pump, Flume
S-A18-89	54.0	Trib. To Haw River	Intermittent	0	58.46	0	0	0	Headwaters Haw River (0303000202)	36.225888	-79.524627	Class C	Workspace Only
S-C18-63	54.5	Trib. To Haw River	Perennial	4	144.73	0	0	0	Headwaters Haw River (0303000202)	36.219428	-79.520167	Class C	Conventional - Dam and pump, Flume
S-C18-62	54.6	Trib. To Haw River	Perennial	4	118.07	0	0	0	Headwaters Haw River (0303000202)	36.217766	-79.519092	Class C	Conventional - Dam and pump, Flume
S-C18-60	54.9	Trib. To Haw River	Intermittent	4	82.19	0	0	0	Headwaters Haw River (0303000202)	36.214322	-79.516736	Class C	Conventional - Dam and pump, Flume
S-B18-143	54.9	Trib. To Haw River	Ephemeral	0	46.22	0	0	0	Headwaters Haw River (0303000202)	36.213707	-79.516255	Class C	Workspace Only
S-B18-142	54.9	Trib. To Haw River	Intermittent	1	53.38	0	0	0	Headwaters Haw River (0303000202)	36.213587	-79.516285	Class C	Conventional - Dam and pump, Flume
S-C18-61	54.9	Trib. To Haw River	Intermittent	2	47.49	0	0	0	Headwaters Haw River (0303000202)	36.213546	-79.516288	Class C	Conventional - Dam and pump, Flume
AS-C18-68	55.3 RR	Trib. To Haw River	Perennial	5	77.52	0	0	0	Headwaters Haw River (0303000202)	36.209732	-79.518255	Class C	Conventional - Dam and pump, Flume
S-B18-59	55.6 RR	Trib. To Haw River	Perennial	3	77.52	0	0	0	Headwaters Haw River (0303000202)	36.208148	-79.515108	Class C	Conventional - Dam and pump, Flume
S-B18-65	56.4 RR	Trib. To Haw River	Intermittent	2	75.29	0	0	0	Back Creek-Haw River (0303000204)	36.199451	-79.500779	Class C	Conventional - Dam and pump, Flume
S-A18-120	56.4 RR	Trib. To Haw River	Perennial	2	73.86	0	0	0	Back Creek-Haw River (0303000204)	36.199406	-79.500675	Class C	Conventional - Dam and pump, Flume
WB-A18-121	56.5	Trib. To Haw River	Pond	31.4	79.07	0	1864.07	0	Back Creek-Haw River (0303000204)	36.19866	-79.499878	Class C	Conventional - Dam and pump, Flume
S-A18-123	56.6 RR	Trib. To Haw River	Intermittent	1	72.97	0	0	0	Back Creek-Haw River (0303000204)	36.198085	-79.498584	Class C	Conventional - Dam and pump, Flume

Appendix L-2
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Impact ID a/	Milepost	Waterbody Name	Waterbody Type b/	Pipeline Cross Length (Feet) c/	Stream within Construction Workspace (linear feet) d/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)	Watershed (HUC 10)	Latitude	Longitude	Water Quality Classification e/	Crossing Method f/
S-A18-129	56.6 RR	Trib. To Haw River	Ephemeral	2	121.7	0	0	0	Back Creek-Haw River (0303000204)	36.197465	-79.497969	Class C	Conventional - Dam and pump, Flume
WB-A18-128	56.7 RR	Trib. To Haw River	Pond	67.89	65.21	0	4166.94	0	Back Creek-Haw River (0303000204)	36.196792	-79.49779	Class C	Conventional - Dam and pump, Flume
S-A18-132	57.1	Trib. To Haw River	Perennial	5	120.02	0	0	0	Back Creek-Haw River (0303000204)	36.19048	-79.496431	Class C	Conventional - Dam and pump, Flume
S-C18-2	57.9	Trib. To Haw River	Intermittent	1	92.62	0	0	0	Back Creek-Haw River (0303000204)	36.18076	-79.494282	Class C	Conventional - Dam and pump, Flume
SS-SOIL18-07	58.4	Trib. To Haw River	Perennial	Unknown	100.03	0	0	0	Back Creek-Haw River (0303000204)	36.174081	-79.489117	Class C	Conventional - Dam and pump, Flume
AS-C18-11	58.7 RR	Trib. To Haw River	Perennial	79	254	0	0	0	Back Creek-Haw River (0303000204)	36.171947	-79.486755	Class C	Conventional - Dam and pump, Flume
AS-C18-12	58.7 RR	Trib. To Haw River	Intermittent	0	6	0	0	0	Back Creek-Haw River (0303000204)	36.171897	-79.485596	Class C	Workspace Only
SS-SOIL19-02	59.3	Trib. To Haw River	Perennial	Approximated Soil Survey Stream Centerline	0	195.29	0	0	Back Creek-Haw River (0303000204)	36.169091	-79.47562	Class C	Conventional - Dam and pump, Flume
AS-NHD-1549*	59.6	Trib. To Haw River	Intermittent	5	88.77	0	0	0	Back Creek-Haw River (0303000204)	36.164607	-79.473414	Class C	Conventional - Dam and pump, Flume
S-C18-30	60.7	Trib. To Haw River	Intermittent	15.73	78.66	0	0	0	Back Creek-Haw River (0303000204)	36.160814	-79.454959	Class C	Conventional - Dam and pump, Flume
S-C18-28	60.8 RR	Trib. To Haw River	Intermittent	3	94.74	0	0	0	Back Creek-Haw River (0303000204)	36.160805	-79.453404	Class C	Conventional - Dam and pump, Flume
SS-SOIL18-08	61.3	Trib. To Haw River	Perennial	Unknown	100.27	0	0	0	Back Creek-Haw River (0303000204)	36.160468	-79.444316	Class C	Conventional - Dam and pump, Flume
S-A18-78	61.8	Trib. To Haw River	Intermittent	2	87.42	0	0	0	Back Creek-Haw River (0303000204)	36.156312	-79.439294	Class C	Conventional - Dam and pump, Flume
S-A18-70	62.5	Trib. To Haw River	Perennial	13.03	76.61	0	0	0	Back Creek-Haw River (0303000204)	36.149993	-79.43016	Class C	Conventional - Dam and pump, Flume
AS-B18-24	63.0 RR	Trib. To Stony Creek	Perennial	4	105.39	0	0	0	Back Creek-Haw River (0303000204)	36.147111	-79.422759	Class C	Conventional - Dam and pump, Flume
AS-NHD-100	63.4 RR	Trib. To Stony Creek	Perennial	5	78.04	0	0	0	Back Creek-Haw River (0303000204)	36.145919	-79.416996	Class C	Conventional - Dam and pump, Flume
S-B18-15	63.5	Trib. To Stony Creek	Intermittent	0	2.66	0	0	0	Back Creek-Haw River (0303000204)	36.146424	-79.413362	Class C	Workspace Only
AS-B18-16 / S-B18-16	63.6	Stony Creek	Perennial	304.73	60.62	0	0	0	Back Creek-Haw River (0303000204)	36.146545	-79.411696	Class C, WS-II, HQW, NSW, CA	HDD
AS-B18-20	63.8	Trib. To Deep Creek	Intermittent	2	96.35	0	0	0	Back Creek-Haw River (0303000204)	36.146452	-79.407099	Class C	Conventional - Dam and pump, Flume

Appendix L-2
Proposed Waterbody Impacts by ID and Type of Impact

Impact ID a/	Milepost	Waterbody Name	Waterbody Type b/	Pipeline Cross Length (Feet) c/	Stream within Construction Workspace (linear feet) d/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)	Watershed (HUC 10)	Latitude	Longitude	Water Quality Classification e/	Crossing Method f/
AS-NHD-1547	64.1 RR	Deep Creek	Perennial	19.1	79.09	0	0	0	Back Creek-Haw River (0303000204)	36.14674	-79.403671	Class C, WS-II, HQW, NSW, CA	Conventional Bore
AS-NHD-3040*	64.5	Trib. To Deep Creek	Intermittent	5	79.58	0	0	0	Back Creek-Haw River (0303000204)	36.146327	-79.395938	Class C	Conventional - Dam and pump, Flume
S-A19-319	65.0 RR	Trib. To Boyds Creek	Intermittent	0	18.69	0	0	0	Back Creek-Haw River (0303000204)	36.145888	-79.387221	Class C	Workspace Only
S-A19-321	65.1 RR	Trib. To Boyds Creek	Intermittent	2	180.26	0	0	0	Back Creek-Haw River (0303000204)	36.145518	-79.385233	Class C	Conventional - Dam and pump, Flume
S-A19-324	65.1 RR	Trib. To Boyds Creek	Perennial	3	181.57	0	0	0	Back Creek-Haw River (0303000204)	36.14548	-79.384078	Class C	Conventional - Dam and pump, Flume
S-A18-251	65.6	Trib. To Boyds Creek	Intermittent	2	33.27	0	0	0	Back Creek-Haw River (0303000204)	36.139001	-79.380363	Class C	Conventional - Dam and pump, Flume
AS-NHD-7002	66.5 RR	Trib. To Boyds Creek	Intermittent	5	108.76	0	0	0	Back Creek-Haw River (0303000204)	36.132332	-79.370622	Class C	Conventional - Dam and pump, Flume
AS-NHD-3025*	66.7 RR	Trib. To Boyds Creek	Intermittent	5	75.78	0	0	0	Back Creek-Haw River (0303000204)	36.129295	-79.370762	Class C	Conventional - Dam and pump, Flume
AS-A18-177	67.2 RR	Trib. To Boyds Creek	Perennial	5	118.62	0	0	0	Back Creek-Haw River (0303000204)	36.123898	-79.372881	Class C	Conventional - Dam and pump, Flume
AS-A18-180	67.2 RR	Trib. To Boyds Creek	Intermittent	3	50.5	0	0	0	Back Creek-Haw River (0303000204)	36.123939	-79.372813	Class C	Conventional - Dam and pump, Flume
AS-A18-177-2	67.2 RR	Trib. To Boyds Creek	Perennial	0	19.41	0	0	0	Back Creek-Haw River (0303000204)	36.123694	-79.372778	Class C	Workspace Only
S-B18-80	67.2 RR	Trib. To Boyds Creek	Intermittent	1	63.97	0	0	0	Back Creek-Haw River (0303000204)	36.122714	-79.373027	Class C	Conventional - Dam and pump, Flume
SS-SOIL19-31	67.2 RR	Trib. To Boyds Creek	Perennial	0	41.01	0	0	0	Back Creek-Haw River (0303000204)	36.122761	-79.372896	Class C	Conventional - Dam and pump, Flume
S-A18-250	65.6	Trib. To Boyds Creek	Perennial	4	91.74	0	0	0	Back Creek-Haw River (0303000204)	36.138984	-79.380327	Class C	Conventional - Dam and pump, Flume
AS-A18-233 / S-A18-233	67.6	Boyds Creek	Perennial	24.84	87.29	0	0	0	Back Creek-Haw River (0303000204)	36.116803	-79.372489	Class C, WS-V, NSW	Conventional - Dam and pump, Flume
SS-SOIL19-10	67.6	Trib. To Boyds Creek	Perennial	0	90.44	0	0	0	Back Creek-Haw River (0303000204)	36.116519	-79.372164	Class C	Conventional - Dam and pump, Flume
SS-SOIL19-12	67.9	Trib. To Boyds Creek	Perennial	Unknown	122.55	0	0	0	Back Creek-Haw River (0303000204)	36.112125	-79.371692	Class C	Conventional - Dam and pump, Flume
AS-NHD-1551*	68.1	Trib. To Boyds Creek	Intermittent	5	88.18	0	0	0	Back Creek-Haw River (0303000204)	36.109669	-79.371795	Class C	Conventional - Dam and pump, Flume
S-B18-7	68.4	Trib. To Boyds Creek	Perennial	2.81	77.09	0	0	0	Back Creek-Haw River (0303000204)	36.105444	-79.370782	Class C	Conventional - Dam and pump, Flume
AS-NHD-1552*	68.6	Trib. To Boyds Creek	Intermittent	5	86.65	0	0	0	Back Creek-Haw River (0303000204)	36.103285	-79.370132	Class C	Conventional - Dam and pump, Flume

Appendix L-2
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S-B18-8	68.8	Trib. To Haw River	Intermittent	13	92.92	0	0	0	Back Creek-Haw River (0303000204)	36.100054	-79.370638	Class C	Conventional - Dam and pump, Flume
S-B18-11	68.9	Trib. To Haw River	Intermittent	3	90.69	0	0	0	Back Creek-Haw River (0303000204)	36.098882	-79.370531	Class C	Conventional - Dam and pump, Flume
S-A18-15	69.2	Trib. To Haw River	Intermittent	4	84.42	0	0	0	Back Creek-Haw River (0303000204)	36.094442	-79.369062	Class C	Conventional - Dam and pump, Flume
AS-B18-132	69.5	Trib. To Haw River	Perennial	8.05	78.6	0	0	0	Back Creek-Haw River (0303000204)	36.093709	-79.365207	Class C	Conventional - Dam and pump, Flume
S-C18-70	69.7 RR	Trib. To Haw River	Intermittent	0	273.85	0	0	0	Back Creek-Haw River (0303000204)	36.09031	-79.364971	Class C	Conventional - Dam and pump, Flume
S-A18-115	70.0 RR	Trib. To Haw River	Perennial	5.67	71.39	0	0	0	Back Creek-Haw River (0303000204)	36.087628	-79.363544	Class C	Conventional - Dam and pump, Flume
S-B18-133	70.3	Trib. To Haw River	Perennial	11.4	75.66	0	0	0	Back Creek-Haw River (0303000204)	36.083251	-79.360739	Class C	Conventional - Dam and pump, Flume
S-C18-82	70.4	Trib. To Haw River	Intermittent	3	92.31	0	0	0	Back Creek-Haw River (0303000204)	36.081679	-79.359706	Class C	Conventional - Dam and pump, Flume
S-C18-81	70.7	Trib. To Haw River	Perennial	24.18	83.02	0	0	0	Back Creek-Haw River (0303000204)	36.077105	-79.35763	Class C	Conventional - Dam and pump, Flume
S-A18-109	70.9	Trib. To Haw River	Perennial	5	104.25	0	0	0	Back Creek-Haw River (0303000204)	36.074856	-79.357646	Class C	Conventional - Dam and pump, Flume
S-A18-108	71.0	Trib. To Haw River	Intermittent	2	115.56	0	0	0	Back Creek-Haw River (0303000204)	36.073911	-79.357977	Class C	Conventional - Dam and pump, Flume
S-A18-107	71.0	Trib. To Haw River	Ephemeral	1	118.36	0	0	0	Back Creek-Haw River (0303000204)	36.073176	-79.358145	Class C	Conventional - Dam and pump, Flume
S-A18-64	71.5	Trib. To Haw River	Perennial	25.88	74.95	0	0	0	Back Creek-Haw River (0303000204)	36.066556	-79.360407	Class C	Conventional - Dam and pump, Flume
S-A18-65	71.6	Trib. To Haw River	Intermittent	1	109.91	0	0	0	Back Creek-Haw River (0303000204)	36.064646	-79.360872	Class C	Conventional - Dam and pump, Flume
S-A18-68	71.8	Trib. To Haw River	Perennial	3	80.35	0	0	0	Back Creek-Haw River (0303000204)	36.061848	-79.361649	Class C	Conventional - Dam and pump, Flume
AS-NHD-1560*	72.1	Trib. To Haw River	Intermittent	5	76.03	0	0	0	Back Creek-Haw River (0303000204)	36.057851	-79.364004	Class C	Conventional - Dam and pump, Flume
S-A18-207	72.2	Trib. To Haw River	Intermittent	0	6.71	0	0	0	Back Creek-Haw River (0303000204)	36.056247	-79.364535	Class C	Workspace Only
S-B18-125	72.4	Trib. To Haw River	Intermittent	3	100.14	0	0	0	Back Creek-Haw River (0303000204)	36.054639	-79.36458	Class C	Conventional - Dam and pump, Flume
S-B18-127	72.5	Trib. To Haw River	Intermittent	5	121.15	0	0	0	Back Creek-Haw River (0303000204)	36.052274	-79.36528	Class C	Conventional - Dam and pump, Flume
S-B19-150	73.0 RR	Trib. To Back Creek	Perennial	0	176.18	0	0	0	Back Creek-Haw River (0303000204)	36.046455	-79.366712	Class C	Workspace Only
T-15 Dan River Interconnect (Rockingham County)													

Appendix L-2
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S-B18-38-2	30.3	Trib. To Dan River	Ephemeral	0	231.44	0	0	0	Cascade Creek-Dan River (0301010309)	36.495619	-79.680082	Class C	Workspace Only
Contractor Yard 5 (Rockingham County)													
AS-A18-248 / S-A18-248	30.6	Trib. To Dry Creek	Ephemeral	0	87.65	0	0	0	Cascade Creek-Dan River (0301010309)	36.518798	-79.721212	Class C	Workspace Only
Contractor Yard 25 A&B (Rockingham County)													
S-A19-299	43.9	Trib to East Prong Moon Creek	Perennial	0	6	0	0	0	Hogans Creek-Dan River (0301010401)	36.405133	-79.417965	Class C	Temporary Access Road
S-A19-299-2	43.9	Trib to East Prong Moon Creek	Perennial	0	25.01	0	0	0	Hogans Creek-Dan River (0301010401)	36.405109	-79.418008	Class C	Temporary Access Road
S-A19-305	43.9	Trib to East Prong Moon Creek	Intermittent	0	29.91	0	0	0	Hogans Creek-Dan River (0301010401)	36.404965	-79.417961	Class C	Temporary Access Road
S-A19-299-3	43.9	Trib to East Prong Moon Creek	Perennial	0	30.02	0	0	0	Hogans Creek-Dan River (0301010401)	36.403889	-79.421348	Class C	Temporary Access Road
Contractor Yard 26 A&B (Alamance County)													
S-A19-308	71.2	Trib. To Back Creek	Perennial	0	14.23	0	0	0	Back Creek-Haw River (0303000204)	36.061643	-79.316459	Class C	Temporary Access Road
Temporary Access Road: TA-RO-076 (Rockingham County)													
S-A18-23	28.3 RR	Trib. To Dan River	Perennial	0	10.71	0	0	0	Cascade Creek-Dan River (0301010309)	36.517519	-79.6579	Class C	Workspace Only
S-A18-27	28.4 RR	Trib. To Dan River	Intermittent	0	14.42	0	0	0	Cascade Creek-Dan River (0301010309)	36.517179	-79.658601	Class C	Workspace Only
			Total	**0**	**25.13**	**0**	**0**	**0**					
Temporary Access Road: TA-RO-080 (Rockingham County)													
S-A18-19	29.7	Trib. To Dan River	Perennial	0	14.29	0	0	0	Cascade Creek-Dan River (0301010309)	36.503339	-79.675523	Class C	Workspace Only
S-A18-19-2	29.8	Trib. To Dan River	Perennial	0	11.42	0	0	0	Cascade Creek-Dan River (0301010309)	36.501467	-79.674965	Class C	Workspace Only
			Total	**0**	**25.71**	**0**	**0**	**0**					
Temporary Access Road: TA-RO-103 (Rockingham County)													
S-A18-1	38.1	Trib. To Wolf Island Creek	Ephemeral	0	4.82	0	0	0	Cascade Creek-Dan River (0301010309)	36.412475	-79.649948	Class C	Bridge or Flume
Temporary Access Road: TA-RO-113A (Rockingham County)													
S-B18-42	41.8	Trib. To Lick Fork	Intermittent	0	13.45	0	0	0	Hogans Creek-Dan River (0301010401)	36.369659	-79.619928	Class C	Bridge or Flume

Appendix L-2
Proposed Waterbody Impacts by ID and Type of Impact

Impact ID a/	Milepost	Waterbody Name	Waterbody Type b/	Pipeline Cross Length (Feet) c/	Stream within Construction Workspace (linear feet) d/	Permanent Stream Impact (linear feet)	Pond within Construction Workspace (square feet)	Permanent Pond Impact (square feet)	Watershed (HUC 10)	Latitude	Longitude	Water Quality Classification e/	Crossing Method f/
Temporary Access Road: TA-RO-129 (Rockingham County)													
S-A18-239	46.7	Trib. To Hogans Creek	Intermittent	0	5.91	0	0	0	Hogans Creek-Dan River (0301010401)	36.308476	-79.593451	Class C	Workspace Only
S-A18-238	46.7	Trib. To Hogans Creek	Intermittent	0	0.23	0	0	0	Hogans Creek-Dan River (0301010401)	36.308519	-79.594753	Class C	Workspace Only
Temporary Access Road: TA-RO-139 (Rockingham County)													
S-C18-71	50.2 RR	Trib. To Haw River	Ephemeral	0	2.05	0	0	0	Headwaters Haw River (0303000202)	36.269615	-79.559552	Class C	Workspace Only
Temporary Access Road: TA-RO-144A (Rockingham County)													
S-C18-15-2	52.2	Trib. To Haw River	Intermittent	0	11.25	0	0	0	Headwaters Haw River (0303000202)	36.246228	-79.539291	Class C	Workspace Only
Temporary Access Road: TA-AL-155 (Alamance County)													
SS-SOIL19-30	54.7	Trib. To Haw River	Perennial	0	3.53	0	0	0	Headwaters Haw River (0303000202)	36.2144	-79.523237	Class C	Bridge or Flume
AS-A18-215 / S-A18-215	54.6	Trib. To Haw River	Perennial	0	25.7	0	0	0	Headwaters Haw River (0303000202)	36.216852	-79.520284	Class C	Bridge or Flume
AS-A18-216 / S-A18-216	54.6	Trib. To Haw River	Intermittent	0	26.24	0	0	0	Headwaters Haw River (0303000202)	36.216822	-79.520162	Class C	Bridge or Flume
Temporary Access Road: TA-AL-162 (Alamance County)													
SS-SOIL19-05	57.9	Trib. To Haw River	Perennial	0	41.96	0	0	0	Back Creek-Haw River (0303000204)	36.180067	-79.492282	Class C	Bridge or Flume
Temporary Access Road: TA-AL-172													
S-B18-138	63.7	Trib. To Stony Creek	Perennial	0	25.77	0	0	0	Back Creek-Haw River (0303000204)	36.149442	-79.40883	Class C	Bridge or Flume
S-B18-137	63.7	Trib. To Stony Creek	Intermittent	0	28.05	0	0	0	Back Creek-Haw River (0303000204)	36.151288	-79.408944	Class C	Bridge or Flume
Temporary Access Road: TA-AL-188 (Alamance County)													
SS-SOIL18-09	70.9	Trib. To Haw River	Perennial	0	12.22	0	0	0	Back Creek-Haw River (0303000204)	36.073553	-79.354916	Class C	Bridge or Flume
			Project Total	**2,113.09**	**17,726.29**	**0**	**6,538.49**	**0**					

a/ All waterbodies are 404 resources; none are Section 10
b/ Flow based on field evaluations using the NCDWQ Stream Identification Form Version 4.11 for delineated resource. For approximated waterbodies, flow type was estimated based on aerial imagery unless the approximated stream is directly associated with a delineated waterbody in which the approximated waterbody was assigned the same flow type as the associated delineated waterbody.
c/ Width of the waterbody (pond or stream channel) measured at ordinary high water mark at the intersection of the pipeline. For waterbodies delineated using desktop data, aerial imagery was used to estimate the channel width if wide enough to discern, and defaulted to 5 feet if too narrow to be measured using aerial imagery. An (*) next to the Impact ID indicates the waterbody channels estimated at 5 feet wide. If the crossing width is “0”, the waterbody is not crossed by the pipeline centerline.
d/ Stream channels that will be crossed by HDD or Conventional bore and are not within a workspace have a "0" for linear feet within construction workspace
e/ Water quality classification based on NCDWR’s Surface Water Classification Program.
f/ Waterbody crossing method will be determined by the Construction Manager in the field based on actual conditions at the time of construction. Materials will be available onsite at all waterbody crossings to use a dry crossing method in the event there is active flow at the time of construction.

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix M

North Carolina Proposed Impact Drawings

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix N

Compliance Statement for NWP 12 Terms and Conditions

Appendix N-1 Southgate Project Compliance with Nationwide Permit 12 Utility Line Activities Terms and Conditions	
Condition	**Southgate Project Compliance Statement**
Utility lines: This NWP authorizes discharges of dredged or fill material into waters of the United States ("WOTUS") and structures or work in navigable waters for crossings of those waters associated with the construction, maintenance, or repair of utility lines, including outfall and intake structures. There must be no change in pre-construction contours of waters of the United States. A "utility line" is defined as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, for any purpose, and any cable, line, or wire for the transmission for any purpose of electrical energy, telephone, and telegraph messages, and internet, radio, and television communication. The term "utility line" does not include activities that drain a water of the United States, such as drainage tile or french drains, but it does apply to pipes conveying drainage from another area.	Please refer to Section 2.5.1 of the Project narrative. Upon completion of the pipeline installation, the surface of the right-of-way disturbed during construction activities will be graded to match original contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion, scour, and possible exposure of the pipeline.
Material resulting from trench excavation may be temporarily sidecast into waters of the United States for no more than three months, provided the material is not placed in such a manner that it is dispersed by currents or other forces. The district engineer may extend the period of temporary side casting for no more than a total of 180 days, where appropriate. In wetlands, the top 6 to 12 inches of the trench should normally be backfilled with topsoil from the trench. The trench cannot be constructed or backfilled in such a manner as to drain waters of the United States (e.g., backfilling with extensive gravel layers, creating a french drain effect). Any exposed slopes and stream banks must be stabilized immediately upon completion of the utility line crossing of each waterbody.	See Section 2.5.1 of Project Narrative. Upon completion of the pipeline installation, the surface of the right-of-way disturbed during construction activities will be graded to match original contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion, scour, and possible exposure of the pipeline. The Project will segregate the topsoil over the trenchline in wetlands where hydrologic conditions permit this practice, and all excavated material will be placed in an upland area if possible. Segregated topsoil will be placed in the trench following subsoil backfilling to restore the original contour.
Utility line substations: This NWP authorizes the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not result in the loss of greater than 1/2-acre of waters of the United States. This NWP does not authorize discharges into non-tidal wetlands adjacent to tidal waters of the United States to construct, maintain, or expand substation facilities.	Not Applicable – The Project does not involve the construction, maintenance, or expansion of substation facilities associated with a power line or utility line in non-tidal waters of the United States.
Foundations for overhead utility line towers, poles, and anchors: This NWP authorizes the construction or maintenance of foundations for overhead utility line towers, poles, and anchors in all waters of the United States, provided the foundations are the minimum size necessary and separate footings for each tower leg (rather than a larger single pad) are used where feasible.	Not applicable – the Project does not include overhead utility line towers, poles or anchors in waters of the United States.
Access roads: This NWP authorizes the construction of access roads for the construction and maintenance of utility lines, including overhead power lines and utility line substations, in non-tidal waters of the United States, provided the activity, in combination with all other activities included in one single and complete project, does not cause the loss of greater than 1/2-acre of non-tidal waters of the United States. This NWP does not	See Section 2.3.3 of the Project narrative and Appendices J-1 and J-2. Access road widths will be the minimum necessary to provide access for construction equipment while maintaining safe travel conditions. Access will be constructed such that the length of the road minimizes impacts on waters of the United

Appendix N-1 Southgate Project Compliance with Nationwide Permit 12 Utility Line Activities Terms and Conditions	
Condition	**Southgate Project Compliance Statement**
authorize discharges into non-tidal wetlands adjacent to tidal waters for access roads. Access roads must be the minimum width necessary (see Note 2, below). Access roads must be constructed so that the length of the road minimizes any adverse effects on waters of the United States and must be as near as possible to pre-construction contours and elevations (e.g., at grade corduroy roads or geotextile/gravel roads). Access roads constructed above pre-construction contours and elevations in waters of the United States must be properly bridged or culverted to maintain surface flows.	States and will be maintained as close as possible to pre-construction contours and elevations. The project is not near any tidal water. There will be no discharges to non-tidal waters.
This NWP may authorize utility lines in or affecting navigable waters of the United States even if there is no associated discharge of dredged or fill material (See 33 CFR part 322). Overhead utility lines constructed over section 10 waters and utility lines that are routed in or under section 10 waters without a discharge of dredged or fill material require a section 10 permit.	Not applicable – the Project does not cross any navigable waters of the United States.
This NWP authorizes, to the extent that Department of the Army authorization is required, temporary structures, fills, and work necessary for the remediation of inadvertent returns of drilling fluids to waters of the United States through sub-soil fissures or fractures that might occur during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines. These remediation activities must be done as soon as practicable, to restore the affected waterbody. District engineers may add special conditions to this NWP to require a remediation plan for addressing inadvertent returns of drilling fluids to waters of the United States during horizontal directional drilling activities conducted for the purpose of installing or replacing utility lines.	See Section 2.4.4 and Appendix H. The Project has developed a HDD Contingency Plan to address disposal of drilling fluid as well as protocols to be implemented in the unlikely event of an inadvertent release of drilling fluid to waters of the United States. Remediation activities will be conducted as soon as practicable to restore the affected waterbody.
This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the utility line activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After construction, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.	See Section 2.4.2.2, Section 2.4.2.3 and Section 2.5 of the Project narrative. The Project is conducting a scour analysis on perennial waterbodies crossed by the pipeline to ensure that the placement depth is sufficient to prevent erosion by expected high flows. The results of this analysis will be provided to USACE and NCDEQ for review.
Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if any of the following criteria are met: (1) the activity involves mechanized land clearing in a forested wetland for the utility line right-of-way; (2) a Section 10 permit is required; (3) the utility line in waters of the United States, excluding overhead lines, exceeds 500 feet; (4) the utility line is placed within a jurisdictional area (i.e., water of the United States), and it runs parallel to or along a stream bed that is within that jurisdictional area; (5) discharges that result in the loss of greater than 1/10-acre of waters of the United States; (6) permanent access roads are constructed above grade in waters of the United States for a distance of more than 500 feet;	This application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina.

Appendix N-1 Southgate Project Compliance with Nationwide Permit 12 Utility Line Activities Terms and Conditions	
Condition	**Southgate Project Compliance Statement**
or (7) permanent access roads are constructed in waters of the United States with impervious materials. (See general condition 32.) (Authorities: Sections 10 and 404)	
Note 1: Where the utility line is constructed or installed in navigable waters of the United States (i.e., section 10 waters) within the coastal United States, the Great Lakes, and United States territories, a copy of the NWP verification will be sent by the Corps to the National Oceanic and Atmospheric Administration (NOAA), National Ocean Service (NOS), for charting the utility line to protect navigation.	Not applicable – the Project does not cross any navigable waters of the United States.
Note 2: For utility line activities crossing a single waterbody more than one time at separate and distant locations, or multiple waterbodies at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. Utility line activities must comply with 33 CFR 330.6(d).	The Project will comply with 33 CFR 330.6(d).
Note 3: Utility lines consisting of aerial electric power transmission lines crossing navigable waters of the United States (which are defined at 33 CFR part 329) must comply with the applicable minimum clearances specified in 33 CFR 322.5(i).	Not applicable – the Project does not include overhead utility lines.
Note 4: Access roads used for both construction and maintenance may be authorized, provided they meet the terms and conditions of this NWP. Access roads used solely for construction of the utility line must be removed upon completion of the work, in accordance with the requirements for temporary fills.	See Section 2.5.2 of the Project narrative. Previously existing access roads that were modified and used during construction will be returned to original or better condition upon completion of the pipeline facilities installation. Temporary access roads constructed specifically for the Project installation will be removed, the surface graded to original contours, and the land restored to its original grade.
Note 5: Pipes or pipelines used to transport gaseous, liquid, liquescent, or slurry substances over navigable waters of the United States are considered to be bridges, not utility lines, and may require a permit from the U.S. Coast Guard pursuant to section 9 of the Rivers and Harbors Act of 1899. However, any discharges of dredged or fill material into waters of the United States associated with such pipelines will require a section 404 permit (see NWP 15).	Not applicable – the Project does not cross any navigable waters of the United States.
Note 6: This NWP authorizes utility line maintenance and repair activities that do not qualify for the Clean Water Act section 404(f) exemption for maintenance of currently serviceable fills or fill structures.	Not applicable – the Project does not involve maintenance and repair activities.
Note 7: For overhead utility lines authorized by this NWP, a copy of the PCN and NWP verification will be provided to the Department of Defense Siting Clearinghouse, which will evaluate potential effects on military activities.	Not applicable – the Project does not include overhead utility lines.
Note 8: For NWP 12 activities that require pre-construction notification, the PCN must include any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings that require	The Southgate Project is only requesting authorization under NWP 12 and does not require other NWP(s), regional general permit(s) or individual permit(s).

Appendix N-1 Southgate Project Compliance with Nationwide Permit 12 Utility Line Activities Terms and Conditions	
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Department of the Army authorization but do not require pre-construction notification (see paragraph (b) of general condition 32). The district engineer will evaluate the PCN in accordance with Section D, “District Engineer’s Decision.” The district engineer may require mitigation to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see general condition 23).	

Appendix N-2 Southgate Project Compliance with General Nationwide Permit Conditions	
Condition	**Southgate Project Compliance Statement**
1. Navigation	Not applicable – the Project does not cross any navigable waters of the United States.
2. Aquatic Life Movements No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.	See Section 2.4.4 of the Project narrative and Appendices C, D and E. Stream crossings for the Project will be temporary, and flow will be maintained during construction via a flume, damp and pump, or cofferdam crossing method. Culverts along access roads will be constructed in a manner that will not hinder aquatic life movement.
3. Spawning Areas Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.	See Section 4.4 of the Project narrative. Activities within waterbodies crossed by the Project will adhere to time of year restrictions that may be required by any federal or state agency. The Project does not cross any important spawning areas or other areas that are presently subject to time of year restrictions.
4. Migratory Bird Breeding Areas Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.	The Project intends to avoid migratory bird breeding areas within waters of the United States to the maximum extent practicable.
5. Shellfish Beds	Not applicable – there are no saltwater shellfish beds crossed by the Project. See Section 5.5.4 of the Project narrative for information on freshwater mussels.
6. Suitable Material No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see section 307 of the Clean Water Act).	See Section 2.4.2 of the Project narrative. Previously excavated materials will be pushed back into the trench using equipment or backhoes. Where the previously excavated material contains large rocks or other materials that could damage the pipe or coating, clean fill will be used as backfill to protect the pipe. Due to concerns about the acidity of fly ash and its potential impacts on cathodic protection, fly ash will not be used as backfill material. However, limestone dust or sand, which is typically non-acidic and will often aid in the cathodic protection of the pipeline, may be used as backfill material. The remaining fill of the trench will be the aggregate of the excavation material removed at the time of the excavation. If additional fill is required, it will be either flowable fill or clean fill.
7. Water Supply Intakes No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.	Not applicable - There closest public supply intake is located approximately 1.3 miles from the Project. The NCDWR designates “critical” water supply intake areas within 0.5-miles from the normal pool elevation of the reservoir in which the intake is located, or a half

Appendix N-2 Southgate Project Compliance with General Nationwide Permit Conditions	
Condition	**Southgate Project Compliance Statement**
	mile upstream from and draining to the intake located directly in the stream or river, or to the ridge line of the watershed (whichever comes first).
8. Adverse Effects from Impoundments If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.	See Sections 2.4.4 of the Project narrative. Some crossing methods proposed for the Project will temporarily create an impoundment during construction. The dam and pump method involves the installation of temporary dams upstream and downstream of the proposed waterbody crossing. Following dam installation, appropriately sized pumps will be used to dewater and transport the stream flow around the construction work area and trench. Energy dissipating devices will be installed at the pump discharge point to minimize erosion and streambed scour. The flume crossing method will consist of temporarily directing the flow of water through one or more flume pipes placed over the area to be excavated. The number of flumes and / or diameter will be designed to withstand the expected high flows within the waterbodies. This method will allow excavation of the pipe trench across the waterbody completely underneath the flume pipes without disruption of water flow in the stream. Following completion of pipeline installation, backfill of the trench, and restoration of stream banks, the temporary impoundments will be removed, and flow through the construction work area will be restored.
9. Management of Water Flows To the maximum extent practicable, the pre- construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).	See Section 2.4.4 of the Project narrative. The dam and pump method involves the installation of temporary dams upstream and downstream of the proposed waterbody crossing. Following dam installation, appropriately sized pumps will be used to dewater and transport the stream flow around the construction work area and trench so that the passage of normal and high flows are not restricted. The flume crossing method will consist of temporarily directing the flow of water through one or more flume pipes placed over the area to be excavated. The number of flumes and / or diameter will be designed to withstand the expected high flows within the waterbodies. These methods will allow excavation of the pipe trench across the waterbody completely underneath the flume pipes without disruption of water flow in the stream during construction. The Project will not alter the pre-construction course during or after the pipeline is installed. Prior to construction, a scour analysis will be performed to perennial streams to ensure the passage of high flows. The scour analysis is currently underway. Existing culverts that are damaged or otherwise not properly functioning will be repaired or replaced with an in-kind structure to ensure they are functional during construction activities. Permanent culverts or

Appendix N-2 Southgate Project Compliance with General Nationwide Permit Conditions	
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	temporary flumes installed as part of the Project will include measures to promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a culvert will not be modified by altering the width or depth of the stream profile in connection with the construction activity. The width, height, and gradient of a proposed culvert will be sufficient to pass the average historical low flow and spring flow without adversely altering flow velocity. Access will be constructed such that the length of the road minimizes impacts on waters of the United States and will be maintained as close as possible to pre-construction contours and elevations.
10. Fills Within 100-Year Floodplains The activity must comply with applicable FEMA-approved state or local floodplain management requirements.	The Project will comply with applicable floodplain management requirements within North Carolina. Applicable floodplain permit applications are currently underway and will be obtained from the issuing authorities. There are no proposed permanent impacts to floodplains (i.e., above-ground structures or increased elevations) in North Carolina.
11. Equipment Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.	See Section 2.4.3 of the Project narrative. The Project will use equipment or timber mats to facilitate equipment movement through and work within the wetland.
12. Soil Erosion and Sediment Controls Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high-water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides	See Section 4.4 of the Project narrative. The Project will conduct crossings of intermittent and perennial waterbodies during periods of low-flow to the extent practicable.
13. Removal of Temporary Fills Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.	See Section 2.4.2 of the Project narrative. Upon completion of the pipeline installation, the surface of the right-of-way disturbed during construction activities will be graded to match original contours and to be compatible with surrounding drainage patterns, except at those locations where permanent changes in drainage will be required to prevent erosion, scour, and possible exposure of the pipeline.
14. Proper Maintenance Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.	The Project will maintain the pipeline in a safe operational manner in accordance with the Project's safety standards and specifications and in accordance with the U.S. Department of Transportation Title 49 CFR (Part 192) requirements.

Appendix N-2 Southgate Project Compliance with General Nationwide Permit Conditions	
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15. Single and Complete Project The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.	Each water of the United States crossing is single and complete and will be completed under NWP 12.
16. Wild and Scenic Rivers	Not applicable - The Project does not cross any federally designated Wild and Scenic Rivers.
17. Tribal Rights No NWP activity may cause more than minimal adverse effects on tribal rights (including treaty rights), protected tribal resources, or tribal lands.	See Section 5.7 of the Project narrative. Detailed reports on cultural resource surveys were submitted to the North Carolina State Historic Preservation Office, applicable federally-recognized tribes as requested and the FERC along with the FERC Certificate Application.
18. Endangered Species (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA section 7 consultation addressing the effects of the proposed activity has been completed. Direct effects are the immediate effects on listed species and critical habitat caused by the NWP activity. Indirect effects are those effects on listed species and critical habitat that are caused by the NWP activity and are later in time, but still are reasonably certain to occur.	See Section 5.5 of the Project narrative. The Project is currently consulting with the U.S. Fish and Wildlife Service and anticipates receipt of a 'not likely to adversely affect' determination. Documentation of final consultation with the U.S. Fish and Wildlife Service will be provided upon completion.
(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA.	The Southgate Project is not proposed by a federal agency.
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized.	This re-application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina.
(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs. Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA.	Noted
(e) If the non-federal permittee has a valid ESA section 10(a)(1)(B) incidental take permit with an	Not applicable – the Project does not anticipate requiring an incidental take permit.

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Condition	**Southgate Project Compliance Statement**
approved Habitat Conservation Plan.	
19. Migratory Birds and Bald and Golden Eagles The permittee is responsible for ensuring their action complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting appropriate local office of the U.S. Fish and Wildlife Service to determine applicable measures to reduce impacts to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.	See Section 5.5.3 of the Project narrative. The Project is committed to avoiding impacts to bald eagles; therefore the Project will conduct surveys during the winter of 2019 to identify active nests within 0.5 mile of Project workspace areas. If active nests are discovered within 0.5 mile of Project activities, measures adapted from the USFWS National Bald Eagle Management Guidelines for high disturbance activities will be implemented. While there is no 'incidental take' permit under the Migratory Bird Treaty Act, the Project intends to avoid migratory bird breeding areas within waters of the United States to the maximum extent practicable.
20. Historic Properties (a) In cases where the district engineer determines that the activity may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.	See Section 5.7 of the Project narrative. The Project will not commence construction activities until the requirements of Section 106 of the National Historic Preservation Act have been satisfied.
(b) Federal permittees should follow their own procedures for complying with the requirements of section 106 of the National Historic Preservation Act.	Not applicable
(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties.	This application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina.
(d) For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA section 106 consultation is required.	Noted
(e) Prospective permittees should be aware that section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify	Noted

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granting such assistance despite the adverse effect created or permitted by the applicant.	
21. Discovery of Previously Unknown Remains and Artifacts If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.	See Appendix M for the Project's Unanticipated Cultural Resources Discoveries Plan.
22. Designated Critical Resource Waters	Not applicable - There are no designated critical resource waters within the Southgate Project limits.
23. Mitigation The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal: (a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).	Compensatory mitigation will be provided as detailed in Section 4.1.2 of the Project narrative.
(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.	Compensatory mitigation will be provided as detailed in Section 4.1.2 of the Project narrative.
(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.	The Project will not incur wetland losses in excess of 1/10-acre at any single and complete crossing of waters of the United States in North Carolina.

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(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation to ensure that the activity results in no more than minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).	Not applicable – The Project will not result in the loss of streams or open waters.
(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. Restored riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.	See Section 4.1.2 of the Project narrative. All workspaces within riparian areas will be restored and revegetated upon completion of construction.
(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.	The Project will comply with the applicable provisions of 33 CFR part 332.
(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-	See Section 4.1.2 of the Project narrative. No single and complete project proposed in this application has an associated impact that exceeds the thresholds in NWP General Condition 23(c) or NWP Regional Condition 10 for requiring compensatory mitigation. Nevertheless, the Southgate Project will provide compensatory mitigation for the conversion of 2.465 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur. No compensatory mitigation is proposed

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responsible mitigation.	for permanent stream or wetland losses because no permanent losses are proposed for the Project.
(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f)).	Noted
(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.	Noted
(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).	See Section 4.1.2 of the Project narrative. No single and complete project proposed in this application has an associated impact that exceeds the thresholds in NWP General Condition 23(c) or NWP Regional Condition 10 for requiring compensatory mitigation. Nevertheless, the Southgate Project will provide compensatory mitigation for the conversion of 2.465 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur. No compensatory mitigation is proposed for permanent stream or wetland losses because no permanent losses are proposed for the Project.
(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.	See Section 4.1.2 of the Project narrative. No single and complete project proposed in this application has an associated impact that exceeds the thresholds in NWP General Condition 23(c) or NWP Regional Condition 10 for requiring compensatory mitigation. Nevertheless, the Southgate Project will provide compensatory mitigation for the conversion of 2.465 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur. No compensatory mitigation is proposed for permanent stream or wetland losses because no permanent losses are proposed for the Project.
(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).	Noted
(a) Compensatory mitigation requirements (e.g., resource type and amount to be provided as	Noted

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compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs.	
(b) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation when developing a compensatory mitigation.	Noted
(c) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.	See Section 4.1.2 of the Project narrative. No single and complete project proposed in this application has an associated impact that exceeds the thresholds in NWP General Condition 23(c) or NWP Regional Condition 10 for requiring compensatory mitigation. Nevertheless, the Southgate Project will provide compensatory mitigation for the conversion of 2.465 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur. No compensatory mitigation is proposed for permanent stream or wetland losses because no permanent losses are proposed for the Project.
24. Safety of Impoundment Structures To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons.	Not applicable - The Southgate Project will not create impoundment structures.
25. Water Quality Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.	The Southgate Project will comply with the general water quality certification conditions. This application constitutes the Project's notice and request for any 401 Water Quality Certification that may be required for any Project activity described herein.
26. Coastal Zone Management	Not applicable - The Southgate Project is not located within the Coastal Zone.
27. Regional and Case-By-Case Conditions The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its	See Appendix O-3.

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section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.	
28. Use of Multiple Nationwide Permits The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.	The Southgate Project is only requesting authorization under NWP 12 and does not require at this time, and is not expected to require, other NWP(s), regional general permit(s) or individual permit(s).
29. Transfer of Nationwide Permit Verifications If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:	Noted
30. Compliance Certification Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer.	Noted
31. Activities Affecting Structures or Works Built by the United States If an NWP activity also requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires section 408 permission is not authorized by NWP until the appropriate Corps office issues the section 408 permission to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.	Not applicable - The Southgate Project is not located in any of the USACE federally authorized civil works project areas and will not require permission pursuant to 33 U.S.C. 408.
32. Pre-Construction Notification a) Timing: where required by the terms of the NWP,	This application serves as the pre-construction notification for those activities within waters of United

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the prospective permittee must notify the district engineer by submitting a pre- construction notification (PCN) as early as possible. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once.	States that meet the criteria identified within the notification procedures for work in North Carolina.
b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:	This application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina.
(1) Name, address and telephone numbers of the prospective permittee;	See completed application form.
(2) Location of the proposed activity;	See completed application form.
(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;	The Southgate Project is seeking authorization under NWP 12 for utility line activities.
(4) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures. For single and complete linear projects, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be	The Joint Permit Application package for the Southgate Project provides the applicable information required for Pre-Construction Notification.

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detailed engineering plans);	
(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;	See Appendix B (alignment sheets) and Appendix J (North Carolina Wetland and Waterbody Delineation Report).
(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied or explaining why the adverse environmental effects are no more than minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.	Not applicable – the Project will not result in the loss of greater than 1/10-acre of waters of the United States at any single and complete crossing. See Appendix K-1.
(7) For non-Federal permittees, if any listed species or designated critical habitat might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat, the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed activity or utilize the designated critical habitat that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act.	See Section 5.5 of the Project narrative. The Project will provide documentation demonstrating compliance with the Endangered Species Act upon completion of consultation with the U.S. Fish and Wildlife Service.
(8) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system.	Not applicable - There are no National Wild and Scenic River systems or study rivers within the Southgate Project limits.
(9) For an activity that requires permission from the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project.	Not applicable - The Southgate Project is not located in any of the USACE federally authorized civil works project areas and will not require permission pursuant to 33 U.S.C. 408.
c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is an NWP PCN and must include all of the applicable	This application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina.

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information required in paragraphs (b)(1) through (10) of this general condition. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.	
d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.	Noted
(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States;	Noted
(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS).	Noted
(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.	Not applicable – No Essential Fish Habitat is crossed by the Project.
(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.	Noted

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1.0 Excluded Waters	
1.1 Anadromous Fish Spawning Areas - Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from the Corps and either NCDMF or NCWRC.	Not applicable – The Project does not cross any identified anadromous fish spawning areas in North Carolina.
1.2 Trout Waters Moratorium - Waters of the United States in the designated trout watersheds of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC, or from the Eastern Band of Cherokee Indians (EBCI) Fisheries and Wildlife Management (FWM) office if the project is located on EBCI trust land.	Not applicable – The Project is not located within any designated trout watersheds.
1.2 Sturgeon Spawning Areas - Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.	Not Applicable – The Project does not cross any Waters of the United States designated as sturgeon spawning areas.
2.0 Waters Requiring Additional Notification	
2.1 Western NC Counties that drain into Designated Critical Habitat - For proposed activities within waters of the United States that require a Pre-Construction Notification (PCN) and are located in the sixteen Western NC counties, permittees must provide a copy of the PCN to the U.S. Fish and Wildlife Service (USFWS).	Not applicable – The Project is not located within any of the Western NC Counties that drain into Designated Critical Habitat.
2.2 Special Designation Waters - Prior to the use of any NWP, except NWP 3, that involves a discharge of dredged or fill material in any of the following identified waters and/or adjacent wetlands in North Carolina, permittees shall submit a PCN to the District Engineer prior to commencing the activity.	The Project crosses several Special Designation Waters (See Appendix K-2). This application serves as the pre-construction notification for those activities within waters of United States that meet the Special Designation Waters criteria identified within the notification procedures for work in North Carolina.
2.3 Coastal Area Management Act Areas of Environmental Concern - Non-federal permittees for any NWP in a designated "Area of Environmental Concern" (AEC) in the twenty (20) counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) must also obtain the required CAMA permit. Development activities for non-federal projects may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office.	Not applicable – The Project is not located within the North Carolina coastal zone.

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2.4 Barrier Islands - Prior to the use of any NWP on a barrier island of North Carolina, permittees must submit a PCN to the District Engineer prior to commencing the activity.	Not applicable – The Project is not located on a barrier island.
2.5 Mountain or piedmont bogs - Prior to the use of any NWP in a Bog, as classified by the North Carolina Wetland Assessment Methodology (NCWAM), permittees shall submit a PCN to the District Engineer prior to commencing the activity.	Not applicable – The Project is not located on a mountain or piedmont bog.
2.6 Animal Waste Facilities - Prior to use of any NWP for construction of animal waste facilities in waters of the United States, including wetlands, permittees shall submit a PCN to the District Engineer prior to commencing the activity.	Not applicable – The Project does not involve the construction of an animal waste facility.
2.7 Trout Waters - Prior to any discharge of dredge or fill material into streams, waterbodies or wetlands within the 294 designated trout watersheds of North Carolina, the permittee shall submit a PCN (see General Condition 32) to the District Engineer prior to commencing the activity. The permittee shall also provide a copy of the notification to the appropriate NCWRC office, or to the EBCI FWM Office (if the project is located on EBCI trust land), to facilitate the determination of any potential impacts to designated Trout Waters.	Not applicable – The Project does cross any streams, waterbodies or wetlands within a designated trout watershed.
2.8 Western NC Waters and Corridors - The permittee shall submit a PCN to the District Engineer prior to commencing the activity in waters of the United States if the activity will occur within any of the following identified waters in western North Carolina, within 0.5 mile on either side of these waters, or within 0.75 mile of the Little Tennessee River, as measured from the top of the bank of the respective water (i.e., river, stream, or creek).	Not applicable - The Project is not located within any of the listed waters of western North Carolina or within 0.5 miles on either side of the respective water.
3.0 List of Corps Regional Conditions for All Nationwide Permits	
3.1 Limitation of Loss of Stream Bed - NWPs may not be used for activities that may result in the loss or degradation of more than 300 total linear feet of stream bed, unless the District Engineer has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and has determined that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments. This waiver only applies to the 300 linear feet threshold for NWPs.	See Section 2.4.4 and 2.5.1 of the Project narrative. The Project will not result in the loss or degradation of more than 300 linear feet of stream bed. All streams temporarily impacted during construction will be restored to pre-construction conditions.

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3.2 Mitigation for Loss of Stream Bed - For any NWP that results in a loss of more than 150 linear feet of stream, the permittee shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses of 150 linear feet or less that require a PCN, the District Engineer may determine, on a case-by-case basis, that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.	Not applicable – The Project will not result in the loss of stream bed(s).
3.3 Pre–construction Notification for Loss of Streambed Exceeding 150 feet - Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream, intermittent or ephemeral stream, the permittee shall submit a PCN to the District Engineer prior to commencing the activity.	Not applicable – The Project will not result in the loss of stream bed(s).
3.4 Restriction on Use of Live Concrete - For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the United States. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the United States after the concrete is set and cured and when it no longer poses a threat to aquatic organisms.	See Section 4.4 of the Project narrative. The Project will not allow live or fresh concrete to come into contact with waters of the United States.
3.5 Requirements for Using Riprap for Bank Stabilization 3.5.1. Where bank stabilization is conducted as part of an activity, natural design, bioengineering and/or geoengineering methods that incorporate natural durable materials, native seed mixes, and native plants and shrubs are to be utilized to the maximum extent practicable. 3.5.2. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters. The placement of filter fabric is not required if the riprap will be pushed or “keyed” into the bank of the waterbody. 3.5.3. The placement of riprap shall be limited to the areas depicted on submitted work plan drawings. 3.5.4. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect. 3.5.5. It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions. 3.5.6. The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.	The Project does not anticipate the use of riprap for stream bank stabilization purposes. In the event that riprap is required for bank stabilization purposes, the Project will adhere to the general conditions. See Section 4.4 of the Project narrative.

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3.6 Requirements for Culvert Placement 3.6.1 For all NWPs that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by altering the width or depth of the stream profile in connection with the construction activity. The width, height, and gradient of a proposed culvert should be sufficient to pass the average historical low flow and spring flow without adversely altering flow velocity.	See Section 2.4.4 of the Project narrative. The pre-construction stream conditions will not be altered as the result of a newly installed culvert. Culverts will be installed in a manner so that passage will still be possible for fish and aquatic organisms during the average historical low flow and spring flow.
3.7 Notification to NCDEQ Shellfish Sanitation Section - Permittees shall notify the NCDEQ Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made.	Not applicable – The Project is not located in any areas where shell fishing occurs.
3.8 Submerged Aquatic Vegetation - Impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP, except NWP 48, unless EFH Consultation has been completed pursuant to the Magnuson-Stevens Fisheries Conservation and Management Act (Magnuson-Stevens Act). Permittees shall submit a PCN to the District Engineer prior to commencing the activity if the project would affect SAV.	Not applicable – The Project does not cross any areas of Submerged Aquatic Vegetation.
3.9 Sedimentation and Erosion Control Structures and Measures - All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the United States. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.	See Section 2.4.1 of the Project narrative. The Project will adopt the Southgate Plan (Appendix D) and Procedures (Appendix E) to minimize impacts on the environment. The Project will develop its own Project-specific Erosion and Sediment Control Plan ("E&SC") based on field conditions and state requirements that will outline best management practices ("BMPs") to minimize impacts. Copies of these plans will be submitted to USACE and NCDEQ in the fall of 2019.
3.10 Restoration of Temporary Impacts to Stream Beds - Upon completion of work that involves temporary stream impacts, streambeds are to be restored to pre-project elevations and widths using natural streambed material such that the impacted stream reach mimics the adjacent upstream and downstream reach.	See Section 2.5.1 of the Project narrative. Completed stream crossings using the flume or dam and pump methods will be stabilized before returning flow to the channel. Areas disturbed will be restored to pre-construction or better conditions. Streambed substrate will be segregated from other soils and will be backfilled into the stream once the pipeline is laid. Original streambed and bank contours will be re-established for surface water and groundwater flow, and mulch, jute thatching, or bonded fiber blankets will be installed on the stream banks, which are

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Condition	**Southgate Project Compliance Statement**
	preferential to plastic erosion control blankets because they reduce wildlife entrapment and are biodegradable. Where the flume technique is used, stream banks will be stabilized before removing the flume pipes and returning flow to the waterbody channel.
3.11 Restoration of Temporary Impacts to Stream Banks - Upon completion of work involving temporary stream bank impacts, stream banks are to be restored to pre-project grade and contours or beneficial grade and contours if the original bank slope is steep and unstable. Natural durable materials, native seed mixes, and native plants and shrubs are to be utilized in the restoration.	See Section 2.5.1 of the Project narrative. Completed stream crossings using the flume or dam and pump methods will be stabilized before returning flow to the channel. Areas disturbed will be restored to pre-construction or better conditions. Streambed substrate will be segregated from other soils and will be backfilled into the stream once the pipeline is laid. Original streambed and bank contours will be re-established for surface water and groundwater flow, and mulch, jute thatching, or bonded fiber blankets will be installed on the stream banks, which are preferential to plastic erosion control blankets because they reduce wildlife entrapment and are biodegradable. Where the flume technique is used, stream banks will be stabilized before removing the flume pipes and returning flow to the waterbody channel. Seeding of disturbed stream approaches with native seed mixes will be completed in accordance with the Southgate Procedures after final grading, weather and soil conditions permitting.
3.12 Federal Navigation Channel Setbacks and Corps Easements	
3.12.1 Authorized structures and fills located in or adjacent to Federally authorized waterways will be constructed in accordance with the latest setback criteria established by the Wilmington District Engineer.	Not applicable – The Project is not located in a federal navigation channel and is not located adjacent to a Federally-authorized waterway.
3.12.2 The permittee shall obtain a Consent to Cross Government Easement from the Wilmington District's Land Use Coordinator prior to any crossing of the Corps easement and/or prior to commencing construction of any structures, authorized dredging or other work within the right-of-way of, or in proximity to, a federally designated disposal area.	Not applicable – The Project does not cross any Corps easements.
3.13 Northern Long-eared Bat – Endangered Species Act Compliance - The Wilmington District, U.S. Army Corps of Engineers has consulted with the United States Fish and Wildlife Service (USFWS) regarding the threatened Northern long-eared bat (NLEB) (*Myotis septentrionalis*) and Standard Local Operating Procedures for Endangered Species (SLOPES) have been approved by the	See Section 5.5.3 of the Project narrative. The Project conducted mist net surveys for rare bat species including northern long-eared bat in 2018. Based on the lack of species occurrence during summer sampling, all federally listed species are assumed absent or present in such low density as for impacts to be inconsequential and Federal requirements for the Project under Section 7(a)(2) of the ESA are met.

Appendix N-3 MVP Southgate Compliance with Nationwide Permit General Regional Conditions for the Wilmington District	
Condition	**Southgate Project Compliance Statement**
Corps and the USFWS. This condition concerns effects to the NLEB only and does not address effects to other federally listed species and/or federally designated critical habitat.	
3.14 Work on Eastern Band of Cherokee Indians Land - All PCNs submitted for activities in waters of the United States on Eastern Band of Cherokee Indians (EBCI) trust land (i.e., Qualla Boundary and non-contiguous tracts of trust land), must comply with the requirements of the latest MOU between the Wilmington District and the Eastern Band of Cherokee Indians.	Not applicable – The Project is not located within Eastern Band of Cherokee Indians land.

Appendix N-4 Southgate Project Compliance with Wilmington District Additional Regional Conditions for Nationwide Permit 12 Utility Line Activities	
Condition	**Southgate Project Compliance Statement**
Pipeline/utility line construction through jurisdictional waters and wetlands will be accomplished utilizing directional drilling/boring methods to the maximum extent practicable.	Impacts have been avoided and minimized to the extent practicable through the routing alternatives analysis discussed in Section 2.10 of Project narrative (Route Alternatives Analysis).
Temporary discharge of excavated or fill material into wetlands and waters of the United States will be for the absolute minimum period of time necessary to accomplish the work. Temporary discharges will be fully contained with appropriate erosion control or containment methods or otherwise such fills will consist of non-erodible materials.	See Section 2.4.3 and Section 4.4 of the Project narrative. The Southgate Project will conduct construction across waterbodies in accordance with the Southgate Procedures. The normal trenching operations will skip the waterbody crossing, stopping on each side near the top of bank. The Project will install the waterbody section of the pipeline by one of the methods described below. In general, pipe will be bent and fabricated as the work progresses along the right-of-way so that the excavation of the waterbody crossing is completed prior to pipe installation by the tie-in crew.
The work area authorized by this permit, including temporary and/or permanent fills, will be minimized to the greatest extent practicable. Justification for work corridors exceeding forty (40) feet in width is required and will be based on pipeline diameter and length, size of equipment required to construct the utility line, and other construction information deemed necessary to support the request. The permittee is required to provide this information to the Corps with the initial notification package.	See Section 2.3.1 of the Project narrative. The pipeline will generally require a 100-foot-wide construction right-of-way (limit of disturbance) during construction within uplands and 75 feet of workspace within wetlands. The temporary workspace is necessary for worker safety, the safe travel of construction vehicles and equipment, stockpiling soil, and installation of erosion and sediment controls. The proposed right-of-way width are consistent with the Interstate Natural Gas Association of America's ("INGAA") recommendations for a pipeline diameter of 18 to 24 inches. INGGA recommends the use of a 95-foot baseline width and increasing or decreasing this baseline width for special conditions (Gulf Interstate Engineering, 1999).
Excavated materials shall be returned to the excavated areas and any remaining materials shall be disposed of in uplands, unless the Corps authorizes disposal in waters of the United States. In areas where a sub-aqueous utility line is to cross a federally-maintained channel, (i.e., the Atlantic Intracoastal Waterway [AIWW]), the line will be buried at least six (6) feet below the allowable over depth of the authorized channel, including all side slopes. For areas outside federally-maintained channels, sub-aqueous lines must be installed at a minimum depth of two (2) feet below the substrate when such lines might interfere with navigation.	See Section 2.4.2 of the Project narrative. Excess soil will be distributed evenly on the right-of-way in accordance with landowner and agency requirements, only in upland areas and only to meet the pre-construction surface elevations. See Section 2.4.1 of the Project narrative. The pipeline will be buried a minimum of three feet below the ground surface except for locations where the pipe will be installed within rock. In those instances, the minimum depth of cover will be two feet.
The minimum clearance for aerial communication lines, or any lines not transmitting electrical power, will be ten (10) feet above the clearance required for nearby stationary bridges as established by the U.S. Coast Guard. In the event the U.S. Coast Guard has	Not applicable – The Project does not involve construction of aerial communication lines.

Appendix N-4 Southgate Project Compliance with Wilmington District Additional Regional Conditions for Nationwide Permit 12 Utility Line Activities	
Condition	**Southgate Project Compliance Statement**
not established a bridge clearance, minimum vertical clearances for power and aerial lines will not be less than required by Section 23, Rule 232, of the latest revision of the National Electrical Safety Code (American National Standards Institute C2). Clearances will not be less than shown in Table 232-1, Item 7, American National Standards Institute C2.	
The minimum clearance for an aerial line, transmitting electrical power, is based on the low point of the line under conditions that produce the greatest sag, taking into consideration temperature, load, wind, length or span and the type of supports. The minimum clearance for an aerial electrical power transmission line crossing navigable waters of the United States, where there is an established bridge clearance established by the U.S. Coast Guard, shall be governed by the system voltage.	Not applicable – The Project does not involve construction of electrical transmission lines.
On navigable waters of the United States, including all federal navigation projects, where there is no bridge for reference for minimum clearance, the proposed project will need to be reviewed by the Corps in order to determine the minimum clearance between the line and MHW necessary to protect navigational interests.	Not applicable – The Project does not cross any navigable waters of the United States.
A plan to restore and re-vegetate wetland areas cleared for construction must be submitted with the required PCN. Cleared wetland areas shall be re-vegetated to the maximum extent practicable with native species of canopy, shrub, and herbaceous species. Fescue grass shall not be used.	See Section 2.5 of the Project narrative. Upon completion of the pipeline installation, the surface of the right-of-way disturbed during construction activities will be graded to match original contours and to be compatible with surrounding drainage patterns. Segregated topsoil will be replaced in unsaturated wetlands. Unsaturated wetlands will be allowed to revegetate naturally, as the seed bank will be maintained within the topsoil layer. Wetland revegetation will be considered successful when the cover of herbaceous and/or woody species is at least 80 percent of the type, density, and distribution of the vegetation in adjacent wetland areas that were not disturbed by construction. Revegetation efforts will continue until wetland revegetation is successful based on the Southgate Procedures and other applicable regulatory approvals.
Any permanently maintained corridor along the utility right of way within forested wetlands shall be considered a permanent impact. A compensatory mitigation plan will be required for all such impacts associated with the requested activity if the activity requires PCN and the cumulative total of permanent forested wetland impacts exceeds 1/10-acre, unless the District Engineer determines in writing that either some other form of mitigation would be more environmentally-appropriate or the adverse effects of the proposed activity are minimal.	See Section 4.1.2 of the Project narrative. The Southgate Project will provide compensatory mitigation for the conversion of approximately 2.5 acres of forested wetland to non-forested wetland through purchase of wetland mitigation credits at a 1:1 ratio from an approved mitigation bank with a service territory covering the watershed where the impacts would occur.
Use of rip-rap or any other engineered structures to stabilize a stream bed should be avoided to the maximum extent practicable. If riprap stabilization is needed, it should be placed only on the	The Project does not currently propose to use rip-rap or other engineered structures to stabilize stream beds. If determined to be

Appendix N-4 Southgate Project Compliance with Wilmington District Additional Regional Conditions for Nationwide Permit 12 Utility Line Activities	
Condition	**Southgate Project Compliance Statement**
stream banks, or, if it is necessary to be placed in the stream bed, the finished top elevation of the riprap should not exceed that of the original stream bed. When directional boring or horizontal directional drilling (HDD) under waters of the United States, including wetlands, permittees shall closely monitor the project for hydraulic fracturing or "fracking." Any discharge from hydraulic fracturing or "fracking" into waters of the United States, including wetlands, shall be reported to the appropriate Corps Regulatory Field Office within 48 hours. Restoration and/or compensatory mitigation may be required as a result of any unintended discharges.	needed, the Project will request permission from the USACE and NCDEQ and would meet these conditions. See Section 2.4.4 and Appendix H. The Project has developed a HDD Contingency Plan to address disposal of drilling fluid as well as protocols to be implemented in the unlikely event of an inadvertent release of drilling fluid to waters of the United States.
For purposes of this NWP, the term utility line does not include pipes or culverts associated with driveways, roadways, lots, etc.	Noted
The permittee shall submit a PCN to the District Engineer prior to commencing the activity if the activity will involve the discharge of dredged or fill material into more than 1/10-acre of wetlands or 150 linear feet of stream channel for the construction of temporary access fills and/or temporary road crossings. The PCN must include a restoration plan that thoroughly describes how all temporary fills will be removed, describes how pre-project conditions will be restored, and includes a timetable for all restoration activities.	This application serves as the pre-construction notification for those activities within waters of United States that meet the criteria identified within the notification procedures for work in North Carolina. See Section 2.5 of the Project narrative for information regarding restoration.

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix O

Water Resources Identification and Testing Plan

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix P

Unanticipated Cultural Resources Discoveries Plan

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix Q

FEMA Flood Zone Maps

MVP Southgate Project

Standard Joint Permit Application

U.S. Army Corps of Engineers – Wilmington District (SAW-2018-00887)

North Carolina Department of Environmental Quality, Division of Water Resources

Appendix R

MVP Southgate General Blasting Plan

Contact Report for Michael Kiss

Contact ID 1206	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/16/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call with consultant (AECOM) to discuss air modeling pertaining to the Lambert Compressor station.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Renee Kramer

Contact ID 1456	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/11/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Good morning Renee, Please let me know if there were any questions you had following your review of the FERC's DEIS for Southgate that I might be able to address. Hope all is well, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Renee Kramer

Contact ID 1493	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/24/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Renee, Thank you for reviewing the FERC's Draft Environmental Impact Statement for the Southgate Project. Do you have the availability to sit down and go through your comments together? This would be valuable so we can address your concerns and revise our community outreach plan as necessary. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Renee Kramer

Contact ID 1517	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/04/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Renee, Can you confirm for me that the day and time works for you? Thanks, Alex From: Miller, Alex Sent: Wednesday, October 2, 2019 7:03 AM To: 'Kramer, Renee P' Cc: fmr.bridget.munger ; Martin, Kyle ; shawn@capresults.net; Salvador, Kathy ; Mundt, Jennifer Subject: RE: [External] Southgate DEIS Comments Hi Renee, Thank you for taking the time to meet with us to discuss the Southgate Project. Does 1:30 at your office still work on Friday, October 11th? Regards, Alex V. Miller NextEra Energy Resources | Environmental Services Office: 713.374.1599 From: Kramer, Renee P > Sent: Monday, September 30, 2019 11:37 AM To: Miller, Alex > Cc: fmr.bridget.munger >; Martin, Kyle >; shawn@capresults.net; Salvador, Kathy >; Mundt, Jennifer > Subject: RE: [External] Southgate DEIS Comments CAUTION - EXTERNAL EMAIL Good afternoon Alex, My apologies for the delayed response. Jennifer and I are available for a conversation the following days and times next week: Monday October 7, 1 pm-5 pm Friday October 11, 12 pm-5 pm Please let me know if one of those would work. Thanks, Renee [cid:image003.png@01D4F067.B694F4A0] From: Miller, Alex [mailto:Alex.Miller@nexteraenergy.com] Sent: Tuesday, September 24, 2019 7:59 AM To: Kramer, Renee P > Cc: fmr.bridget.munger >; Martin, Kyle >; shawn@capresults.net; Salvador, Kathy > Subject: [External] Southgate DEIS Comments CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Renee, Thank you for reviewing the FERC's Draft Environmental Impact Statement for

	the Southgate Project. Do you have the availability to sit down and go through your comments together? This would be valuable so we can address your concerns and revise our community outreach plan as necessary. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Renee Kramer

Contact ID 1279	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/14/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail providing DEIS comment meeting schedule.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

From: Shawn Day
Sent: Wednesday, October 16, 2019 9:24 AM
To: 'Todd Lambert'
Cc: 'Bob Patterson'; 'Lawrence, Alina A.'; 'Sabol, James J.'
Subject: RE: MVP Pipeline

Hi Todd,

Just wanted to circle back here to see if you'd like to get together, either in person or by phone, to discuss any specific concerns or questions you may have about the project. Please let us know at your convenience.

Thanks!

Shawn

Shawn Day
Public Relations Manager | MVP Southgate
Office: 804.771.5306
http://www.mvpsouthgate.com

Contact Report for Benjamin Leach

Contact ID 1238	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/22/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Sounds good, Ben. Feel free to give me a call if you'd like to discuss anything in the meantime. Thanks, Cory From: Leach, Benjamin Sent: Monday, July 22, 2019 8:57 AM To: Chalmers, Cory M. Subject: [EXTERNAL] Re: Southgate Pipeline VA E&S Plans Cory, My team and I have started last week to review Southgate. I expect to have a preliminary completeness review done sometime this week. On Wed, Jul 17, 2019 at 8:33 AM Chalmers, Cory M. > wrote: Hi Ben, This email is to confirm that two thumb drives with digital copies of the Southgate Pipeline project's E&S plans, along with supporting calculations and details, were provided to EEE consulting yesterday, July 16. I've also attached the transmittal letter that was delivered along with the thumb drives. Printing is continuing through today so two hard copy sets will be delivered to EEE tomorrow, July 18. I'll provide notification once that is completed. Thank you, Cory Cory Chalmers • Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 • Mobile: 304.627.8173 cchalmers@equitransmidstream.com -- ~ Ben Ben Leach, GISP Stormwater Team Lead of the Office of Stormwater Management Department of Environmental Quality +1 (804) 698-4037 - direct dial Benjamin.Leach@deq.virginia.gov www.deq.virginia.gov
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Zachary Lentz

Contact ID 1457	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/11/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Zac, Thanks for the update. The check and FRO form will be heading your way in the next day or two. The check request process has taken a bit longer than anticipated so they will be sent together. I'll let you know when they are put in the mail and when you can expect them. Thank you, Cory From: Lentz, Zachary Sent: Wednesday, September 11, 2019 11:46 AM To: Chalmers, Cory M. Subject: [EXTERNAL] Plans received Cory, I received two full size sets of ESC drawings for Southgate this morning, but have not received the FRO form or the fees. Please advise. Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D56898.24D64EC0] [cid:image002.png@01D56898.24D64EC0]
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Zachary Lentz

Contact ID 1471	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/18/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Zac, I finally have an update. I have the check and form in hand and will be dropping it in the mail this afternoon. Can I assume this should go to your attention at the following address? 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 From: Lentz, Zachary Sent: Wednesday, September 11, 2019 12:04 PM To: Chalmers, Cory M. Subject: RE: [External] RE: Plans received Thanks, Cory! Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D56E20.D5DFF210] [cid:image002.png@01D56E20.D5DFF210] From: Chalmers, Cory M. > Sent: Wednesday, September 11, 2019 11:58 AM To: Lentz, Zachary > Subject: [External] RE: Plans received CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Zac, Thanks for the update. The check and FRO form will be heading your way in the next day or two. The check request process has taken a bit longer than anticipated so they will be sent together. I'll let you know when they are put in the mail and when you can expect them. Thank you, Cory From: Lentz, Zachary > Sent: Wednesday, September 11, 2019 11:46 AM To: Chalmers, Cory M. > Subject: [EXTERNAL] Plans received Cory, I received two full size sets of ESC drawings for Southgate this morning, but have not received the FRO form or the fees. Please advise. Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality

	336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D56E20.D5DFF210] [cid:image002.png@01D56E20.D5DFF210]
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Zachary Lentz

Contact ID 1473	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
	Zac, Attached, please find a Secretary's Certificate evidencing Mr. Cooper as an officer of the company. Please let me know if you have any questions. It is our understanding that this should satisfy the requirements of the FRO form. Thanks, Cory From: Chalmers, Cory M. Sent: Friday, September 20, 2019 11:14 AM To: Lentz, Zachary Subject: RE: [External] RE: Plans received Hi Zac, As discussed, here is a link to the website. This lists Bob as part of the management team with Equitrans. I'll continue to work on providing the additional information. https://www.equitransmidstream.com/management-team/ From: Lentz, Zachary > Sent: Friday, September 20, 2019 10:48 AM To: Chalmers, Cory M. > Subject: RE: [External] RE: Plans received Cory, https://www.sosnc.gov/online_services/search/Business_Registrat I got to this page by using the search tool on the NC Secretary of State website. As you can see, all listed members are LLC's, and as far as I can tell, none of them are registered in NC. I have so far been unable to find any relevant information (and sometimes any information at all) about these entities from the states in which they're listed. Any guidance would be appreciated. Thanks, Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D571F2.F7C0A700] [cid:image002.png@01D571F2.F7C0A700] From: Chalmers, Cory M. > Sent: Thursday, September 19, 2019 1:46 PM To: Lentz, Zachary > Subject: RE: [External] RE: Plans received

Issue Comments	CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Would you mind to send me the website that you were searching for the Financial Responsibility Form? Would like to provide that as an example of what you are using as evidence/proof. Thanks, Cory From: Lentz, Zachary > Sent: Wednesday, September 18, 2019 3:42 PM To: Chalmers, Cory M. > Subject: RE: [External] RE: Plans received Thanks Cory, that's correct. Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D571F2.F7C0A700] [cid:image002.png@01D571F2.F7C0A700] From: Chalmers, Cory M. > Sent: Wednesday, September 18, 2019 12:59 PM To: Lentz, Zachary > Subject: RE: [External] RE: Plans received CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Zac, I finally have an update. I have the check and form in hand and will be dropping it in the mail this afternoon. Can I assume this should go to your attention at the following address? 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 From: Lentz, Zachary > Sent: Wednesday, September 11, 2019 12:04 PM To: Chalmers, Cory M. > Subject: RE: [External] RE: Plans received Thanks, Cory! Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality 336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D571F2.F7C0A700] [cid:image002.png@01D571F2.F7C0A700] From: Chalmers, Cory M. > Sent: Wednesday, September 11, 2019 11:58 AM To: Lentz, Zachary > Subject: [External] RE: Plans received CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Zac, Thanks for the update. The check and FRO form will be heading your way in the next day or two. The check request process has taken a bit longer than anticipated so they will be sent together. I'll let you know when they are put in the mail and when you can expect them. Thank you, Cory From: Lentz, Zachary > Sent: Wednesday, September 11, 2019 11:46 AM To: Chalmers, Cory M. > Subject: [EXTERNAL] Plans received Cory, I received two full size sets of ESC drawings for Southgate this morning, but have not received the FRO form or the fees. Please advise. Zac Lentz Assistant Regional Engineer Division of Energy, Mineral, and Land Resources Department of Environmental Quality

	336-776-9661 (office) zac.lentz@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 [cid:image001.jpg@01D571F2.F7C0A700] [cid:image002.png@01D571F2.F7C0A700]
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Frankie Maness

Contact ID 1163	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/04/2019
Type of Contact	Web Based Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Email with Frankie Maness, Graham city manager, and Nathan Page, planning director
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Maria R. Clark

Contact ID 1058	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/28/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Ms. Clark: Please find the attached responses to your letter resubmitted on April 15, 2019 to the FERC docket regarding the MVP Southgate Project. Following your review, we would welcome a follow-up meeting to further discuss any outstanding questions/concerns. Thank you for your time, Alex Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Maria R. Clark

Contact ID 1257	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/06/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Email discussion on MVP Southgate pipeline route.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Maria R. Clark

Contact ID 1237	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/25/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call conversation about pipeline routing.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1056	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Mr. Miller, This is not a revised submittal, simply additional information to be considered for jurisdictional determination purposes on the currently proposed route. Thank you for your time, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Miller, Todd M CIV USARMY CENAO (US) Sent: Thursday, May 23, 2019 8:18 AM To: Miller, Alex Subject: FW: MVP Southgate - Virginia Joint Permit Application - May 2019 Supplement (NAO-2018-1574) (VA # 18-1892) CAUTION - EXTERNAL EMAIL Alex, Does this submittal mean you are reinitiating the review of the JPA? Please call me to discuss. I will be back in the office today after 11am ET. Todd Miller Western Virginia Regulatory Section U.S. Army Corps of Engineers 9100 Arboretum Pkwy, Ste 235 Richmond, Virginia 23236 (804) 323-3782 Richmond Office todd.m.miller@usace.army.mil From: Walker, Lisa [mailto:LWalker@trccompanies.com] Sent: Wednesday, May 22, 2019 3:16 PM To: Miller, Todd M CIV USARMY CENAO (US) >; Randy.Owen@mrc.virginia.gov; dave.davis@deq.virginia.gov; JPA.permits@mrc.virginia.gov; mike.johnson@mrc.virginia.gov Cc: Miller, Alex >; Faul, Travis >; Zimmer, John >; Patti, Heather >; Hamberg, Alexis >; Bailey, David E CIV USARMY CESAW (USA) > Subject: [Non-DoD Source] MVP Southgate - Virginia Joint Permit Application - May 2019 Supplement (NAO-2018-1574) (VA # 18-1892) Good afternoon, please find attached a supplement to the November 2018 MVP Southgate Project Joint Permit Application. Please let me know if you have any trouble opening the files. Sincerely,

	Lisa Walker Senior Project Manager/Scientist [cid:image002.png@01D5114F.69721370] 912 Lotus Lane South, Jacksonville, FL 32259 Cell 904.716.7429 LinkedIn | Twitter | Blog | TRCcompanies.com Please note that our domain name and email addresses have changed
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Todd Miller

Contact ID 1274	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/13/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi David and Todd, My email was returned to me last night so I am trying again with just Attachment A from the filing and the latest KMZ of our route. The FERC will be hosting DEIS Comment Meetings next week in each county with the comment period scheduled to end mid-September. The FEIS is scheduled for December 19th, 2019 based on the FERC's Notice of Schedule. We will continue to update our wetland delineation reports for your review. Please give me a call with any questions, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1055	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	05/23/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Project update
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1263	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on the FERC filing, comment period, outreach with tribes, and updating delineation report.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1469	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/19/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Voicemail to discuss schedule for submitting PCN.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1472	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/20/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on project schedule and revised application.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Todd Miller

Contact ID 1478	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/20/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Mr. Miller called MVP to discuss the PCN/application schedule.
Contacted By	Heather Patti
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for John Mintz

Contact ID 1265	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/12/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on recent Southgate submittals and FERC’s DEIS issuance.
Contacted By	Paul Webb
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Jennifer Mundt

Contact ID 1529	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/11/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	Meeting To Discuss DEQ's Comments To The FERC Docket Regarding Environmental Justice, Outreach, And Economics. Meeting Attendees: Jennifer Mundt, Renee Kramer, Sharon Martin, John Luce, Kathy Salvador (MVP), Shawn Day (MVP), Alex Miller (MVP, Kyle Martin (MVP)
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Bridget Munger

Contact ID 1494	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/24/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	To: "Kramer, Renee P" From: "Miller, Alex" Subject: Southgate DEIS Comments Date: 09/24/2019 Cc: "Munger, Bridget" , "Martin, Kyle" , "shawn@capresults.net" , "Salvador, Kathy" ReplyTo: "Miller, Alex" Body: Hi Renee, Thank you for reviewing the FERC's Draft Environmental Impact Statement for the Southgate Project. Do you have the availability to sit down and go through your comments together? This would be valuable so we can address your concerns and revise our community outreach plan as necessary. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] Renee.Kramer@ncdenr.gov
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Olivia Munzer

Contact ID 1197	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/17/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
	Hi Olivia, Thank you again for the information. We have developed some proposed mixes to be submitted for the NC portion of Southgate. Would you mind to review and provide some input on how they look? These were compiled with additional input from Ernst Seeds. And if a call is a better way to discuss, I can set something up. Thank you very much, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.comFrom: Munzer, Olivia Sent: Monday, March 04, 2019 1:55 PM To: Chalmers, Cory M. Subject: RE: [External] RE: Southgate Pipeline Hi Cory, My apologies for getting you this information so late. I've been playing catch up. Here are a few resources we have for native plants, and they include region and suitability for erosion control. I can find more resources for you if you need, but I figured this would get you started. Olivia Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Chalmers, Cory M. > Sent: Wednesday, January 30, 2019 3:56 PM To: Munzer, Olivia >; Isenhour, John R > Subject: [External] RE: Southgate Pipeline CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Olivia, That would be excellent. Any information and guidance you can provide for recommended seed mixes would be very helpful. We currently have what is provided in the Erosion & Sediment Control Planning and Design Manual, but would appreciate any supplemental information. Specifically, anything related to

Issue Comments	temporary and permanent restoration. And if a phone call would be better to discuss, please don't hesitate. I can be reached at the contact information below. Thanks again for your assistance, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.comFrom: Munzer, Olivia > Sent: Monday, January 28, 2019 4:13 PM To: Isenhour, John R >; Chalmers, Cory M. > Subject: [EXTERNAL] RE: Southgate Pipeline Hi John and Corey, Yes, I can provide some information and guidance on seeding for the Southgate Pipeline. I've been involved with the project in other aspects too. Feel free to contact me Corey and I can start rounding up some information for you too. Olivia Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Isenhour, John R Sent: Thursday, January 24, 2019 10:53 AM To: Munzer, Olivia >; cchalmers@equitransmidstream.com Subject: Southgate Pipeline Olivia, I hope you are doing well. A few months ago I got a call from Gretchen with Southgate Pipeline concerning invasive exotic control. After a discussion I directed here to NC Cooperative Extension for additional information on invasive control, but did mention that NCWRC would like to be involved with seeding recommendations on their construction projects in NC. Last week Corey Chalmers (copied here) reached out to me concerning seeding recommendations. As you and other Habitat Conservation Section staff generally handle permitted activities such as pipeline installation I wanted to make sure that you and Corey could be in contact to ensure proper information was to him. If I can be of further assistance with this discussion please let me know, otherwise I know Corey will be in good hands. Take care, John Isenhour Technical Assistance Biologist NC Wildlife Resources Commission 530 West Innes Street Salisbury, North Carolina 28144 cell: 704-213-4825 ncwildlife.org [Description: Description: googleplus3][Description: Description: fb3][Description: Description: tweet3][Description: Description: blog3][Description: Description: youtube3] _____ Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties.
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Olivia Munzer

Contact ID 1258	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/07/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
	From: Munzer, Olivia Sent: Wednesday, August 07, 2019 6:17 PM To: Chalmers, Cory M. Cc: Tompkins, Bryan ; Garrison, Gabriela Subject: RE: [External] RE: Southgate Pipeline Cory, My apologies for the delay. I've been in the field a lot the last few weeks. I talked to Bryan Tompkins (USFWS) and Gabriela Garrison (NCWRC) who are heavily involved in pollinator habitat. I cc'd them as they can probably answer specific questions or issues more than I can. Here are their suggestions: - Try to get more NC ecotypes or at least those closer, especially IN Bluestem and Indiangrass. Check with some of the larger local nurseries such as Garrett's, Mellow Marsh, Lumber River for local ecotypes. - Substitute the Swamp sunflower with the Oxeye sunflower in the riparian mix. - Add Indian blanket (Gaillardia) - it is a prolific germinator and easy to establish. Coreopsis tinctorial is another good species - Add Maximillian sunflower in the upland mix. Bryan had a few questions (I may have provided answers in recommendations, but I don't recall offhand): - What is the construction timeline? - Do you have a maintenance/mowing plan that is conducive to pollinator habitat? - What is your timing, stabilization needs, site/soil prep, cover crops and measures to maintain sites until proper planting season? Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Chalmers, Cory M. > Sent: Wednesday, July 17, 2019 10:47 AM To: Munzer, Olivia > Subject: RE: [External] RE: Southgate Pipeline CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Olivia, Thank you again

Issue Comments	for the information. We have developed some proposed mixes to be submitted for the NC portion of Southgate. Would you mind to review and provide some input on how they look? These were compiled with additional input from Ernst Seeds. And if a call is a better way to discuss, I can set something up. Thank you very much, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com From: Munzer, Olivia > Sent: Monday, March 04, 2019 1:55 PM To: Chalmers, Cory M. > Subject: RE: [External] RE: Southgate Pipeline Hi Cory, My apologies for getting you this information so late. I've been playing catch up. Here are a few resources we have for native plants, and they include region and suitability for erosion control. I can find more resources for you if you need, but I figured this would get you started. Olivia Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Chalmers, Cory M. > Sent: Wednesday, January 30, 2019 3:56 PM To: Munzer, Olivia >; Isenhour, John R > Subject: [External] RE: Southgate Pipeline CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Olivia, That would be excellent. Any information and guidance you can provide for recommended seed mixes would be very helpful. We currently have what is provided in the Erosion & Sediment Control Planning and Design Manual, but would appreciate any supplemental information. Specifically, anything related to temporary and permanent restoration. And if a phone call would be better to discuss, please don't hesitate. I can be reached at the contact information below. Thanks again for your assistance, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com From: Munzer, Olivia > Sent: Monday, January 28, 2019 4:13 PM To: Isenhour, John R >; Chalmers, Cory M. > Subject: [EXTERNAL] RE: Southgate Pipeline Hi John and Corey, Yes, I can provide some information and guidance on seeding for the Southgate Pipeline. I've been involved with the project in other aspects too. Feel free to contact me Corey and I can start rounding up some information for you too. Olivia Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Isenhour, John R Sent: Thursday, January 24, 2019 10:53 AM To: Munzer, Olivia >; cchalmers@equitransmidstream.com Subject: Southgate Pipeline Olivia, I hope you are doing well. A few months ago I got a call from Gretchen with Southgate Pipeline concerning invasive exotic control. After a discussion I directed here to NC

	Cooperative Extension for additional information on invasive control, but did mention that NCWRC would like to be involved with seeding recommendations on their construction projects in NC. Last week Corey Chalmers (copied here) reached out to me concerning seeding recommendations. As you and other Habitat Conservation Section staff generally handle permitted activities such as pipeline installation I wanted to make sure that you and Corey could be in contact to ensure proper information was to him. If I can be of further assistance with this discussion please let me know, otherwise I know Corey will be in good hands. Take care, John Isenhour Technical Assistance Biologist NC Wildlife Resources Commission 530 West Innes Street Salisbury, North Carolina 28144 cell: 704-213-4825 ncwildlife.org [Description: Description: googleplus3][Description: Description: fb3][Description: Description: tweet3][Description: Description: blog3][Description: Description: youtube3] _____ Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties. Alex.Miller@nexteraenergy.com,Alex.Miller@nexteraenergy.com,sr
Contacted By	Megan Stahl
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Olivia Munzer

Contact ID 1294	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Olivia, I wanted to make you aware that public meetings to collect comment on the Southgate Project's DEIS will be held in each of the three counties along the proposed route. These times and locations are as follows: 5 p.m. - 8 p.m. Aug. 19, 2019 Rockingham Community College 215 Wrenn Memorial Road Wentworth, NC 27375 5 p.m. - 8 p.m. Aug. 20, 2019 Olde Dominion Agricultural Complex 19783 US Highway 29 South Chatham, VA 24531 5 p.m. - 8 p.m. Aug. 22, 2019 Vailtree Event & Conference Center 1567 Bakatsias Lane Haw River, NC 27258 Please let me know if you have any questions. Thanks, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Olivia Munzer

Contact ID 1296	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/20/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	From: Munzer, Olivia Sent: Tuesday, August 20, 2019 8:23 AM To: Chalmers, Cory M. Subject: RE: [External] Southgate DEIS Comment Meetings Thank you Cory. Olivia Munzer Western Piedmont Habitat Conservation Coordinator NC Wildlife Resources Commission From: Chalmers, Cory M. > Sent: Monday, August 19, 2019 1:46 PM To: Munzer, Olivia > Subject: [External] Southgate DEIS Comment Meetings CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov Hi Olivia, I wanted to make you aware that public meetings to collect comment on the Southgate Project's DEIS will be held in each of the three counties along the proposed route. These times and locations are as follows: 5 p.m. - 8 p.m. Aug. 19, 2019 Rockingham Community College 215 Wrenn Memorial Road Wentworth, NC 27375 5 p.m. - 8 p.m. Aug. 20, 2019 Olde Dominion Agricultural Complex 19783 US Highway 29 South Chatham, VA 24531 5 p.m. - 8 p.m. Aug. 22, 2019 Vailtree Event & Conference Center 1567 Bakatsias Lane Haw River, NC 27258 Please let me know if you have any questions. Thanks, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com _____ Email correspondence to and from this sender is subject to the N.C. Public Records Law and may be disclosed to third parties. sms@pipelineoutreach.com,sms@pipelineoutreach.com

Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Great. Thank you, Sheri!

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

From: Montalvo, Sheri A <sheri.montalvo@ncdenr.gov>
Sent: Thursday, August 15, 2019 1:05 PM
To: Patti, Heather <HPatti@trccompanies.com>
Subject: FW: [External] FW: Fee Request for MVP Southgate Project ID # 20181638 Ver 3

Good afternoon,

We received the check today and it will be applied.

Thanks,

Sheri Montalvo
401 & Buffer Permitting Branch
Division of Water Resources
Department of Environmental Quality

Office: (919) 707-3635
Sheri.montalvo@ncdenr.gov

Mailing address: 1617 Mail Service Center, Raleigh, NC 27699-1617
Physical address: 512 N. Salisbury Street, Raleigh, NC 27604

From: Strickland, Bev
Sent: Thursday, August 15, 2019 12:44 PM
To: Montalvo, Sheri A <sheri.montalvo@ncdenr.gov>
Subject: FW: [External] FW: Fee Request for MVP Southgate Project ID # 20181638 Ver 3

Beverly J Strickland

Beverly Strickland
Laserfiche Administrator
Division of Water Resources

Department of Environmental Quality
919-707-3876 **New Office Number**

Physical: Suite 1219G, 512 N Salisbury, Raleigh, NC 27604
Mailing: Mail Service Center 1617, Raleigh, NC 27699-1617

Bev.Strickland@ncdenr.gov

From: Patti, Heather <HPatti@trccompanies.com>
Sent: Thursday, August 15, 2019 11:29 AM
To: Strickland, Bev <bev.strickland@ncdenr.gov>
Subject: [External] FW: Fee Request for MVP Southgate Project ID # 20181638 Ver 3

Hi Bev,

The $570.00 fee for this permit application should have been delivered to the address below yesterday via FedEx, 8/14.

NCDEQ - Division of Water Resources
Attn: 401 Wetlands
1617 Mail Service Center
Raleigh, NC 27699-1617

Could you confirm receipt of the fee? Thank you,

Heather Patti, PWS
Senior Ecologist

5540 Centerview Drive, Suite 100, Raleigh, NC 27606
T: 919-256-6236 | F: 919-838-9661 | C: 262-623-1079

LinkedIn | Twitter | Blog | Flickr | www.TRCcompanies.com

Please note that our domain name and email addresses have changed

From: laserfiche@ncdenr.gov <laserfiche@ncdenr.gov>
Sent: Wednesday, August 14, 2019 2:23 PM
To: Patti, Heather <HPatti@trccompanies.com>
Cc: bev.strickland@ncdenr.gov
Subject: Fee Request for MVP Southgate Project ID # 20181638 Ver 3

The North Carolina Division of Water Resources has received an application that you submitted on 8/13/2019 2:46 PM for MVP Southgate Project. The ID number for that project is 20181638, Version 3.

Your permit request will not be reviewed until the fee for your project has been received. The amount owed is 570.00.

1. You may pay either by mail with check/money order OR by electronic payment (Credit Card).

2. If payment is by check/money order, please remit payment to:

NCDEQ - Division of Water Resources
Attn: 401 Wetlands
1617 Mail Service Center
Raleigh, NC 27699-1617

3. If payment is electronic, please see https://deq.nc.gov/about/divisions/water-resources/water-resources-permits/wastewater-branch/401-wetlands-buffer-permits/wetlands-epayments. Credit card transactions will incur a convenience fee.

4. Please include your Permit Number and Invoice Number on all correspondence.

5. A $25.00 processing fee will be charged for returned checks in accordance with North Carolina General Statute 25-3-512.

6. Non-Payment of this fee by the payment due date will initiate the application being returned.

7. Should you have any questions regarding this invoice, please contact the Fee Coordinator below:

Transportation Projects Contact: Kristi Lynn Carpenter at kristilynn.carpenter@ncdenr.gov
All other Projects Contact: Sheri Montalvo at sheri.montalvo@ncdenr.gov

Project file link: https://edocs.deq.nc.gov/WaterResources/Browse.aspx?dbid=0&startid=948200

If this permit application was submitted outside of standard business hours, it will be considered to have been received on the next business day.

This email was automatically generated by Laserfiche workflow. Please do not respond to this email address, as responses aren't monitored.

Contact Report for Nathan Page

Contact ID 1488	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/23/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Email with Nathan Page, Graham planning director
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Nathan Page

Contact ID 1122	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/19/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	Pre-application meeting between Southgate and Mr. Page to discuss floodplain permitting expectations and schedule.
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Hamberg, Alexis

From: Hamberg, Alexis
Sent: Tuesday, September 10, 2019 11:00 AM
To: Lavarco, William
Cc: Miller, Alex
Subject: FW: UPS Ship Notification, Tracking Number 1Z665RY50197624095

FYI

From: UPS Quantum View <pkginfo@ups.com>
Sent: Tuesday, September 10, 2019 8:47 AM
To: Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>
Subject: UPS Ship Notification, Tracking Number 1Z665RY50197624095

To get an estimated delivery time for most UPS packages, click Continue

You have a package coming.

Scheduled Delivery Date: Wednesday, 09/11/2019

Continue

Change Delivery | Manage Preferences | View Delivery Planner

This message was sent to you at the request of NEXTERA ENERGY RESOURCES LLC to notify you that the shipment information below has been transmitted to UPS. The physical package may or may not have actually been tendered to UPS for shipment. To verify the actual transit status of your shipment, click on the tracking link below.

Shipment Details

From:	NEXTERA ENERGY RESOURCES LLC
Tracking Number:	1Z665RY50197624095
Ship To:	Preservation Virginia 608 Holbrook Avenue DANVILLE, VA 245412412 US
UPS Service:	UPS NEXT DAY AIR
Number of Packages:	1
Package Weight:	0.0 LBS
Scheduled Delivery:	09/11/2019
Reference Number 1:	5170
Reference Number 2:	236688

Download the UPS mobile app

August 7, 2019

Mr. Gregory A. Richardson
Executive Director
NC Commission of Indian Affairs
1317 Mail Service Center
Raleigh, NC 27603-1317

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Greg:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Gregory A. Richardson

Contact ID 1414	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/04/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Phone call discussion in regards to attending the NC Commission of Indian Affairs Annual Meeting (confirm date, time, etc.)
Contacted By	N/A
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Vann Stancil

Contact ID 1202	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/17/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello, Just checking in again. Any updates that could be provided would be greatly appreciated as we continue to plan our withdrawal strategy. And as always, please feel free to give me a call if you'd like to discuss. Thank you, Cory Cory Chalmers * Environmental Coordinator 120 Professional Place, Bridgeport, WV 26330 Direct: 304.848.0061 * Mobile: 304.627.8173 cchalmers@equitransmidstream.com From: Chalmers, Cory M. Sent: Wednesday, June 26, 2019 2:21 PM To: John_Ellis@fws.gov; sarah_mcrae@fws.gov; Stancil, Vann F Cc: Miller, Alex ; Stahl, Megan D. Subject: RE: MVP Southgate - surface water withdrawal Hi John, Sarah, and Vann, Have you all had an opportunity to discuss this internally? Please let me know if you need any additional information or if you'd like to regroup with another conference call. Thank you again for your time, Cory From: Stahl, Megan D. Sent: Tuesday, May 07, 2019 4:25 PM To: John_Ellis@fws.gov; sarah_mcrae@fws.gov; Stancil, Vann F > Cc: Miller, Alex >; Stephanie Frazier >; Chalmers, Cory M. > Subject: MVP Southgate - surface water withdrawal John, Sarah, and Vann, I am writing to follow up on the discussion between FWS and the MVP Southgate team last week. The VA DEQ guidance for surface water withdrawals includes the following measures to avoid an adverse effect or impairment to surface water: * Withdrawing no more than 10% of the instantaneous flow rate from the channel; * Using the intake screens designed so that screen openings are not larger than 1 millimeter and; * Ensuring that screen face intake velocities are not greater than 0.25 feet per second. Can you confirm that no corresponding guidelines

	exist for North Carolina waters? On the call we discussed the possibility of Southgate withdrawing water from the Dan River and you mentioned that no withdrawals should occur during critical life stages of anadromous, rare, threatened or endangered species. Can you confirm that for the Dan River this timeframe is between March - June? Once you provide feedback on these items I will send the proposed draft plan for Southgate withdrawal and discharge for your review and comment. Thank you, Megan Megan Stahl Manager Environmental 2200 Energy Drive Canonsburg, PA 15317 T 412-553-7783 C 412-737-2587 mstahl@equitransmidstream.com *Please note my new email address [cid:image001.jpg@01D47B5F.34A70E60]
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Vann Stancil

Contact ID 1289	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/19/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Provided information on DEIS public comment meeting time and locations (voicemail)
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Steve Carter

Contact ID 1434	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/22/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	August 22: Email with Steve Carter, Alamance County commissioner
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Steve Carter

Contact ID 1448	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/09/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Email with Steve Carter, Alamance County commissioner
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Steve Carter

Contact ID 1483	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/17/2019
Type of Contact	Meeting
Type of Issue	No Issues were indentified with this contact
Issue Comments	Meeting with Steve Carter, Alamance County Board of Supervisors member.
Contacted By	Shawn Day
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Mr. Gerald Stewart
Chief
Chickahominy Tribe, Eastern Division
2895 Mt. Pleasant Road
Providence Forge, VA 23140

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Chief Stewart:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Matthew Strickler

Contact ID 1182	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	06/26/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Secretary Strickler, Thank you again for taking the time to meet with us earlier this month to discuss the Southgate Project. As promised, I wanted to get back to you about a specific question you had during our meeting. The nearest residence to the proposed Lambert Compressor Station is approximately 0.6 miles away. Please let me know if there are any other questions from your staff or your constituents that we can address. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Thompson

Contact ID 1195	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/11/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Tamera, Thank you for reaching out to me to setup a meeting. Please let me know who I should coordinate the meeting with to discuss our air application. Have a great day, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Thompson

Contact ID 1194	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/10/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left a voicemail requesting a returned call to discuss revised permit application currently under review by the agency.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

-----Original Message-----
From: Thames, Joyce A CIV USARMY CESAW (US) <Joyce.A.Thames@usace.army.mil>
Sent: Wednesday, August 14, 2019 1:44 PM
To: kathy.salvador@nexteraenergy.com; Patti, Heather <HPatti@trccompanies.com>
Cc: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Subject: SAW-2018-00887--Mountain Valley Pipeline - Southgate / NextEra Energy / Alamance
Importance: High

Good Afternoon,

On 14 August 2019, we receive your PCN request. We have assigned the request the EXISTING file number SAW-2018-00887 and forwarded it to David Bailey for further processing, please refer to this number on all correspondence..

Sincerely,

Joyce A. Thames
US Army Corps of Engineers
Raleigh Reg. Field Ofc.
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
(919) 554-4884 Ext 21

Joyce A. Thames
US Army Corps of Engineers
Raleigh Reg. Field Ofc.
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587
(919) 554-4884 Ext 21

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the Customer Satisfaction Survey located at https://nam01.safelinks.protection.outlook.com/?url=http%3A%2F%2Fcorpsmapu.usace.army.mil%2Fcm_apex%2Ff%3Fp%3D136%3A4%3A0&data=02%7C01%7CHPatti%40trccompanies.com%7C738c2f7bda8649f7cf8208d720df2711%7C543eaf7b7e0d4076a34d1fc8cc20e5bb%7C0%7C0%7C637014015137023762&sdata=Yr9A%2BsPygyJ5A5I9369znM7qg8Jw43wIUwPdcGGZmx8%3D&reserved=0.

Hello Mr. Bailey,

Thank you for following up with us regarding our application. The Project does not anticipate being able to fulfill the outstanding items from our application by November 1, 2019 as originally forecasted. A complete application is now forecasted to be submitted in the first quarter of 2020.

Regards,

Alex V. Miller
Environmental Permitting Lead
on behalf of Mountain Valley Pipeline, LLC
713-374-1599

-----Original Message-----
From: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Sent: Wednesday, September 18, 2019 11:52 AM
To: Patti, Heather <HPatti@trccompanies.com>; Miller, Todd M CIV USARMY CENAO (US) <Todd.M.Miller@usace.army.mil>; Miller, Alex <Alex.Miller@nexteraenergy.com>
Cc: Salvador, Kathy <Kathy.Salvador@fpl.com>; Gibby, Jean B CIV USARMY CESAW (USA) <Jean.B.Gibby@usace.army.mil>; Frye, Jennifer S CIV USARMY CENAO (USA) <Jennifer.S.Frye@usace.army.mil>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>
Subject: RE: Response to Request for Additional Information; Mountain Valley Pipeline-Southgate, Alamance and Rockingham Counties; SAW-2018-00887

CAUTION - EXTERNAL EMAIL

Hi Heather. The November 1st target date is related to our responsibilities pertaining to One Federal Decision, which requires target dates for important milestones in the permitting process. Based on information received from MVP as of February 2019, November 1st was anticipated as the date when the Corps would receive a complete PCN/application. The completion status would be determined based primarily on the items mentioned in the Wilmington and Norfolk District's letters following your December 2018 and August 2019 JPA submittals. We need to know if you anticipate submittal of a complete PCN/application by November 1st, or if surveys/delineations/design/etc. pertaining to our above-referenced response letters are likely to push back this submittal. If so, we just need a revised anticipated complete PCN/application date to update the One Federal Decision milestone target. Thanks again.
-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R

3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
Fax: (919) 562-0421
Email: David.E.Bailey2@usace.army.mil

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at: http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0
Thank you for taking the time to visit this site and complete the survey.

Hello Mr. Bailey,

Thank you for following up with us regarding our application. The Project does not anticipate being able to fulfill the outstanding items from our application by November 1, 2019 as originally forecasted. A complete application is now forecasted to be submitted in the first quarter of 2020.

Regards,

Alex V. Miller
Environmental Permitting Lead
on behalf of Mountain Valley Pipeline, LLC
713-374-1599

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From: Bailey, David E CIV USARMY CESAW (USA) <David.E.Bailey2@usace.army.mil>
Sent: Wednesday, September 18, 2019 11:52 AM
To: Patti, Heather <HPatti@trccompanies.com>; Miller, Todd M CIV USARMY CENAO (US) <Todd.M.Miller@usace.army.mil>; Miller, Alex <Alex.Miller@nexteraenergy.com>
Cc: Salvador, Kathy <Kathy.Salvador@fpl.com>; Gibby, Jean B CIV USARMY CESAW (USA) <Jean.B.Gibby@usace.army.mil>; Frye, Jennifer S CIV USARMY CENAO (USA) <Jennifer.S.Frye@usace.army.mil>; Hamberg, Alexis <Alexis.Hamberg@nexteraenergy.com>; Zimmer, John <JZimmer@trccompanies.com>
Subject: RE: Response to Request for Additional Information; Mountain Valley Pipeline-Southgate, Alamance and Rockingham Counties; SAW-2018-00887

CAUTION - EXTERNAL EMAIL

Hi Heather. The November 1st target date is related to our responsibilities pertaining to One Federal Decision, which requires target dates for important milestones in the permitting process. Based on information received from MVP as of February 2019, November 1st was anticipated as the date when the Corps would receive a complete PCN/application. The completion status would be determined based primarily on the items mentioned in the Wilmington and Norfolk District's letters following your December 2018 and August 2019 JPA submittals. We need to know if you anticipate submittal of a complete PCN/application by November 1st, or if surveys/delineations/design/etc. pertaining to our above-referenced response letters are likely to push back this submittal. If so, we just need a revised anticipated complete PCN/application date to update the One Federal Decision milestone target. Thanks again.
-Dave Bailey

David E. Bailey, PWS
Regulatory Project Manager
US Army Corps of Engineers
CE-SAW-RG-R

3331 Heritage Trade Drive, Suite 105
Wake Forest, North Carolina 27587
Phone: (919) 554-4884, Ext. 30.
Fax: (919) 562-0421
Email: David.E.Bailey2@usace.army.mil

We would appreciate your feedback on how we are performing our duties. Our automated Customer Service Survey is located at: http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0
Thank you for taking the time to visit this site and complete the survey.

MVP Southgate – Lambert PS Meeting
Meeting from 8:30 to 10:30 am at VA DEQ Central Office
August 14, 2019

DEQ participants:

- Jeff Steers, Director of Central Operations
- Mike Dowd, Director of Air Division
- Tamera Thompson, Manager, Office of Air Permitting
- Patrick Corbett, Air Permit Engineer
- Paul Jenkins, Blue Ridge Office, Air Permitting
- Mike Kiss, Manager, Office of Air Quality Assessments
- Stanley Faggert, EJ issues lead

MVP Southgate - In person participants

- Kathy Salvador, NextEra Energy
- Justin Curtis (Aqua Law - external counsel for MVP)
- Christina Akly, NextEra Energy

On the phone participants

- Kristin Ryan, EQM
- Doug Mace, EQM
- Rob Pichardo, EQM
- Alex Miller, NextEra Energy

Meeting Agenda

1. Welcome and introductions
2. Public participation and air board review
    a. Information meeting, public comment period, public hearing
    b. Site suitability and EJ

    The Board in making regulations and in approving variances, control programs, or permits, and the courts in granting injunctive relief under the provisions of this chapter, shall consider facts and circumstances relevant to the reasonableness of the activity involved and the regulations proposed to control it, including:

    1. The character and degree of injury to, or interference with, safety, health, or the reasonable use of property which is caused or threatened to be caused;
    2. The social and economic value of the activity involved;
    3. The suitability of the activity to the area in which it is located; and
    4. The scientific and economic practicality of reducing or eliminating the discharge resulting from such activity.

    c. Difference between DEQ's ability to defend "meets the minimum requirements" versus "best controlled in the country" – SCR
3. Interaction on modeling and permit timing with Transco project
4. Path forward – including timeline
5. Adjourn

Contact Report for Mike Johnson

Contact ID 1250	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/31/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Discussion on project updates and proposed crossings.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Julia Wellman

Contact ID 1248	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	07/30/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Julia, Thank you for your patience while I catch-up from being out. Attached is the route that we submitted to the FERC in our May Supplemental. The Project is planning on submitting an updated proposed route in August to the FERC. The upcoming adjustments are largely based on accommodating landowner feedback where feasible. I will pass those along to you when it is distributed. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Wellman, Julia Sent: Monday, July 29, 2019 7:53 AM To: Miller, Alex Subject: MVP Southgate EIS shapefiles CAUTION - EXTERNAL EMAIL Good morning Alex, Do you have shapefiles or Google Earth files of the MVP Southgate route as presented in the FERC draft EIS that we could distribute to reviewers? If so, could you please email them to me? Thank you, Julia -- Julia Wellman Environmental Impact Review Coordinator Department of Environmental Quality 1111 E Main Street, Suite 1400 Richmond, VA 23219 804-698-4326 Julia.Wellman@deq.virginia.gov www.deq.virginia.gov **** For program updates and public notices, please subscribe to Constant Contact: https://lp.constantcontact.com/su/MVcCump/EIR ****
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Julia Wellman

Contact ID 1266	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/12/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hello Julia, The July DEIS is consistent with the route that was last submitted to the FERC. Additionally, please find the attached KMZ of the Southgate Project's updated route that was filed with the FERC on Friday (8/9). These adjustments were largely driven based on landowner feedback and we are asking the FERC to consider in their evaluation. Happy to discuss further at your convenience. Thanks, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Wellman, Julia Sent: Wednesday, July 31, 2019 7:34 AM To: Miller, Alex Subject: Re: MVP Southgate EIS shapefiles Will you please let me know when you all have made a determination on whether the routes are the same? On Wed, Jul 31, 2019 at 8:32 AM Miller, Alex > wrote: We are reviewing that right now, but it looks to be the case after my first read over the weekend. From: Wellman, Julia > Sent: Wednesday, July 31, 2019 7:29 AM To: Miller, Alex > Subject: Re: MVP Southgate EIS shapefiles Thank you. Do you know if the route that MVP submitted in May matches what is published in the FERC draft EIS for MVP Southgate? On Tue, Jul 30, 2019 at 5:36 PM Miller, Alex > wrote: Hi Julia, Thank you for your patience while I catch-up from being out. Attached is the route that we submitted to the FERC in our May Supplemental. The Project is planning on submitting an updated proposed route in August to the FERC. The upcoming adjustments are largely based on accommodating landowner feedback where feasible. I will pass those along to you when it is distributed. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain

	Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Wellman, Julia > Sent: Monday, July 29, 2019 7:53 AM To: Miller, Alex > Subject: MVP Southgate EIS shapefiles CAUTION - EXTERNAL EMAIL Good morning Alex, Do you have shapefiles or Google Earth files of the MVP Southgate route as presented in the FERC draft EIS that we could distribute to reviewers? If so, could you please email them to me? Thank you, Julia -- Julia Wellman Environmental Impact Review Coordinator Department of Environmental Quality 1111 E Main Street, Suite 1400Richmond, VA 23219 804-698-4326 Julia.Wellman@deq.virginia.gov www.deq.virginia.gov **** For program updates and public notices, please subscribe to Constant Contact: https://lp.constantcontact.com/su/MVcCump/EIR **** -- Julia Wellman Environmental Impact Review Coordinator Department of Environmental Quality 1111 E Main Street, Suite 1400 Richmond, VA 23219 804-698-4326 Julia.Wellman@deq.virginia.gov www.deq.virginia.gov **** For program updates and public notices, please subscribe to Constant Contact: https://lp.constantcontact.com/su/MVcCump/EIR **** -- Julia Wellman Environmental Impact Review Coordinator Department of Environmental Quality 1111 E Main Street, Suite 1400 Richmond, VA 23219 804-698-4326 Julia.Wellman@deq.virginia.gov www.deq.virginia.gov **** For program updates and public notices, please subscribe to Constant Contact: https://lp.constantcontact.com/su/MVcCump/EIR ****
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Julia Wellman

Contact ID 1284	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	08/22/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left voicemail to check in on DEIS review.
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

August 7, 2019

Ms. Marion Werkheiser
1811 E. Grace Street
Richmond, VA 23223

Subject: MVP Southgate Natural Gas Pipeline in Pittsylvania County, VA and Alamance County, NC

Dear Marion:

On July 26, 2019, the Federal Energy Regulatory Commission (FERC) issued the Draft Environmental Impact Statement (DEIS) for the Mountain Valley Pipeline, LLC, MVP Southgate project. This is the latest milestone for the project that extends 73 miles and will transport natural gas from Pittsylvania County, Virginia to new delivery points in Rockingham and Alamance Counties, North Carolina.

I have enclosed a flash drive with a copy of the DEIS and all MVP Southgate cultural resource reports to date for your information and/or review. Also, attached to this letter is a copy of the flash drive instructions, which contain the password to the flash drive.

Considering the regulatory responsibility of FERC, a federal agency, the proposed project will require review under both Section 106 of the National Historic Preservation Act (NHPA) and the National Environmental Policy Act (NEPA). FERC has produced the DEIS as part of its review process and will initiate Section 106 consultation as appropriate.

MVP Southgate does not intend for this communication between the Tribe and MVP Southgate to take the place of any official Section 106 consultation that has or will be conducted. Rather, our communication is consistent with our policy to reach out to Tribes with interest in the area of our projects and provide the latest information and gather feedback on the proposed project. If you have an interest in meeting with me and the project developer or others on the project team so that we can answer any questions, provide you additional information, and / or discuss any concerns you may have about the project location, please let me know.

Again, as it is MVP Southgate's policy to reach out to Tribes that have an interest in the area of the project, I wanted to provide you this information and offer an opportunity to meet over the next two months. If you would like additional information or to schedule a meeting at your offices to discuss the project, please let me know. I can be reached at (561) 691-2820 or via e-mail at Agnes.Ramsey@nee.com .

Regards,

Agnes S. Ramsey

Sr. Project Manager – Tribal Relations
Phone (561) 691-2820
Cell (561) 385-9018

Contact Report for Zachary Lentz

Contact ID 1535	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/15/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left voicemail asking for call back for update on review
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Zachary Lentz

Contact ID 1534	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	09/30/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Spoke to Zac to get update on the plans and confirmation that the previously provided Secretary's Certificate was adequate for finalizing the Financial Responsibility Form; Zac said he had no comments on the plan review at that time, was overall accepting of the design, but would update if/when he had comments; he said typically they like to provide comments within the 30 day window so that applicants have an opportunity to correct and resubmit without getting a denial letter; I said I would check back in with him in a week or two to see how things were going
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Zachary Lentz

Contact ID 1536	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/15/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Received call back; Zac had been on vacation and also experienced a death in the family so the review had gone to Tamera Eplin for its continued review; Zac said he believed she had comments but did not know what they were or how extensive; he said Tamera had been out of office and would return on Wednesday, 10/16; Zac said he would leave a note for her that I had called and also suggested I call as well; Zac offered her phone number to her direct office line
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Eplin

Contact ID 1537	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/16/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left detailed voicemail asking that she call me back to discuss the E&S plan review and expressed my interest that she provide any review comments so that we can correct and resubmit prior to the 30 day review timeframe completing (which is Saturday 10/19);
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Tamera Eplin

Contact ID 1538	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/17/2019
Type of Contact	Phone Call
Type of Issue	No Issues were indentified with this contact
Issue Comments	Left voicemail with my name and contact number
Contacted By	Cory Chalmers
Attachments	There are no files attached to this contact.
There are no followups for this contact.	

Contact Report for Annette Lucas

Contact ID 1540	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/17/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	To: "sms@pipelineoutreach.com" From: "Chalmers, Cory M." Subject: FW: MVP Southgate Preliminary Review Meeting Date: 10/17/2019 Cc: ReplyTo: "Chalmers, Cory M." Body: From: Alessandra Braswell Sent: Thursday, October 17, 2019 2:20 PM To: annette.lucas@ncdenr.gov Cc: Chalmers, Cory M. ; Tim Seldon ; Scott Sheridan Subject: [EXTERNAL] MVP Southgate Preliminary Review Meeting Hello Annette, Thanks for speaking with me earlier this week regarding meeting for a preliminary review of the MVP Southgate restoration plans to discuss stormwater permitting options. I have canvassed our team on their availability. Does 10:30 AM - 12 PM work for you on Tuesday, October 29th, or Friday, November 1st? If not, do you have any days that would work in that time slot the following week? Looking forward to APWA next week! Best, Alessa Alessandra Smolek Braswell, Ph.D., P.E. (NC) Engineer Geosyntec Consultants, Inc.1 Geosyntec Consultants of NC, P.C.2 2501 Blue Ridge Road Suite 430 Raleigh, NC 27607 Phone: 919.424.1841 Mobile: 904.501.0502 1 - Services Outside of North Carolina 2 - Services Inside of North Carolina GEOSYNTEC | SIREM | SAVRON Follow Us - LinkedIn | Twitter | Facebook | YouTube This electronic mail message contains information that (a) is or may be LEGALLY PRIVILEGED, CONFIDENTIAL, PROPRIETARY IN NATURE, OR OTHERWISE PROTECTED BY LAW FROM DISCLOSURE, and (b) is intended only for the use of the Addressee(s) named herein. If you are not the intended recipient, an addressee, or the person responsible for delivering this to an addressee, you are hereby notified that reading, using,

Contact Report for Mark Joyner

Contact ID 1542	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/17/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Hi Mark, Are you available the week of the 28th to meet at the Cherrystone Manor and review the cemetery? I would like to discuss the proposed workspace alignment and any additional concerns you might have on the project. Also, I have not received the signed CA yet and want to confirm that you are still reviewing it? Have a great day, Alex From: Mark Joyner Sent: Friday, October 4, 2019 3:55 PM To: Miller, Alex Subject: Re: MVP Southgate: Confidentiality Agreement CAUTION - EXTERNAL EMAIL Thank you Alex. I received it and will sign and return it. Sent from Yahoo Mail on Android On Fri, Oct 4, 2019 at 4:46 PM, Miller, Alex > wrote: Hello Mr. Joyner, Thank you for speaking with me this afternoon about the Southgate Project and some of your societies concerns. Please sign and return the attached document so we can begin distributing confidential data regarding our project. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	N/A
Attachments	There are no files attached to this contact.

There are no followups for this contact.

	copying, or distributing any part of this message is strictly prohibited. If you have received this electronic mail message in error, please contact us immediately and take the steps necessary to delete the message completely from your computer system. sms@pipelineoutreach.com,sms@pipelineoutreach.com
Contacted By	N/A
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Mark Joyner

Contact ID 1544	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/18/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	Mark, Can you also take a photo of the page just before this for the actual agreement? I know it's a little confusing because there are two separate agreements there. We have a couple Phase II sites in Rockingham County that we intend to take the SHPO out to visit while the investigation is taking place. We were planning on starting work next Monday, but my field lead just said they are postponing due to weather. I will keep you posted on a day, but might be safer to shoot for November 5th right now if that's a day that works? Thanks, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Mark Joyner Sent: Friday, October 18, 2019 11:02 AM To: Miller, Alex Subject: Re: MVP Southgate: Confidentiality Agreement Alex, Thank you for following up. The Historical Society has reviewed the CA and I have attached the signed page as a PDF. If this suffices please let me know. If not I can mail a hard copy to your office or bring a copy for you when we meet at Cherrystone. I am representing both the Danville Historical Society and the Association for the Study of Archaeological Properties LLC. I am available the week of the 28th. I just need to know which day and time to meet with you at the site. Thank You. Mark Joyner On Thursday, October 17, 2019, 12:11:28 PM EDT, Miller, Alex > wrote: Hi Mark, Are you available the week of the 28th to meet at the Cherrystone Manor and review the cemetery? I would like to discuss the proposed workspace alignment and any additional concerns you might have on the project. Also, I have not received the signed CA yet and want to confirm that you are still reviewing it? Have a great

	day, Alex From: Mark Joyner > Sent: Friday, October 4, 2019 3:55 PM To: Miller, Alex > Subject: Re: MVP Southgate: Confidentiality Agreement CAUTION - EXTERNAL EMAIL Thank you Alex. I received it and will sign and return it. Sent from Yahoo Mail on Android On Fri, Oct 4, 2019 at 4:46 PM, Miller, Alex > wrote: Hello Mr. Joyner, Thank you for speaking with me this afternoon about the Southgate Project and some of your societies concerns. Please sign and return the attached document so we can begin distributing confidential data regarding our project. Regards, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized]
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

Contact Report for Sue Homewood

Contact ID 1545	
Contact Status	**Completed**
Priority Level	**Medium**
Contact Date	10/18/2019
Type of Contact	Email
Type of Issue	No Issues were indentified with this contact
Issue Comments	To: "Homewood, Sue" , "Patti, Heather" From: "Miller, Alex" Subject: RE: Public Notice Notification Date: 10/18/2019 Cc: ReplyTo: "Miller, Alex" Body: Hi Sue, Thank you for passing along; I was happy to see it on the website this morning. It will be posted to our project website as well. We will be responding to your RAI on Wednesday and continue to follow-up in advance of the public meeting. Have a great weekend, Alex V. Miller Environmental Permitting Lead on behalf of Mountain Valley Pipeline, LLC 713-374-1599 [MVP Southgate Official Image - re-sized] From: Homewood, Sue Sent: Friday, October 18, 2019 11:54 AM To: Miller, Alex ; Patti, Heather Subject: Public Notice Notification CAUTION - EXTERNAL EMAIL Please see attached. The notice was posted to DWR's website and mailed to our list serve this morning. It will be published in the Burlington Times today and the Rockingham Now on Sunday. Thanks, Sue Homewood Division of Water Resources, Winston Salem Regional Office Department of Environmental Quality 336 776 9693 office 336 813 1863 mobile Sue.Homewood@ncdenr.gov 450 W. Hanes Mill Rd, Suite 300 Winston Salem NC 27105 Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties. sue.homewood@ncdenr.gov,HPatti@trccompanies.com
Contacted By	Alex Miller
Attachments	There are no files attached to this contact.

There are no followups for this contact.

2200 Energy Drive | Canonsburg, PA 15317
833-MV-SOUTH | mail@mvpsouthgate.com
www.mvpsouthgate.com

October 21, 2019 Via Email

Ms. Maria R. Clark
United States Environmental Protection Agency
61 Forsyth Street
Atlanta, Georgia 30303-8960

RE: Responses to Comments Received on the MVP Southgate Project

Dear Ms. Maria R. Clark:

In response to your comments on the Draft Environmental Impact Statement for the Southgate Project (CEQ #20190176) dated September 12, 2019, the following information is being provided in the enclosed attachment that addresses your comments.

Should you have any additional questions or require further information to complete your review of the Project, please do not hesitate to contact Alex Miller at (713) 374-1599 or via email at alex.miller@nee.com or myself at (561) 691-7054 or via email at kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador
Senior Director, Environmental Services

cc: Aaron Blair, USEPA Region 3
Todd Bowers, USEPA Region 4
Amanda Mardiney, FERC
Allen Jacks, Cardno
William Lavarco, MVP Southgate
Alex Miller, MVP Southgate

MVP Southgate Project

FERC Docket No. CP19-14-000

Responses to U.S. Environmental Protection Agency Comments Received on the MVP Southgate Project

Attachments

October 2019

EPA Comment:
Purpose and Need: The DEIS was not clear concerning a full description of the purpose and need for the action(s). In the Section 1.1 Purpose and Need, the document stated a description of the proposal and how the Commission bases its decisions. However, the need for this project remained uncertain. The purpose and need of the proposed project stated in the DEIS is: "...to meet the specific requests or natural gas transportation service of its anchor shipper, Dominion Energy (formerly PSNC Energy), a local natural gas distribution company."

Additionally, the Commission directed the readers to its "Certificate Policy Statement"' to try to clarify how the Commission evaluates the need for the project, and as the Commission states in the DEIS:"...whether there is a need for a proposed project and whether the proposed project would serve the public interest. The Commission decision, in its Order, would review the need for the Project."

Recommendations: The EPA recognizes that this section of the DEIS needs to be further developed as the Commission receives agency and public input. While finalizing this discussion, the EPA has provided some general information regarding NC's demand/consumption regarding three energy sectors (See chart below). It is noted that in NC the natural gas sector has increased by more than 100%, but we also noted that the available volume of gas as of today is already exceeding NC's present consumption. We understand that one of the many issues FERC considers for its decision is market demand and supply. We recommend that the FEIS include a well-defined purpose and need that would address the underlining need for this project that balances the benefits and impacts from the proposal.

MVP Response:
Please see Attachment 1 in response to comments raised by the EPA, and other stakeholders, regarding the Southgate's purpose and need.

EPA Comment:
Alternatives: The EPA's earlier scoping comments recommended that FERC expand the evaluation of the alternatives. While we recommended to further evaluate the Duke Power Alterative (included in this DEIS), and to explore further 'co-location' alternatives that would reduce and minimize environmental impacts.

Recommendations: The EPA recommends expanding the System Alternatives section. The DEIS explanation of why this alternative is not feasible is not clear. The EPA also recommends expanding the Major Pipeline Route Alternatives. We recommend studying a new route for the NC proposed route, specifically where the proposed route deviated from co-location at MP 32.8 (begins co-location with the power lines) and beyond. The EPA recognizes that this suggested co-location alternative route would entail additional mileage, but we also recognize the extent of permanent and temporary impacts the proposed new location route would create. We recommend studying the continuation of co-location from MP 32.8 going south and following co-location (with Cardinal Pipeline) looping to the east until reaching the future delivery point at the Haw River location. The EPA can supply the appropriate maps if FERC requires clarification regarding this recommended environmentally-preferable alternative.

MVP Response:
In addition to the alternatives analyzed in the November 2018 Resource Report 10, the Project provided information on additional alternatives in the March 28, 2019 Supplemental Filing; May 13, 2019 Environmental Information Request #2; May 22, 2019 Supplemental Filing; and June 21, 2019 Environmental Information Request #3.

Specifically, the Project evaluate the proposed route involving co-location from MP 32.8 going south and following co-location (with Cardinal Pipeline) looping to the east until reaching the future delivery point at the Haw River location. This alternative was not preferred for a variety of reasons including proximity to residences, terrain, and additional waterbody crossings, including the Haw River, which is not crossed by the currently proposed alignment.

EPA Comment:
NHPA, ESA and CWA Section 404 Compliance: The DEIS states that FERC would complete the process for compliance with the National Historic Preservation Act (NHPA) and the Endangered Species Act (ESA) Section 7 consultations prior to construction. It is also noted that FERC was submitting the DEIS as its biological assessment (BA) and requesting informal consultation with the Fish and Wildlife Service (FWS). We recognize the substantial information related to NHPA consultations and studies that were presented in the DEIS. We recommend that FERC not allow the applicant to begin ground disturbance until these processes are completed. We also note that the Section 404 of the Clean Water Act (CWA) permitting was pending due to the Corps of Engineers indication that the 404 permits could not be finalized until the NHPA and Section 7 processes were completed.

Recommendation: The EPA strongly recommends that all permits, consultations and the biological opinion (if required) be concluded and available in the FEIS or in the Record of Decision (ROD). The required analyses, ground reconnaissance and consultations for these approvals are extremely important in order to adequately make project decisions.

MVP Response:
The Project updated its currently anticipated schedule for permit receipt in Attachment 2. No construction will take place for elements of the Project that are under the jurisdiction of federal permits until they are received. Updated cultural reports, wetland delineations, and requested species specific survey reports are being submitted to the respective agencies. These can be provided to the EPA at their request.

EPA Comment:
Hydrostatic Testing and Horizontal Drill Water: The DEIS states that hydrostatic test water would be discharged into the Roanoke River Basin and Cape Fear River Basin. Also, the DEIS stated that the project will use municipal water for the test, but at the same time, the DEIS (in a different section) also mentioned that Mountain Valley continues to evaluate other sources of water for hydrostatic testing and Horizontal Directional Drill (HDD) operations. The DEIS mentioned the very high probability of having Inadvertent Return (IR) at the Dan River site and Stony Creek Reservoir when performing HDD activities.

Recommendations: The DEIS stated that they will not be using chemicals during hydrostatic testing. By not using chemicals during the testing, water might be left in the pipelines that can cause oxygen corrosion and microbiologically influenced corrosion (MIC). Pipelines might become vulnerable and long-term integrity and safety could become an issue. The EPA recommends that plans be included in the FEIS to prevent these issues.

The EPA recommends the use of filter covers to use at the end of the output pipe/hose to capture a variety of deposits such as metals before discharging the used water. It is important to note that if the applicant proposes different sources of water after FERC's licensing decision, the project could require additional permits and therefore, the NEPA process might need to be amended for the additional studies from the affected water bodies from the change in plans involving the hydrostatic test water. The EPA also requests a complete Hydrostatic Testing Plan be included in the FEIS.

As BMPs for the HDD sites where the possibility of IR exists, the EPA strongly recommends the presence of a 'mud engineer' and a trained crew member ('mud man ') to work at every HDD location. We understand that most IR incidents happen when experts and highly trained crew are not at the sites helping to manage this technology and the appropriate mix of materials that this involves. The EPA recommends to strongly consider the following components especially when impacting sensitive areas:

- Ticker grade of piping material for crossing water bodies.
- The installation of automatic shut-off valves or remote-control valves.
- The installation of computerized monitoring and leak detection system.
- The use of HDD technique should be considered for more water crossings.
- The pipeline should be buried deeper in all water bodies locations to avoid future pipe exposures (thus, the applicant could eliminate pipe degradation that could cost constant repairs/maintenance due to high flow events, human interference and environmental stressors).

MVP Response:
For clarification, discharges will be composed entirely of water associated with the hydrostatic testing of newly constructed, or cleaned and certified PCB-free pipelines. Chemical methods may be used for cleaning or other purposes; however, chemical laden water will not be discharged to the ground but rather hauled away and disposed of at an approved and properly permitted waste facility. The project will also use discharge devices to filter the water prior to land applying. Mountain Valley will also have qualified engineers (i.e. "mud engineers") on-site during the HDD activities.

EPA Comment:
Aquatic Resources: The applicant (Mountain Valley) states that the project would impact 26.8 acres of wetlands, though many of these impacts would be temporary and short-term. The project's operational right-of-way would affect 5.9 acres of wetlands, including the conversion of 0.1 acre of palustrine scrub-shrub (PSS) wetland to palustrine emergent (PEM) wetland, and 4.4 acres of palustrine forested (PFO) wetlands to PSS and PEM wetlands.

Recommendations: Given the extended time-to-maturity of PFO wetland systems, EPA recommends that temporary PFO impacts be treated as permanent impacts. Filling of aquatic resources, particularly with stream loss, is not only a direct impact, but will likely lead to changes in the biogeochemical and hydrologic conditions of the receiving streams. The EPA is concerned with the potential secondary effects of the project including potential water quality degradation, impacts to hydrology, habitat and biodiversity loss, and downstream impacts from the loss of nutrient cycling, organic matter input and processing, and natural hydrology.

Cumulative impacts from indirect impacts can result from individually minor, but collectively significant, actions taking place over a period of time. Although the impact of a particular action may be considered minor, the cumulative effects of numerous piecemeal changes can result in a major impairment of the water resources. Considering MVP Southgate as a single and complete project, the EPA recommends a cumulative impacts analysis be considered in order to fully assess the effects on water quality, hydrology, habitat and biodiversity in the watersheds within the total project area.

The EPA recommends the applicant document the studies that show minimum or non-impact to upper stream or lower stream sections of these water bodies and their ecosystem. Complete documentation should include communications/consultations to the regular users of these waters.

The EPA recommends the completion of any ongoing wetland and stream surveys be included in the FEIS. We also request that practicable avoidance and minimization measures be incorporated into the project design and construction. Although wetland impacts in the DEIS are classified by system type, this classification does not provide details regarding the wetland quality or functional assessment currently provided by these resources. The EPA recommends that functional assessments for impacted waterbodies be provided in the mitigation plan.

The EPA recommends a comprehensive mitigation plan be developed to assess and assure the functional performance of any proposed stream mitigation. The plan should include identification of specific performance standards, a monitoring plan, and an adaptive management plan with corrective actions identified should the stream mitigation and relocations be unable to achieve performance standards. The EPA recommends that the baseline assessment of the streams be used to guide the development of these performance standards. If a relocated stream is expected to receive full mitigation credit for the impacted resources, the stream relocation should at a minimum be providing equivalent quality and function to that of the pre-impacted stream. Stream relocations should only be considered 'self-mitigating' if the relocation retains or improves the existing condition of the stream system as measured by the baseline assessment methodology.

An important resource to consider is titled, "The Framework and Risk Matrix". The U.S. Fish and Wildlife Service (USFWS), is one of its developers. This is a pipeline crossing framework and risk analysis approach and it is recommended by the USFWS. This approach is also used for wetlands. For detailed technical information regarding this resource, please contact: Janine_M_Castro@fws.gov.

MVP Response:
It is understood that the Project's short-term impact could continue for up to three years following construction. Long-term impacts would last more than three years, but the affected resource would eventually recover to pre-construction conditions. A permanent impact would result from an activity that modifies a resource to the extent that it would not return to preconstruction conditions.

It is also recognized that impacts on forested wetlands would be long-term in the temporary work areas and permanent in the maintained pipeline easement. The Project is consulting with the USACE to develop a Compensatory Mitigation Plan that will offset permanent wetland impacts, including those that would convert PFO to PEM or PSS wetlands. Unavoidable impacts on wetlands may be mitigated through the creation, restoration, enhancement, or preservation of at least an equal amount of wetlands through implementation of an agency-approved Compensatory Mitigation Plan.

No permanent stream impacts are anticipated to occur as a result of the Southgate Project. Engineers evaluated stream crossings to identify where there was risk for exposure and either adjusted the route or will add controls to mitigate for scour. An updated wetland delineation report will be filed in the Project's October supplemental to the FERC. Mountain Valley will continue to consider recommendations of the EPA for minimizing risk and impacts to sensitive resources along the Project route.

EPA Comment:
Environmental Justice: The EPA appreciates that a discussion and analysis of environmental justice (EJ) that was included in the DEIS. The EPA has identified census block groups where linguistically isolated populations are present.

Recommendation: The EPA recommends expanding the EJ analysis and if linguistically isolated populations are to be impacted by the proposal, the EPA recommends that the applicant should reach out

to these communities. All project related documents should be translated into the corresponding languages.

MVP Response:
Spanish translators have been available for the land agents and Spanish translation services have been advertised on the Project website. To date, English has been the preferred language of everyone encountered. Mountain Valley continues to refine our environmental justice analysis and outreach strategy, and will take the EPA's recommendations under consideration if applicable.

EPA Comment:
Air Quality: The DEIS states that emissions from the new compressor station would be greater than 25,000 metric tons per year. The EPA's 40 CFR Parts 86 et. al. rule for mandatory reporting of greenhouse gases will potentially require monitoring and reporting of emissions from this new unit. The DEIS indicated that the new compressor unit could produce up to 16 blowdown events per year.

Recommendation: The EPA recommends that the applicant consider new and proven technologies to reduce methane emissions and include these capture technologies into the new compressor station construction. A variety of applicable resources and technologies can be found at: https://www.epa.gov/natural-gas-star-program/recommended-technologies-reduce-methane-emissions and https://wY."W.epa.gov/natural-gas-star-progr am/blowdown-reductions.

In 2014, the EPA estimated that the transmission and storage sector accounts for 13% of the total methane emissions from the oil and natural gas industry. The EPA reported that Reciprocating Compressors account for 35% of the emissions from this sector. The EPA developed the Natural Gas STAR Program that provides a framework for partner companies with U.S. oil and gas operations to implement methane reducing technologies and practices. We would like to encourage the applicant to join this program and find out its many benefits at: https://www.epa.gov/natural-gas- star-program.
On August 28, 2019, the EPA proposed policy amendments to the 2012 and 2016 new source performance standards for the oil and gas industry. These new standards can be found at: https://www.epa.gov/controlling- air-pollution-oil-and-natural-gas- industry/proposed -pol icy-amendments-20l2- and-2016-new.

MVP Response:
New and proven technologies were considered to reduce methane emissions for the proposed Lambert Compressor Station. The units will be comprised of a pressurized hold system to control natural gas emissions during regular shutdowns. The system allows the units to maintain a pressurized hold during routine shut downs lasting less than 4 days, which avoids unit blowdowns and venting of natural gas within the unit.

EPA Comment:
Forested Land Impacts: Approximately 582 acres of forested land would be cleared as proposed. The DEIS indicated that some areas would be allowed to naturally revert to forest, but that such process could take 30 or more years. Additional impacts occurred when the land clearing releases greenhouse gases into the atmosphere. Furthermore, the project will potentially produce large amounts of vegetative debris, and consequently the need for either on-site burning and/or transportation and disposal.

Recommendation: The EPA recommends calculating greenhouse emissions from this activity and it be added to the project emissions. The EPA recommends analyzing the impacts of forest fragmentation and use the results to develop a replanting proposal. Also, the EPA recommends using a tree targeted clearance in order to allow some of the most important old growth to remain. The EPA recommends

some additional resources regarding greenhouse gas emissions: https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions; https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references.

The EPA recommends that vegetative debris be recycled and/or repurposed to the extent practicable, and it be diverted from landfills.

MVP Comment:
Mountain Valley is working with each state on addressing forest fragmentation concerns. This includes conversations with the Virginia Department of Natural Heritage and committing to bare-root plantings in Jordan Lake riparian areas in North Carolina. Open burning emissions data were supplied in the Project's Resource Report 9 in November 2018. The table will be updated later this month with the latest survey data and updated route. Additionally, Mountain Valley will work with landowners and continue to evaluate alternative means of vegetation debris management to reduce the GHG footprint.

EPA Comment:
Existing Residential, Commercial and Industrial Facilities: The DEIS included measurements to reduce impacts to the closest (25 and 50 feet within the project) residents/structures.

Recommendation: The EPA recommends to include notices of construction (and blasting) to residents within 250 feet from the pipeline construction. Additionally, we ask to provide community notices in other languages, as appropriate.

MVP Response:
Mountain Valley will provide verbal notification, followed by written documentation, to the buildings' occupant(s) of any Project blasting activity within 250 feet of a blast location.

EPA Comment:
Clean Diesel: The EPA recommends that the applicant consider Implementing diesel controls, cleaner fuel, and cleaner construction practices for on-road and off-road equipment used for transportation, soil movement, or other construction activities, including:

- Strategies and technologies that reduce unnecessary idling, including auxiliary power units, the use of electric equipment, and strict enforcement of idling limits; and
- Use of clean diesel through add-on control technologies like diesel particulate filters and diesel oxidation catalysts, repowers, or newer, cleaner equipment.

For more information on diesel emission controls in construction projects, please see: http://www.northeastdiesel.org/pdf/NEDC-Construction-Contract- Spec.pdf.

MVP Response:
Clean diesel technologies and strategies will be considered when determining what equipment is most practical for construction activities.

EPA Comment:
Pipeline Safety: The EPA understands that there has been a substantial number of recent articles pertaining to public concerns involving natural gas pipeline projects (in general) around the country and their potential impact radius (high consequence areas) if an incident were to occur. Random leaks or

other types of incidents/malfunctions might occur at any time on any segment of the pipeline. The Federal pipeline safety regulations at Title 49 §192.935 identifies the types of areas where additional measures must be taken.

Recommendations: The EPA suggests the development of a 'Risk Assessment' to inform the public in a more detailed manner. We understand that the Pipeline and Hazardous Materials Safety Administration (PHMSA) oversees pipeline safety. However, we recommend that FERC share with PHMSA any relevant public concerns received regarding pipeline safety. Please note that we are suggesting a 'Risk Assessment' and not a risk management plan (as they are sometimes confused). We believe that these communication and coordination efforts between the agencies might lessen public and community concerns regarding safety issues from nearby natural gas pipelines. The EPA also recommends the use of the latest technology for leak detection, such as infrared laser detectors, aerial sensing-leak mapping systems, hand-held passive infrared cameras, and infrared laser detectors for leaks detection, as appropriate.

MVP Response:

In the unlikely event of an incident during operations, Mountain Valley will work with emergency response agencies to maintain access to and from residences and businesses during potential emergency situations. Mountain Valley will implement its ERP to bring the incident under control, and work with local responders to maintain access to residences and businesses via existing roads. If a road is damaged by an incident, or access to residences and business is otherwise restricted, Mountain Valley will coordinate with the applicable municipalities and responders to provide alternative access to the affected residences and businesses. Additionally, in an emergency situation, Mountain Valley could use air lift services to reach affected residences and businesses.

Mountain Valley currently has an existing ERP covering the Mountain Valley Pipeline system. Prior to the Project being placed in-service, Mountain Valley will modify the current ERP and implement a Project-specific ERP in accordance with the requirements of 49 CFR Part 192 and in coordination with local emergency management. The Southgate Project has initiated discussions with emergency response units in the Project area and will continue those discussions through development of the Project.

MVP Southgate's operator utilizes best management practices and leverages advancements in technology concerning leak detection, including the use of helicopter patrols, drones, and handheld IR cameras. In addition to typical aerial patrols, helicopter-mounted infrared leak detection systems are employed to further identify potential areas of concern for pipelines and facilities.

MVP Southgate Project

Attachment 1

Response to Comments Regarding the Southgate Project's Purpose and Need

October 2019

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Mountain Valley Pipeline, LLC	)	**Docket No. CP19-14-000**

ANSWER OF MOUNTAIN VALLEY PIPELINE, LLC TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Pursuant to Rule 213 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure,[1] Mountain Valley Pipeline, LLC ("Mountain Valley") hereby answers certain comments filed regarding the Commission's Draft Environmental Impact Statement prepared for the Southgate Pipeline Project ("Southgate Project" or "Project").[2]

BACKGROUND

The Commission issued a Notice of Availability of the DEIS for the Southgate Project on July 26, 2019, requiring comments on the DEIS be submitted by September 16, 2019.[3] The DEIS concludes that while the Southgate Project may result in some adverse environmental impacts, the majority of impacts "would be reduced to less-than-significant levels" with the implementation of various mitigation measures.[4] In this Answer, Mountain Valley responds to a number of comments on the Project filed by non-governmental organizations, state and local governments, and other commenters.[5]

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[1] 18 C.F.R. §§ 385.212 & 385.213 (2019).
[2] Mountain Valley Pipeline, LLC, Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000 (July 26, 2019) ("DEIS").
[3] Notice of Availability of the Draft Environmental Impact Statement for the Proposed Southgate Project, Docket No. CP19-14-000, at 2 (July 26, 2019).
[4] DEIS at ES-9; 5-1.
[5] Mountain Valley provided additional information in response to specific commenters in its response to the Commission's October 3, 2019 Environmental Information Request, Post-Application No. 4, submitted on October 18, 2019.

Mountain Valley responds to certain issues that are predominately legal in nature in this narrative and responds to other more discrete issues raised by commenters in the table attached as Exhibit 1.

The Southgate Project is a new natural gas pipeline system commencing near Chatham, Virginia and terminating at a delivery point with Dominion Energy North Carolina[6] ("DENC") near Graham, North Carolina. The Project includes approximately 73 miles of pipe, one compressor station, associated valves, piping, and appurtenant facilities, and will receive gas from two new interconnections, one with the Mountain Valley Pipeline Project ("Mainline Facilities")[7] and one with East Tennessee Natural Gas Transmission, LLC ("East Tennessee"). Mountain Valley has a long-term, binding precedent agreement with DENC for 300,000 dekatherms ("Dth") per day on the Project.

I.
EXECUTIVE SUMMARY

Notwithstanding protestations of insufficient time to comment, numerous detailed comments were filed on a multitude of issues in the DEIS. Certain commenters argue that Mountain Valley has failed to demonstrate that the Southgate Project is needed, but ignore the compelling fact that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for

[6] Formerly "PSNC Energy." After Mountain Valley filed the Application for the Southgate Project, Dominion Energy, Inc. ("Dominion") acquired PSNC Energy, which is now called Dominion Energy North Carolina and referred to as "DENC" in this Answer.

[7] The Commission issued the Certificate Order for the Mainline Facilities, which are currently under construction, on October 13, 2017. *See Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043 (2017) ("Certificate Order"), *order denying reh'g*, 163 FERC ¶ 61,197 (2018), *aff'd*, *Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199 (D.C. Cir. Feb. 19, 2019) (unpublished opinion). The MVP Certificate Order was upheld on appeal by the Court of Appeals for the District of Columbia Circuit ("D.C. Circuit"), which considered sixteen different challenges to FERC's environmental review of the Mainline Facilities and subsequent issuance of the certificate and denied all challenges, finding them without merit. *See Appalachian Voices v. FERC*, No. 17-1271 (D.C. Cir. Feb. 19, 2019).

300,000 Dth per day of capacity, representing approximately 80 percent of the total Project capacity. This is a strong demonstration of market need for the Project and is fully consistent with Commission policy and precedent.

Despite assertions otherwise, the National Environmental Policy Act ("NEPA") does not require the Commission to prepare a revised or supplemental DEIS for the Project. The DEIS, while not a final document, is thorough, comprehensive, and certainly does not warrant the preparation of a revised or supplemental draft. It contains more than sufficient information to provide the public an opportunity for meaningful analysis.

The DEIS analyzes all direct, indirect and cumulative impacts of, and reasonable alternatives to, the Project, consistent with the Commission's NEPA responsibilities. The DEIS does not improperly segment the Southgate Project by not evaluating the Mainline Facilities in the same environmental document. It is beyond reproach that any argument regarding segmentation does not apply in this situation, where the Commission has completed an EIS for the Mainline Facilities and is in the process of completing another comprehensive EIS for the Southgate Project—an FEIS which will include a comprehensive cumulative impacts analysis that considers the Mainline Facilities and two Transcontinental Gas Pipe Line Company, LLC ("Transco") compressor stations as "cumulative actions" within a resource-specific geographic scope of the Project.

Similarly, the DEIS provides a robust alternatives analysis consistent with NEPA requirements. The DEIS considered the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed above-ground facilities. Based on this, the DEIS reasonably concludes that no alternative "would provide

a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[8]

The DEIS also appropriately considered the principle of environmental justice in determining that the Southgate Project would not disproportionately impact minority or low-income populations. The DEIS identified the environmental justice communities within one mile of the proposed Lambert Compressor Station, and explains that impacts to these communities would not be disproportionately high or adverse because impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to *any* population.

The DEIS also addresses the potential greenhouse gas ("GHG") emissions attributable to the construction and operation of the Southgate Project, including cumulative impacts, and concludes that construction and operation-related emissions are not expected to have a significant impact on local or regional air quality. There is no NEPA requirement that the Commission consider impacts from upstream natural gas production allegedly induced by the Southgate Project, because the impacts of such activities are neither causally connected to the Southgate Project nor are they reasonably foreseeable.

With respect to downstream GHG emissions, Mountain Valley in both its Application and in its own comments on the DEIS has explained in detail that any potential downstream GHG emissions associated with the Southgate Project have already been accounted for in the Commission's "upper bound" estimate for the Mainline Facilities and by virtue of the fact that the expected deliveries of natural gas from East Tennessee into the Southgate Project will come from existing capacity and will not require any expansion

[8] DEIS at 3-48.

of the East Tennessee system. Thus, any further quantitative estimate would result in misleading and inaccurate double-counting of impacts. For the same reason, there is no need to consider upstream GHG emissions, as the Southgate Project is not transporting additional volumes of natural gas and cannot, therefore, be said to be "inducing" additional natural gas production.

In sum, the Commission's DEIS is consistent with the requirement that the Commission take a "hard look" at the environmental impacts of its actions.[9]

II.
ANSWER

A. Mountain Valley Has Fully Demonstrated the Need and Demand for the Project.

Commenters argue that the Southgate Project is not needed and that market demand in the Southeastern United States does not support the Project.[10] Notwithstanding that this argument is not a comment regarding the DEIS, Mountain Valley will once again explain why these commenters are incorrect. Commenters deliberately ignore that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for 300,000 Dth per day of capacity on the Southgate Project, representing approximately 80 percent of the total Project capacity, which fully supports the market need for the Project.[11]

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[9] *Mo. Coal. for the Env't v. FERC*, 544 F.3d 955, 958 (8th Cir. 2008) (quoting *Mayo Found. v. Surface Transp. Bd*., 472 F.3d 545, 549 (8th Cir. 2006)); *see also Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc*., 462 U.S. 87, 97 (1983).

[10] Comments of Appalachian Mountain Advocates, *et al.* on Draft Environmental Impact Statement for Mountain Valley Pipeline, LLC's Proposed Southgate Project, Docket No. CP19-14-000, at 5-7 (Sept. 16, 2019) ("AMA Comments"); Comments and Request for 60-Day Extension for Comments of Blue Ridge Environmental Defense League, Docket No. CP19-14-000, at 5-8 (Sept. 16, 2019) ("BREDL Comments").

[11] Application of Mountain Valley Pipeline, LLC for Authorization to Construct and Operate Pipeline Facilities Under the Natural Gas Act, Docket No. CP19-14-000, at 7 (Nov. 6, 2018) ("Application"). Mountain Valley will be at risk for the additional 20 percent of the capacity as stated in its Application.

The Commission's Certificate Policy Statement plainly states that binding precedent agreements are "significant evidence of demand for [a] project."[12] In approving the Mainline Facilities, the Commission explained that binding agreements are the "best evidence that additional gas will be needed" in the markets the Project is intended to serve.[13] On appeal, the D.C. Circuit unequivocally affirmed the Commission's finding of need based on long-term precedent agreements.[14] While Commenters introduce their own demand projections, this does not overcome the fact that the most objective evidence of market demand for the pipeline capacity created by the Project is Mountain Valley's precedent agreement with DENC for the overwhelming majority of the Project capacity. The D.C. Circuit consistently has upheld the Commission's finding of need based on the existence of precedent agreements under similar circumstances.[15] Therefore, in accordance with longstanding Commission practice and D.C. Circuit precedent, the Commission reasonably may conclude that Mountain Valley's long-term, binding precedent agreement with DENC provides adequate evidence of need for the Project.

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[12] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, at p. 61,748 (1999) ("Certificate Policy Statement"), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000). *See, e.g.*, *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 242 (D.C. Cir. 2013) (recognizing FERC's finding that precedent agreements supporting the project constituted "strong evidence of market demand") (citation omitted).

[13] Certificate Order, 161 FERC ¶ 61,043 at P 41.

[14] *Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *1 ("Notwithstanding petitioners' argument to the contrary, FERC's conclusion that there is a market need for the Project was reasonable and supported by substantial evidence, in the form of long-term precedent agreements for 100 percent of the Project's capacity"). *See also Sierra Club v. FERC*, 867 F.3d 1357, 1379 (D.C. Cir. 2017) (holding that applicants met the market need "by showing that 93% of their capacity has already been contracted for").

[15] *See Myersville Citizens for a Rural Community, Inc. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) ("[T]he Commission concluded that the evidence that the Project was fully subscribed was adequate to support the finding of market need. It is the case here, as it was in *Minisink*, that 'Petitioners identify nothing in the policy statement or in any precedent construing it to suggest that it *requires*, rather than *permits*, the Commission to assess a project's benefits by looking beyond the market need reflected by the applicant's existing contracts with shippers.") (quoting *Minisink Residents for Envtl. Pres. & Safety v. FERC*, 762 F.3d 97, 111 n.102 (D.C. Cir. 2014)) (emphasis added).

Commenters argue that the Commission must also consider indicators of project need other than precedent agreements. This is incorrect. While the Certificate Policy Statement *allows* the Commission to consider this type of information, it did not *require* the Commission to do so. The Certificate Policy statement *allows* pipelines to submit additional types of evidence that "*might include* . . . demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market."[16] Indeed, Mountain Valley submitted such a market study with its Application. However, precedent agreements remain "significant evidence of demand for [a] project."[17]

The Certificate Policy Statement permits additional evidence to allow pipelines to demonstrate project need even if the pipeline had executed few (or even no) agreements to support it, because the amount of capacity under contract may not fully reflect "all the public benefits that can be achieved by a proposed project."[18] Accordingly, benefits could include "the environmental advantages of gas over other fuels, lower fuel costs, access to new supply sources or the connection of new supply to the interstate grid, the elimination of pipeline facility constraints, better service from access to competitive transportation options, and the need for an adequate pipeline infrastructure."[19] Mountain Valley explained in its Application that the Project provides many of these benefits. The Project introduces meaningful competition as it represents an additional interstate pipeline into

[16] Certificate Policy Statement, 88 FERC at p. 61,747 (emphasis added).
[17] *Id.* at p. 61,748.
[18] *Id.* at p. 61,744.
[19] *Id*.

North Carolina, where Transco has a near monopoly. Further, the Project provides DENC with flexibility, optionality, and diversity of supply.[20]

Thus, Mountain Valley has not only demonstrated Project need through its precedent agreement with DENC, it also has identified additional public benefits upon which the Commission may rely as evidence of Project need.

B. The DEIS Includes Sufficient Information to Analyze Impacts and Provide for Meaningful Public Review.

Some commenters assert that the DEIS is incomplete and lacks information necessary to analyze environmental impacts under NEPA, and that without this information, "the public cannot meaningfully comment on the project."[21] As a result, commenters argue that the Commission must either prepare a revised DEIS and release it for public comment, or issue a supplemental DEIS that addresses new information.[22] Commenters misapprehend the purpose of a DEIS and overstate the requirements under NEPA to prepare a revised or supplemental DEIS. The DEIS contains more than sufficient information for the public to understand the impacts of the Project and comment meaningfully thereon.

As the D.C. Circuit has held, "[b]y its very name, the DEIS is a draft of the agency's proposed [final] EIS, and as such the purpose of a DEIS 'is to elicit suggestions for change[,]'" and to provide a "springboard for public comment."[23] In the same vein, the

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[20] Application at 7-9.

[21] *See, e.g.*, Southern Environmental Law Center Comments on FERC's Draft Environmental Impact Statement for Mountain Valley Pipeline's Southgate Project, Docket No. CP19-14-000, at 6 (Sept. 16, 2019) ("SELC Comments"); BREDL Comments at 1-2.

[22] SELC Comments at 6.

[23] *Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323, 1328, 1329 (D.C. Cir. 2004) (quoting *City of Grapevine, Tex. v. Dep't of Transp.*, 17 F.3d 1502, 1507 (D.C. Cir. 1994)); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). *See also Se. Supply Header, LLC*, 120 FERC ¶ 61,257, at P 27 (2007) (denying request to issue revised DEIS where DEIS called for submission information before the end of the comment period or prior to construction).

Commission has explained that the DEIS "put[s] interested parties on notice of the types of activities contemplated and of their impacts."[24] Commenters must show that any alleged omissions in the DEIS "left the public unable to make known its environmental concerns about the project's impact."[25] It is not sufficient that the public was not able to "analyze each aspect of the project, such as specific rather than generalized statements of proposed sitings."[26] Courts have recognized that due to "the practical realities of large projects," such as the Southgate Project, "[i]f every aspect of the project were required to be finalized before any part of the project could move forward, it would be difficult, if not impossible, to construct the project."[27]

These practical realities are evidenced by the Commission's "longstanding practice to issue environmental documents along with recommended mitigation measures that request specific documentation of agency consultation, construction plans, and detailed information to supplement baseline data."[28] It is thus reasonable—and consistent with Commission practice—for the DEIS to contemplate that certain information will be provided subsequent to issuance of the DEIS.[29] The mere fact that additional information will be submitted after issuance of the DEIS does not, as commenters erroneously suggest,

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[24] *Constitution Pipeline Co.*, 154 FERC ¶ 61,046, at P 31 (2016).
[25] *New River*, 373 F.3d at 1329. The volume of comments received in response to the DEIS indicates the opposite—that commenters were more than able to make environmental concerns known to the Commission. *See id.*, 373 F.3d at 1329-30.
[26] *Id.*, 373 F.3d at 1329.
[27] *Id.* (quoting *E. Tenn. Nat. Gas Co.*, 102 FERC ¶ 61,225, at P 25 (2003)); *see also Robertson*, 490 U.S. at 350 (NEPA does not require all plans to be finalized and complete in draft or even final EIS).
[28] *Algonquin Gas Transmission, LLC*, 150 FERC ¶ 61,163, at P 56 (2015), *reh'g denied*, 154 FERC ¶ 61,048 (2016).
[29] SELC alleges that key information is missing from the DEIS (*see* SECL Comments at 5-6). However, the DEIS instructs Mountain Valley to either provide such information prior to the comment period deadline for the DEIS, or at a future date (*see* DEIS at 5-14 – 5-21). Mountain Valley complied with the DEIS and submitted the information required by the comment period deadline (*see, e.g.*, Mountain Valley Pipeline, LLC, Response to FERC Staff's Recommended Mitigation, Docket No. CP19-14-000 (Sept. 13, 2019)). Mountain Valley will continue to comply with all Commission directives contained within the DEIS, FEIS, and Commission orders.

in and of itself require the Commission to prepare a revised DEIS. "NEPA does not require agencies to constantly revise their issued analyses as new information becomes available."[30] The "fact that many of the permits, approvals, consultations, and variances required for the . . . project have been or will be filed after the formal public notice and comment periods does not mean that the public is excluded from meaningful participation."[31] On the contrary, information filed after the comment period continues to be "accessible to the public in the Commission's electronic database."[32]

This practice is consistent with the Council on Environmental Quality's ("CEQ") regulations implementing NEPA. CEQ regulations provide that an agency shall prepare a revised DEIS if the "draft statement is so inadequate as to preclude meaningful analysis."[33] The CEQ regulations further provide that an agency shall prepare a supplemental DEIS if: "(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[34] Neither of these conditions is present in this case; there is no basis to warrant a revised or supplemental DEIS.

Likewise, the Commission is not required to prepare a supplemental DEIS because the practical realities of the Southgate Project necessitate additional filings after issuance of the DEIS. The Supreme Court has soundly rejected the notion that an agency is required to prepare a supplemental DEIS each time new information becomes available. According

[30] *Dominion Cove Point LNG, LP*, 151 FERC ¶ 61,095, at P 52 (2015), *aff'd sub nom. EarthReports, Inc. v. FERC*, 828 F.3d 949 (D.C. Cir. 2016).
[31] *Constitution Pipeline*, 154 FERC ¶ 61,046 at P 31.
[32] *Id.*
[33] 40 C.F.R. § 1502.9(a).
[34] *Id.* § 1502.9(c)(1)(i)-(ii).

to the Court, requiring otherwise "would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made."[35] Whether to prepare a supplemental DEIS is subject to the Commission's discretion.[36] The Commission's decision on whether to prepare a supplemental DEIS is subject to a "rule of reason:" "if the new information is sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared."[37] The significance of the new information depends on whether it "provides a *seriously* different picture of the environmental landscape."[38] In this case, none of the information that commenters allege is missing or deficient would present a "*seriously* different picture" of the impacts of the Project, and the Commission should appropriately decline to issue a supplemental DEIS.

C. The Commission Has Not Inappropriately Segmented Its Review of the Southgate Project From the Mainline Facilities.

Some commenters assert that the DEIS impermissibly "segments" the Southgate Project by failing to evaluate the Mainline Facilities as a "connected action" in the same environmental document.[39] This argument is nonsensical. According to these commenters, the failure to include the Mainline Facilities in the Commission's review of the Southgate Project undermines its cumulative impacts analysis and determination that

[35] *Marsh v. Ore. Nat. Res. Council*, 490 U.S. 360, 373 (1989). *See also Altamont Gas Transmission Co.*, 75 FERC ¶ 61,348, at p. 62,106 (1996) (denying request for supplemental EIS).
[36] *Wisconsin v. Weinberger*, 745 F.2d 412, 417 (7th Cir. 1984).
[37] *Marsh*, 490 U.S. at 374.
[38] *City of Olmsted Falls, OH v. FAA*, 292 F.3d 261, 274 (D.C. Cir. 2002) (quoting *Wisconsin*, 745 F.2d at 418).
[39] *See* AMA Comments at 8-10; BREDL Comments at 3-5.

the Southgate Project will cause only limited adverse environmental impacts.[40] However, commenters conveniently ignore the entire purpose of the rule against segmentation—to ensure that agencies do not analyze projects in smaller components to avoid a finding of significance that would trigger the need to prepare an EIS.[41] Here, the Commission is preparing an EIS for the Southgate Project, and commenters are opining on that very document.[42] Further, the Commission already completed a thorough environmental review of the Mainline Facilities, including preparation of a full DEIS and Final EIS, and concluded that it would have limited adverse environmental impacts.[43] The Commission cannot go back in time more than two years and add the impact of the Southgate Project into the Mainline Facilities' DEIS and FEIS. There is thus no segmentation.

Moreover, as discussed further below,[44] the DEIS considers the Mainline Facilities as a "cumulative action" in its cumulative impacts analysis, including an evaluation of cumulative impacts to certain water resources.[45] To the extent that commenters argue the

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[40] AMA Comments at 8; BREDL Comments at 3. *See also* DEIS at 5-1 (noting that any adverse environmental impacts would be reduced to less than significant levels with recommended mitigation measures).

[41] *See* 40 C.F.R. § 1508.27(b)(7); *Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294, 299 (D.C. Cir. 1987) ("'Piecemealing' or 'Segmentation' allows an agency to avoid the NEPA requirement that an EIS be prepared for all major federal actions with significant environmental impacts by dividing an overall plan into component parts, each involving action with less significant environmental effects.").

[42] The Commission's decision to prepare an EIS for the Southgate Project is the most detailed review under NEPA and in contrast to most projects of this size where the Commission prepares an EA. *See, e.g., Cheyenne Connector, LLC*, 168 FERC ¶ 61,180 (2019) (Commission staff prepared an EA for a new 70-mile pipeline project); *Spire STL Pipeline LLC*, 164 FERC ¶ 61,085 (2018) (Commission staff prepared an EA for a new 65-mile pipeline); *Gulf South Pipeline Company, LP*, 155 FERC ¶ 61,287 (2019) (Commission staff prepared an EA for a new 66-mile pipeline).

[43] Mountain Valley Pipeline, LLC, Final Environmental Impact Statement, Docket No. CP16-10-000, at 5-1 (June 23, 2017) ("Final EIS"). The Final EIS did note that impacts to forested resources would be more significant, but would be reasonably reduced through adherence to certain mitigation measures. *Id. See also* Certificate Order, 161 FERC ¶ 61,043 at P 308 (Mainline Facilities would be "environmentally acceptable actions" if constructed in accordance with requisite mitigation measures). The Commission's environmental review of the Mainline Facilities lasted nearly three years, beginning with the environmental pre-filing review process in 2014. *See generally* Docket No. PF15-3-000.

[44] *See infra* pages 14-17.

[45] DEIS at 4-246.

cumulative impacts analysis should include the "full impacts of each project in a single EIS," commenters are incorrect.[46] The Commission is not required to re-analyze the entire Mainline Facilities as part of its cumulative impacts analysis.[47] Rather, the DEIS properly addresses cumulative impacts to specific resources within a defined geographic scope, in accordance with CEQ regulations.[48] Thus, the Commission is already undertaking what commenters are requesting, and concerns over segmentation are wrong and disingenuous.

Commenters'[49] reliance on the D.C. Circuit's decision in *Delaware Riverkeeper Network v. FERC*[50] is similarly misplaced because, unlike the projects at issue in *Delaware Riverkeeper*, the Commission has already completed a thorough, nearly three-year environmental review of the Mainline Facilities, including preparation of an EIS, not an EA, and is now in the process of preparing yet another EIS for the Southgate Project. Therefore the Commission is certainly addressing the "true scope and impact" of the Southgate Project.[51]

D. The DEIS's Cumulative Impacts Analysis Takes a Sufficient Hard Look at Cumulative Impacts Associated with the Project.

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[46] AMA Comments at 10.

[47] *See Coal. on Sensible Transp. v. Dole*, 826 F.2d 60, 71 (D.C. Cir. 1987) (noting that "[f]urther analysis" of projects already fully evaluated for environmental impacts would be unnecessarily redundant and "in no material way serve the purposes of NEPA").

[48] DEIS at 4-235 – 4-243; *see* 40 C.F.R. § 1508.7.

[49] AMA Comments at 8-10; BREDL Comments at 4-5.

[50] 753 F.3d 1304 (D.C. Cir. 2014).

[51] *Id.* at 1309, 1319. Note that since issuing the decision in *Delaware Riverkeeper*, the D.C. Circuit has decided several cases clarifying and limiting its application to the unique set of facts present in that case. *See City of Boston Delegation v. FERC*, 897 F.3d 241, 252 (D.C. Cir. 2018) (projects were not "under simultaneous consideration by the agency," nor were they "financially and functionally interdependent"); *Myersville*, 783 F.3d at 1326 (noting that the court had "premised [its] decision [in *Delaware Riverkeeper*] requiring joint NEPA consideration on the unquestionable connectedness of the projects, the fact that the projects all were under consideration by the Commission at the same time, and the fact that the projects were financially interdependent"); *Minisink*, 762 F.3d at 113 n.11 (noting that the "critical facts" in *Delaware Riverkeeper* were "worlds apart" from the facts in *Minisink*). These cases indicate that the same unique factors present in *Delaware Riverkeeper* must be present for the court to reach the same result in a subsequent case.

Some commenters assert that the DEIS failed to take a hard look at the cumulative impacts of the Southgate Project because the temporal and geographic scope of the analysis is too narrow.[52] According to these commenters, the DEIS must be revised to broaden the scope of its analysis to include "massive projects" that would affect the same environmental resources.[53] Such projects, according to commenters, include a mixed-used development,[54] as well as two existing compressor stations within the vicinity of Lambert Compressor Station proposed as part of the Southgate Project.[55] Other commenters argue that the DEIS only includes a "minimal analysis" of cumulative impacts associated with the Mainline Facilities.[56] Contrary to these assertions, the cumulative impacts analysis in the DEIS is thorough and comprehensive, and properly defines the geographic and temporal scope of the analysis.

A "cumulative impact" is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."[57] The D.C. Circuit has explained that

> a meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the

[52] SELC Comments at 10-11.
[53] *Id.* at 11.
[54] SELC argues the DEIS fails to address the cumulative impacts of Chatham Park, a mixed-use development in Pittsboro, North Carolina. *Id.* at 10-11. The Chatham Park development is approximately 25 miles south of the Project in Chatham County, North Carolina and none of the Project facilities are located in Chatham County.
[55] *Id.* at 10; BREDL Comments at 15.
[56] AMA Comments at 10.
[57] 40 C.F.R. § 1508.7.

individual impacts are allowed to accumulate.[58]

The DEIS's cumulative impacts analysis satisfies this criteria. The DEIS properly explained that "[f]or a cumulative impact to occur, another project(s) must impact the same resource(s) as the Southgate Project."[59] Because [i]impacts often vary in extent and duration," the DEIS accounts for this variation "by considering resource-specific geographic scopes" for a range of resources, including: soils; groundwater, surface water, and wetlands; vegetation; wildlife; fisheries and aquatic resources; land use, recreation special interest areas, and visual resources; socioeconomics and environmental justice; cultural resources; and air quality and noise.[60] The DEIS then identified other past, present, and reasonably foreseeable projects within the resource-specific geographic scope of analysis, and analyzed the cumulative effects of such projects combined with the Southgate Project.[61]

The DEIS identifies both jurisdictional and non-jurisdictional projects within proximity to the Southgate Project, including *both* Transco Compressor Stations 165 and 166 and the Mainline Facilities.[62] The DEIS then analyzes the cumulative impacts associated with those projects within the geographic scope of each resource. With respect to water resources in particular, the DEIS looked at projects within the same HUC-12 watershed for impacts to groundwater, and within the larger HUC-10 watershed for impacts

[58] *Grand Canyon Tr. v. FAA*, 290 F.3d 339, 345 (D.C. Cir. 2002) (amended Aug. 27, 2002) (citation omitted).
[59] DEIS at 4-236.
[60] *Id.*
[61] *Id.*
[62] *Id.* at 4-244 – 4-246 (identifying the Virginia Southside Expansion Project, the Virginia Southside Expansion II Project, and the Mainline Facilities); *see also id.* at 2-246 – 2-248 (identifying non-jurisdictional Southgate Project-related facilities, other energy projects, mining operations, transportation and road improvement projects, and commercial, industrial, and residential projects).

on surface water.[63] Importantly, both analyses included the Mainline Facilities as a project that could have cumulative impacts on water resources.[64] The DEIS concluded with respect to groundwater, that "it is unlikely that pipeline activities would negatively affect groundwater supplies from wells" due to the "shallow . . . nature of pipeline trenching."[65] Concerning surface water, the DEIS explained that because most impacts are short-term, and would be minimized by the installation and maintenance of best management practices, the cumulative effect of the Project, combined with the 37 other projects within the HUC-10 watershed, would be minor.[66]

The DEIS also evaluated cumulative impacts on air quality resulting from construction and operation of the Southgate Project facilities. Specifically with respect to the Lambert Compressor Station, the DEIS evaluated cumulative impacts on air quality as a result of the Southgate Project and projects within 31.1 miles of the Lambert Compressor Station.[67] The DEIS acknowledges that operation of both Transco Compressor Station 165 and 166, as well as the Southgate Project, would result in long-term, stationary sources of air emissions. Importantly, none of the major source thresholds would be exceeded, and the facilities would continue to operate in compliance with all applicable permitting

[63] *Id.* at 2-450. To the extent that Appalachian Mountain Advocates, *et al.* ("AMA") asserts that the DEIS only analyzed the cumulative impacts of the Southgate Project and the Mainline Facilities on HUC-12 watersheds, AMA is incorrect. The DEIS considered projects within the HUC-12 watershed for groundwater, and within the larger HUC-10 watershed for surface water. Both analyses included the Mainline Facilities. *Id.*

[64] DEIS at 2-450.

[65] *Id.*

[66] DEIS at 4-252. The DEIS explained that most projects, including the Mainline Facilities, would be required by permit to install erosion and stormwater control devices, so "any cumulative impacts from upland construction of multiple projects . . . would not likely be significant." *Id.* at 4-251 – 4-252. It also noted that because of geographic and temporal separation of waterbody crossings, "it is unlikely that cumulative impacts would be significant." *Id.* at 4-252.

[67] *Id.* at 4-265.

requirements, including federal, state, and local air regulations.[68] As a result, the DEIS reasonably concluded that "operation of the Southgate Project combin[ed] with other projects would not result in significant cumulative impacts on air quality."[69]

Thus, contrary to commenters' assertions, the DEIS comprehensively evaluates cumulative impacts associated with the Southgate Project and other projects within its resource-specific geographic scope, including the Mainline Facilities and both Transco Compressor Stations.

E. The DEIS Properly Articulates the Purpose and Need of the Project and Evaluates Reasonable Alternatives.

Commenters incorrectly argue the DEIS ignores the "question of whether there is a real public need for the [Project]" and "improperly restricts its analysis of alternatives to those that can transport Mountain Valley's full desired volume of gas from its desired starting and ending points."[70] However, the DEIS articulates properly the purpose and need of the Project and evaluates sufficiently the Project alternatives as required by NEPA.

Courts and the Commission have properly explained that NEPA requires the Commission to identify and analyze reasonable alternatives during its review of a proposed action.[71] Importantly, "NEPA is a procedural statute; it does not mandate particular results, but simply prescribes the necessary process."[72] CEQ's NEPA regulations require the Commission to "briefly specify the underlying purpose and need to which the agency is

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[68] *Id.* The DEIS also explained that because the Transco compressor stations were constructed more than three years ago, these emissions are "considered part of the ambient air quality within the Southgate Project geographic scope and are accounted for in existing facility permits." *Id.* Any future upgrades to Compressor Station 165 "would be reviewed for compliance with [National Ambient Air Quality Standards] and required air quality permits." *Id.*

[69] *Id.*

[70] AMA Comments at 1-2.

[71] *Minisink*, 762 F.3d at 102; *Millennium Pipeline*, 157 FERC ¶ 61,096 at P 112 (citing 42 U.S.C. § 4332(2)(C) (2012) and 40 C.F.R. §§ 1502.1, 1502.14, and 1502.16 (2016)).

[72] *Minisink*, 762 F.3d at 111 (internal quotation marks omitted) (quoting *Robertson*, 490 U.S. at 350).

responding in proposing the alternatives including the proposed action."[73] It is not the intent of the DEIS to "reach a conclusion on whether there is a need for a proposed project."[74] Rather, "[t]he function of a statement of purpose and need . . . is to define the objectives of the proposed action such that the agency can identify and consider legitimate alternatives."[75]

In this case, the DEIS properly articulates the purpose and need of the Project:

> In general, as described by Mountain Valley, the purpose and need for the Southgate Project is to meet the specific requests for natural gas transportation service of its anchor shipper, [DENC], a local natural gas distribution company. Mountain Valley states that the Project will provide additional firm natural gas transportation services for [DENC] to meet its growing supply needs via interconnections with the under construction Mountain Valley Pipeline project in southern Virginia and the interstate pipeline of East Tennessee in North Carolina to two new delivery points on the [DENC] distribution system in Rockingham and Alamance Counties, North Carolina.[76]

This purpose and need is consistent with the requirements of the Project shipper, DENC. Based on this purpose and need, the DEIS properly evaluates reasonable alternatives to the Project, consistent with the Commission's stated methodology and precedent.

CEQ regulations on the alternatives analysis require the Commission to "[r]igorously explore and objectively evaluate all *reasonable* alternatives."[77] While NEPA does not define what constitutes a "reasonable alternative," CEQ guidance clarifies that alternatives are not reasonable if they are not feasible.[78] CEQ guidance further provides

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[73] 40 C.F.R. § 1502.13. *See also Kern River Gas Transmission Co.*, 138 FERC ¶ 61,037, at P 27 (2012) ("The Council on Environmental Quality (CEQ) regulations implementing NEPA requires only that an EA include a brief discussion of the need for the proposal.") (citing 40 C.F.R. § 1508.9 (2011)).
[74] *Kern River Gas Transmission*, 138 FERC ¶ 61,037 at P 27.
[75] *Id.* (citing *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1175 (10th Cir. 1999)).
[76] DEIS at 1-2.
[77] 40 C.F.R. § 1502.14 (emphasis added).
[78] *Enable Gas Transmission*, LLC, 153 FERC ¶ 61,055, at P 25 (2015) (citing *Guidance Regarding NEPA Regulations*, 48 Fed. Reg. 34,263 (July 28, 1983)).

that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense."[79]

When evaluating whether an alternative is preferable to a proposed action, the Commission considers three evaluation criteria.[80] These criteria are: (1) whether "the alternative meets the stated purpose of the project;" (2) whether the alternative "is technically and economically feasible and practical; and" (3) whether the alternative "offers a significant environmental advantage over a proposed action."[81] The Commission, therefore, is not required to consider "alternatives that are not consistent with the purpose and need of the proposed project."[82] Consistent with these criteria, the DEIS considers the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed aboveground facilities.[83] Based on this analysis, the DEIS reasonably concludes that no alternative "would provide a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[84]

Despite this comprehensive review of alternatives, Commenters nevertheless argue that the Commission "must consider other systems, including *non-gas energy alternatives, and/or energy conservation or efficiency*."[85] But because such alternatives cannot "meet[] the stated purpose of the project," i.e., to meet the specific request for natural gas

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[79] *See Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).
[80] DEIS at 3-1.
[81] *Id*.
[82] *Dominion Transmission, Inc.*, 155 FERC ¶ 61,106, at P 113 (2016) (citing *Pac. Coast Fed'n of Fishermen's Ass'ns v. Blank*, 693 F.3d 1084, 1100 (9th Cir. 2012)).
[83] DEIS at 3-1 – 3-48.
[84] *Id.* at 3-48.
[85] North Carolina Department of Environmental Quality Comment on the Draft Environmental Impact Statement (DEIS) for the Southgate Project, Docket No. CP19-14-000, at 3 (Sept. 16, 2019) ("NCDEQ Comments").

transportation service of its anchor shipper, DENC, they are not "reasonable" alternatives that the Commission must consider under NEPA.[86] Commission precedent recognizes that the use of renewable energy sources and increased energy conservation may not meet the purpose of a natural gas pipeline project.[87] Not surprisingly, these commenters fail to explain how the customers of DENC can utilize solar energy or wind energy or energy conservation programs to operate their gas appliances, gas furnaces and other devices and machinery that are natural gas fueled. Therefore, the DEIS properly considered reasonable alternatives to the Project, consistent with Commission precedent and the requirements of NEPA.

Transco and Atlantic Coast Pipeline ("Atlantic Coast") each submitted comments on the hypothetical alternatives in the DEIS that address their respective pipeline systems.[88] Transco comments that it could, in theory, provide the same capacity required by DENC by using its existing system with minor modifications at an existing compressor station and constructing a 37.7-mile long lateral pipeline that would follow existing pipeline rights-of-way.[89] Unsurprisingly, in offering this hypothetical alternative, Transco fails to explain how it would meet a number of criteria DENC considered when it contracted for capacity

[86] *Dominion*, 155 FERC ¶ 61,106 at P 113 (citing *Pac. Coast*, 693 F.3d at 1100).
[87] *Id.* (citing *Pac. Coast*, 693 F.3d at 1100). *See also Envtl. Law & Policy Ctr. v. NRC*, 470 F.3d 676, 684 (7th Cir. 2006) (NRC properly declined to consider energy-efficiency alternatives when goal of project was to generate baseload energy and private applicant "was in no position to implement such measures"); *National Parks Conservation Ass'n v. Forest Service*, 177, F.Supp.3d 1, 14 (D.D.C. 2016) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991)) (noting that where an agency is "asked to sanction a specific plan," it must "take into account the needs and goals of the parties involved in the application," and holding that purpose of "exploration of private minerals" was consistent with NEPA).
[88] Transcontinental Gas Pipe Line Company, LLC, Comments on Draft Environmental Impact Statement, Docket No. CP19-14-000 (Sept. 18, 2019) ("Transco Comments"); Atlantic Coast Pipeline. Draft Environmental Impact Statement for Southgate Project, Docket No. CP19-14-000 (Sept. 16, 2019) ("Atlantic Coast Comments").
[89] Transco comments at 2.

on the Southgate Project.[90] Specifically, the Transco alternative to the Project would not (1) add competition to an interstate pipeline market where Transco has a near monopoly; (2) provide DENC with a third direct interstate pipeline connection improving reliability and adding resiliency to the interstate pipeline services that DENC receives; (3) diversify risk and provide access to the other pipelines to continue serving DENC's customers without interruption in the event of an unplanned outage or interruption; and (4) provide a direct connection of DENC's system to East Tennessee's pipeline through which DENC sources its gas storage on Saltville Gas Storage Company L.L.C.'s storage facilities, which will allow DENC to replace less reliable secondary-firm backhaul deliveries on Transco with primary-firm forward-haul deliveries on the Southgate Project. Mountain Valley is not alone in describing these benefits, as DENC filed a response in this proceeding on December 28, 2018 describing how the Southgate Project will provide many of these benefits, including filing testimony provided before the North Carolina Utilities Commission ("NCUC").[91] Moreover, regarding the first three criteria, the NCUC has recognized the need for competitive interstate pipeline capacity alternatives *other* than Transco—which Transco fails to explain or acknowledge.[92] DENC further filed its own

[90] In fact, DENC solicited interest for additional pipeline capacity necessary to meet anticipated incremental demand on its distribution system from all existing and proposed pipelines, including Transco and Atlantic Coast. Application at 3. In choosing Mountain Valley and the Southgate Project, DENC cited numerous reasons, including transportation cost, supply cost, supply diversity, reliability and resiliency, and operational efficiencies. *Id.* at 7.

[91] *See Motion for Leave to Answer, Answer, and Motion to Lodge of Public Service Company of North Carolina, Inc*., Docket No. CP19-14-000 (Dec. 28, 2018) ("*Answer*"). In the *Answer*, DENC [PSNC] referenced its application before the NCUC seeking approval for compensation under the Southgate agreement wherein its stated various benefits the Southgate Project provides, including " access to MVP capacity, which constitutes the best-cost alternative available to satisfy the Company's long-term interstate capacity needs;" "increase reliability, resiliency and direct to low-cost natural gas produced in the Marcellus and Utica shale regions;" "contribute to optionality of natural gas supply sources;" and "allow PSNC to replace secondary-firm backhaul deliveries with primary forward-haul deliveries." *Answer* at 5.

[92] *See* Docket No. G-100, Sub 91, *Investigation Regarding Competitive Alternatives for Additional Natural Gas Service Agreements*. The NCUC approved the Southgate Project as beneficial to consumers in North Carolina, and authorized payment under the precedent agreement. *See* Order on Annual Review of Gas

response to comments on the DEIS stating that Transco has failed to explain how it could provide mainline capacity to serve DENC and never presented this new proposal until now and accordingly it is too late.[93] In short, the only comment Transco offered that is helpful to the Commission's alternatives analysis is that Atlantic Coast is not a viable alternative.[94]

Atlantic Coast comments that Commission staff "should ***not*** assume when considering [Atlantic Coast Pipeline ("ACP")] as an alternative to Southgate that ACP would deliver gas to PSNC at the same delivery points proposed by [Mountain Valley]."[95] According to Atlantic Coast, instead of delivering gas where the Southgate Project is proposed to deliver gas and where DENC wants it delivered, the Commission should consider an alternative where Atlantic Coast would deliver gas on the eastern side of DENC's system, reducing the length of pipeline necessary for Atlantic Coast to deliver gas to DENC. Atlantic Coast further suggests that in order to do so, it would need additional capacity to be added to the Piedmont intrastate pipeline.[96] But this is not what DENC has requested. Moreover, an Atlantic Coast alternative would not provide the crucial connection to East Tennessee that the Project will provide. Therefore, Atlantic Coast's new suggested system alternative would not meet the purpose of the Southgate Project, which, rather than simply delivering gas to DENC, specifically includes receiving gas from

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Costs, *In re Application of Public Service Company of North Carolina, Inc. for Annual Review of Gas Costs Pursuant to N.C.G.S. § 62-133.4(c) and Commission Rule R1-17(k)(6)*, Docket No. G-5, Sub 591 (NCUC Dec. 6, 2018); Order Accepting Affiliated Agreements for Filing and Permitting operation Thereunder Pursuant to N.C. Gen. Stat. § 62-153, *In re Application of Public Service Company of North Carolina, Inc. for Approval of Payment of Compensation Under a Service Agreement with Mountain Valley Pipeline, LLC*, Docket No. G-5, Sub 591 (NCUC Oct. 9, 2018) (attached to Mountain Valley's Application as Ex. Z-1).

[93] *See* DENC [PSNC] Response filed October 17, 2019 in Docket No. CP19-14-000.

[94] Transco Comments at 2, n.1.

[95] Atlantic Coast Comments at 2 (emphasis in original). Atlantic Coast's lead developer and largest equity owner is Dominion. As noted earlier, Dominion acquired the former PSNC Energy in January 2019, after PSNC Energy entered into the binding precedent agreement with Mountain Valley. DENC/PSNC and ACP are now affiliates. DENC/PSNC and Mountain Valley are not affiliates.

[96] Atlantic Coast Comments at 3.

the interconnection with the Mainline Facilities (on which DENC is a customer) and from the new interconnection with East Tennessee and delivering gas to two new delivery points on the DENC distribution system in Rockingham and Alamance Counties, North Carolina. Neither would this alternative meet the goal of diversifying the interstate pipeline market in North Carolina, as evident by the NCUC's recognition of the need for competitive pipeline alternatives, notwithstanding the fact that DENC had an existing commitment on ACP.[97]

More fundamentally, however, is that neither the Atlantic Coast alternative or the Transco alternative as put forward are real projects. While it may be appropriate to evaluate those "alternatives" under NEPA, the alternatives are hypothetical only, as neither pipeline company has proposed either "alternative" as a viable project. As the Commission recently explained in *Cheyenne Connector, LLC*, even if a potential alternative assessed under NEPA may present an environmental advantage, "NEPA does not require the Commission to certificate the most environmentally favorable alternative."[98] Based on comments from a competing pipeline company that its hypothetical system alternative provided less environmental impact over the proposed project, the Commission explained that the competing pipeline did not present a "viable system alternative" because that pipeline company did not have commitments from shippers or submit an application for an alternative project.[99] Further, while the Commission assessed the potential impacts from the hypothetical alternative project for NEPA purposes, it ultimately issued a certificate for

[97] *See Answer* (explaining DENC's 20-year precedent agreement with Atlantic Coast for 100,000 dth/d). Atlantic Coast itself "fully understands and appreciates" the need for "a new pipeline alternative to serve North Carolina." Atlantic Coast Comments at 2.
[98] *Cheyenne Connector, LLC*, 168 FERC ¶ 61,180, at P 107 (2019).
[99] *Id*. at 105.

the proposed project because, among other things, the benefits of the proposed project "outweigh the potential environmental benefits of the non-viable, hypothetical system alternative proffered by [the competitor]."[100] The same analysis applies here where the Commission is faced with Atlantic Coast's and Transco's non-viable alternatives.

In this case, while both hypothetical alternatives may be appropriate for Commission consideration under NEPA (and have been considered), neither alternative is a real, viable project that the Commission has the ability to consider under the Natural Gas Act ("NGA"). The NGA restricts Commission action to issue certificates to an "*applicant*" when it finds that the "*proposed . . . construction . . .* is or will be required by the present or future public convenience and necessity."[101] Neither Atlantic Coast nor Transco are applicants for these proposed alternatives as both pipelines require construction of additional facilities to serve DENC. Furthermore, neither company has filed applications or presented evidence that they have customer support for their alternatives.[102] Therefore, their hypothetical alternatives are not viable projects and remain exactly what they are—hypothetical.

F. The DEIS Sufficiently Analyzes Impacts to Environmental Justice Populations.

Some commenters assert that the DEIS failed to analyze adequately impacts to environmental justice communities.[103] According to the SELC, the DEIS does not analyze

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[100] *Id*. at 107.

[101] 15 U.S.C. § 717f(e) (emphasis added).

[102] Atlantic Coast purports not to question DENC's decision to contract with Mountain Valley, as opposed to Atlantic Coast, and states that the Commission "should not look behind precedent agreements to judge a pipeline customer's decision." Atlantic Coast Comments at 2.

[103] SELC Comments at 7-8. The NCDEQ also raises environmental justice concerns with respect to the possibility that DENC will have a small increase in the total bill amount to its customers as a result of the Southgate capacity. Comments at 8-10. This argument is outside the scope of NEPA and not one properly before this Commission but rather an issue that should be raised before the applicable state utility commission.

the health impacts that the Lambert Compressor Station would have on environmental justice populations.[104] However, SELC's comments essentially boil down to a disagreement with the DEIS's analysis of air quality impacts in the vicinity of the Lambert Compressor Station—not the DEIS's evaluation of environmental justice. The DEIS appropriately considered the principles of environmental justice and determined that the Southgate Project "would not have a disproportionately high and adverse environmental or human health impact on minority or low-income populations."[105]

Consistent with CEQ environmental justice guidance, the DEIS identified environmental justice communities by identifying census block groups with a specified minority population or household poverty rate.[106] The DEIS specifically identified two census block groups within one mile of the Lambert Compressor Station containing environmental justice populations.[107] SELC acknowledges these two populations in the DEIS, but asserts that the DEIS "does not assess the health impacts that the compressor station would have on these populations."[108] This is incorrect. The DEIS explains that although construction and operation of the compressor station "would result in long-term impacts on air quality," these impacts would not be significant because Mountain Valley would take steps to minimize dust during construction and potential operational emissions would be below the NAAQS, "which are designated to protect public health."[109] As a

[104] *Id.* at 7.
[105] DEIS at 4-138.
[106] *Id.* at 4-128 – 4-130. Executive Order 12898 requires federal agencies to identify adverse environmental or human health effects that are disproportionally higher on low-income and minority populations. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, Executive Order 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994). CEQ promulgated guidance to assist federal agencies in identifying these populations. CEQ, *Environmental Justice: Guidance Under the National Environmental Policy Act* (Dec. 10, 1997).
[107] DEIS at 4-131; *see also* SELC Comments at 7.
[108] SELC Comments at 7.
[109] DEIS at 4-131. Impacts on air quality are more fully discussed in Section 4.11 of the DEIS.

result, the Southgate Project "would not have significant adverse air quality impacts on the low-income or minority populations in the Project area."[110]

SELC's comments do not pertain to the DEIS's identification and discussion of environmental justice populations. Rather, their comments take issue with the DEIS's conclusions with respect to the Lambert Compressor Station's impacts on air quality generally.[111] However, the DEIS thoroughly evaluated impacts (including cumulative impacts) to air quality resulting from construction and operation of the Lambert Compressor Station, concluding that impacts would not be significant.[112] With respect to its NEPA obligations to determine whether the Project will have a "disproportionately high and adverse impact on low-income and predominantly minority communities," the DEIS satisfies this standard.[113] By concluding that impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to the general population, the DEIS appropriately concluded the Southgate Project would not have a "disproportionately high and adverse impact" on the two identified environmental justice populations.[114] The DEIS thus satisfies NEPA's goal of informed decisionmaking by recognizing and discussing the Southgate Project's impacts on environmental justice populations.

G. Commission Review of GHG Emissions for the Project Is Consistent with NEPA.

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[110] *Id.*

[111] SELC Comments at 7 (arguing that "existing evidence" indicates impacts surrounding compressor station "could be significant").

[112] *See* DEIS §§ 4.11, 4.13.2.9.

[113] *See Sierra Club*, 867 F.3d at 1368 (internal quotations and citation omitted).

[114] *Id.* at 1369 (noting that the Commission had concluded that the project at issue would not have a high and adverse impact on any population, "meaning, in the agency's view, that it could not have a *disproportionately* high and adverse impact on any population, marginalized or otherwise") (internal quotations and citation omitted). *See also id.* at 1370 (noting that EIS had "explained that the [compressor] station's noise and air-quality effects on these [environmental justice] locations were expected to remain within acceptable limits").

The DEIS properly provides an estimate of the GHG emissions associated with construction and operation of the Southgate Project, and concludes that impacts on air quality during construction and operation will not be significant.[115] Several commenters assert that the DEIS's analysis of GHG emissions is deficient because it does not address emissions associated with upstream production and downstream combustion of natural gas to be transported by the Southgate Project.[116] Commenters argue that the DEIS should include a quantitative estimate of both upstream and downstream GHG emissions associated with the Southgate Project.[117] For the reasons explained below, the DEIS's analysis of GHG emissions associated with construction and operation of the Southgate Project fully complies with NEPA.

CEQ regulations implementing NEPA require consideration of direct and indirect effects of a proposed project.[118] Indirect effects are "caused by the [project] and are later in time or farther removed in distance, but are still reasonably foreseeable."[119] Commenters assert that the DEIS failed to estimate potential indirect downstream GHG emissions associated with natural gas to be transported by the Southgate Project.[120] According to one

[115] DEIS at 4-193 – 4-195, tbls. 4.11-4 and 4.11-5.
[116] *See* AMA Comments at 11-12; Motion to Intervene on Behalf of Food and Water Watch and Comments in Opposition to DEIS, Docket No. CP19-14-000, at 4 (Sept. 16, 2019) ("Food and Water Watch Comments"); NCDEQ Comments at 5-6; Institute for Policy Integrity at New York University School of Law, Comments on Failure to Quantify and Monetize Greenhouse Gas Emissions in the Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000, at 2, 4 (Sept. 16, 2019) ("NYU Law Comments").
[117] Some commenters further assert that the DEIS should also assess the significance of GHG emissions using available methodologies, including the Social Cost of Carbon. *See* AMA Comments at 18-23; NCDEQ Comments at 5; NYU Law Comments at 1-2. The DEIS properly explains (at 4-269) that there is not a "universally accepted methodology" "to determine the incremental impact of individual projects." Nothing more is required. *See Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *2 (noting that Commission provided reasons for declining to use Social Cost of Carbon tool, and holding that nothing more "is required for NEPA purposes").
[118] 40 C.F.R. § 1502.16(b).
[119] *Id.* § 1508.8(b).
[120] *See* AMA Comments at 13-15; Food and Water Watch Comments at 1-2; NCDEQ Comments at 5-6; NYU Law Comments at 1.

commenter, the specific end-use of the gas is irrelevant, because the Commission can provide a "full-burn" estimate of GHG emissions.[121] Ignoring the fact that the Commission has repeatedly explained why the "full-burn" estimate of GHG emissions is not accurate,[122] the Commission has already done what commenters request—provided an "upper bound" estimate of emissions associated with the Mainline Facilities. In analyzing the environmental impacts of the Mainline Facilities, the Commission conservatively estimated the full combustion of the Mainline Facilities' total volume of natural gas transportation capacity.[123] As Mountain Valley explained in Resource Report 9 submitted with its Application,[124] and in its comments on the DEIS submitted on September 13, 2019, it is unnecessary for the Commission to provide an estimate of the upper-bound GHG emissions resulting from end-use combustion for the Southgate Project. This is because potential downstream emissions associated with the Southgate Project have already been accounted for in the Commission's upper-bound estimate for the Mainline Facilities.

To clarify further, Commission approval of the Southgate Project will not cause any incremental downstream GHG emissions. As reflected in its precedent agreement, DENC expects to source more than 80 percent of the natural gas to be transported on the Southgate Project from the Mainline Facilities, and the remaining amount from East Tennessee's existing pipeline system.[125] Accordingly, there is no incremental pipeline capacity, and therefore no additional gas use, attributable to the Project. Downstream GHG emissions were already considered as part of the Commission's evaluation and approval of

[121] AMA Comments at 14-15.
[122] *See, e.g.*, Certificate Order, 161 FERC ¶ 61,043 at P 293.
[123] *Id.*
[124] *Mountain Valley Pipeline, LLC*, Application, Resource Report 9 at 9-24 (Nov. 6, 2018).
[125] Resource Report 9 at 9-24 (noting that natural gas will be received "at either the Mountain Valley Pipeline interconnection near Chatham, Virginia or from East Tennessee at the LN 3600 Interconnect near Eden, North Carolina").

the Mainline Facilities. The Project simply represents different future utilization of the natural gas transported on the Mainline Facilities or East Tennessee.[126] Thus, a quantitative estimate of GHG emissions for the Southgate Project is not only unnecessary, but would result in an inaccurate double-counting of impacts. In short, commenters simply fail to explain how natural gas can be consumed twice.

Similarly, the Commission is not required to assess alleged impacts the Project could have on upstream natural gas production "induced by" the Southgate Project, as asserted by some commenters.[127] As explained above, the Southgate Project is not transporting additional volumes of natural gas. Rather, it is an extension of the MVP

[126] The expected deliveries of natural gas from East Tennessee into the Southgate Project do not require an expansion project on the East Tennessee system.
[127] *See* AMA Comments at 11-12; Food and Water Watch Comments at 1-2.

Mainline Facilities and cannot, therefore, be said to be "inducing" additional natural gas production.

IV.
CONCLUSION

Mountain Valley requests that the Commission accept this Answer to comments filed in this proceeding.

Respectfully submitted,

MOUNTAIN VALLEY PIPELINE, LLC

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Counsel for Mountain Valley Pipeline, LLC

Dated: October 21, 2019

EXHIBIT 1

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010 (2019), I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 21st day of October 2019.

/s/ *Claire M. Brennan*

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MVP Southgate Project

Attachment 2

Anticipated Permits and Consultations for the MVP Southgate Project

October 2019

REVISED Table 1.7-1 Anticipated Permits and Consultations for the MVP Southgate Project			
Agency	**Permit/ Approval/ Consultation a/**	**Submittal Date or Anticipated Submittal/ Initiation Date**	**Anticipated Permit Receipt/ Completion Date**
Federal			
Federal Energy Regulatory Commission	Natural Gas Act, Section 7; Certificate for construction and operation of interstate natural gas pipeline.	Submitted November 6, 2018	March 2020
U.S. Army Corps of Engineers Norfolk District Wilmington District	Section 404 Permit for impacts on waters of the U.S., including wetlands	Submitted November 30, 2018	May 2020
U.S. Fish and Wildlife Service Virginia North Carolina	Consultation under Section 7 of ESA for potential impacts on federally protected species Consultation regarding impacts on migratory birds and eagles	May 2018	May 2020
Virginia			
Virginia Department of Historic Resources, Division of Review and Compliance ("SHPO")	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on the National Register of Historic Places	May 2018	March 2020
Virginia Marine Resources Commission	Permit for encroachment to state-owned subaqueous lands	November 30, 2018	May 2020
Virginia Department of Environmental Quality ("VDEQ"), Water Division	Section 401 Water Quality Certification and Water Protection Permit for impacts to non-404 regulated wetlands or waters	November 30, 2018	May 2020 (Automatic under Nationwide Permit 12)
VDEQ, Water Division	Virginia Pollution Discharge Elimination System (VPDES) permit for discharge of construction stormwater	March 2019	December 2019
VDEQ, Water Division	General Permit No. VAG83 (Petroleum Contaminated Sites, Groundwater Remediation and Hydrostatic Tests GP	Covered under General Permit Conditions	
VDEQ, Air Division	VADEQ Article 6 Minor New Source Air Quality Permit	November 8, 2018	March 2020
Virginia Department of Conservation and Recreation, Division of Natural Heritage	Consultation for state threatened and endangered species	May 2018	November 2019
Virginia Department of Game and Inland Fisheries	Consultation for state protected wildlife species	May 2018	November 2019
Virginia Department of Transportation	Road bonds and crossing permits	August 2019	December 2019

REVISED Table 1.7-1

Anticipated Permits and Consultations for the MVP Southgate Project

Agency	Permit/ Approval/ Consultation a/	Submittal Date or Anticipated Submittal/ Initiation Date	Anticipated Permit Receipt/ Completion Date
North Carolina			
North Carolina Department of Environmental Quality ("NCDEQ"), Division of Water Resources	401 Water Quality Certification, Isolated/non-404 wetlands and water permit	November 30, 2018	January 2020
North Carolina Department of Environmental Quality ("NCDEQ"), Division of Water Resources	Jordan Lake Watershed Major Variance	February 8, 2018	January 2020
NCDEQ, Division of Energy, Mineral and Land Resources	General Permit NCG010000 to discharge stormwater under the NPDES for Construction Activities	April 2019	December 2019
NCDEQ, Natural Heritage Program	Consultation for state threatened and endangered species	May 2018	November 2019
North Carolina Wildlife Resources Commission	Consultation for state threatened and endangered species	May 2018	November 2019
North Carolina Department of Cultural Resources ("SHPO")	Consultation and clearance regarding potential impacts on pre-historic and historic resources eligible for listing on the National Register of Historic Places	May 2018	March 2020
North Carolina Department of Transportation	Road bonds and crossing permits	June 2019	December 2019

a/ Consultations will occur continuously throughout the development of the Project.

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October 21, 2019

Via Email

Ms. Sheila Holman,
North Carolina Department of Environmental Quality
217 West Jones Street
Raleigh, North Carolina 27699

RE: Responses to Comments Received on the MVP Southgate Project

Dear Ms. Sheila Holman:

Thank you for coordinating your agency's review of the MVP Southgate Project. Mountain Valley prepared a general response to inquiries regarding the need for the project and system alternatives in Attachment 1 to this letter. On October 11th we met with members of your agency to continue our conversation on environmental justice concerns and will include an updated map of environmental justice communities along the route in our October supplemental filing to the FERC that expands the analysis out to one mile from the project's alignment.

In response to your comments on the Draft Environmental Impact Statement for the Southgate Project dated September 16, 2019, information is being provided in Attachment 2 of this letter that addresses your comments.

Should you have any additional questions or need further information to complete your review of the Project, please do not hesitate to contact Alex Miller at (713) 374-1599 or via email at alex.miller@nee.com or myself at (561) 691-7054 or via email at kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador

Kathy Salvador
Senior Director, Environmental Services

cc: Jennifer Mundt, NCDEQ
Amanda Mardiney, FERC
Allen Jacks, Cardno
William Lavarco, MVP Southgate
Alex Miller, MVP Southgate

MVP Southgate Project

FERC Docket No. CP19-14-000

Responses to North Carolina Department of Environmental Quality Comments Received on the MVP Southgate Project

Attachments

October 2019

MVP Southgate Project

Attachment 1

Response to Comments Regarding the Southgate Project's Purpose and Need

October 2019

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Mountain Valley Pipeline, LLC	)	**Docket No. CP19-14-000**

ANSWER OF MOUNTAIN VALLEY PIPELINE, LLC TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Pursuant to Rule 213 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure,[1] Mountain Valley Pipeline, LLC ("Mountain Valley") hereby answers certain comments filed regarding the Commission's Draft Environmental Impact Statement prepared for the Southgate Pipeline Project ("Southgate Project" or "Project").[2]

BACKGROUND

The Commission issued a Notice of Availability of the DEIS for the Southgate Project on July 26, 2019, requiring comments on the DEIS be submitted by September 16, 2019.[3] The DEIS concludes that while the Southgate Project may result in some adverse environmental impacts, the majority of impacts "would be reduced to less-than-significant levels" with the implementation of various mitigation measures.[4] In this Answer, Mountain Valley responds to a number of comments on the Project filed by non-governmental organizations, state and local governments, and other commenters.[5]

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[1] 18 C.F.R. §§ 385.212 & 385.213 (2019).
[2] Mountain Valley Pipeline, LLC, Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000 (July 26, 2019) ("DEIS").
[3] Notice of Availability of the Draft Environmental Impact Statement for the Proposed Southgate Project, Docket No. CP19-14-000, at 2 (July 26, 2019).
[4] DEIS at ES-9; 5-1.
[5] Mountain Valley provided additional information in response to specific commenters in its response to the Commission's October 3, 2019 Environmental Information Request, Post-Application No. 4, submitted on October 18, 2019.

Mountain Valley responds to certain issues that are predominately legal in nature in this narrative and responds to other more discrete issues raised by commenters in the table attached as Exhibit 1.

The Southgate Project is a new natural gas pipeline system commencing near Chatham, Virginia and terminating at a delivery point with Dominion Energy North Carolina[6] ("DENC") near Graham, North Carolina. The Project includes approximately 73 miles of pipe, one compressor station, associated valves, piping, and appurtenant facilities, and will receive gas from two new interconnections, one with the Mountain Valley Pipeline Project ("Mainline Facilities")[7] and one with East Tennessee Natural Gas Transmission, LLC ("East Tennessee"). Mountain Valley has a long-term, binding precedent agreement with DENC for 300,000 dekatherms ("Dth") per day on the Project.

I.
EXECUTIVE SUMMARY

Notwithstanding protestations of insufficient time to comment, numerous detailed comments were filed on a multitude of issues in the DEIS. Certain commenters argue that Mountain Valley has failed to demonstrate that the Southgate Project is needed, but ignore the compelling fact that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for

[6] Formerly "PSNC Energy." After Mountain Valley filed the Application for the Southgate Project, Dominion Energy, Inc. ("Dominion") acquired PSNC Energy, which is now called Dominion Energy North Carolina and referred to as "DENC" in this Answer.

[7] The Commission issued the Certificate Order for the Mainline Facilities, which are currently under construction, on October 13, 2017. *See Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043 (2017) ("Certificate Order"), *order denying reh'g*, 163 FERC ¶ 61,197 (2018), *aff'd*, *Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199 (D.C. Cir. Feb. 19, 2019) (unpublished opinion). The MVP Certificate Order was upheld on appeal by the Court of Appeals for the District of Columbia Circuit ("D.C. Circuit"), which considered sixteen different challenges to FERC's environmental review of the Mainline Facilities and subsequent issuance of the certificate and denied all challenges, finding them without merit. *See Appalachian Voices v. FERC*, No. 17-1271 (D.C. Cir. Feb. 19, 2019).

300,000 Dth per day of capacity, representing approximately 80 percent of the total Project capacity. This is a strong demonstration of market need for the Project and is fully consistent with Commission policy and precedent.

Despite assertions otherwise, the National Environmental Policy Act ("NEPA") does not require the Commission to prepare a revised or supplemental DEIS for the Project. The DEIS, while not a final document, is thorough, comprehensive, and certainly does not warrant the preparation of a revised or supplemental draft. It contains more than sufficient information to provide the public an opportunity for meaningful analysis.

The DEIS analyzes all direct, indirect and cumulative impacts of, and reasonable alternatives to, the Project, consistent with the Commission's NEPA responsibilities. The DEIS does not improperly segment the Southgate Project by not evaluating the Mainline Facilities in the same environmental document. It is beyond reproach that any argument regarding segmentation does not apply in this situation, where the Commission has completed an EIS for the Mainline Facilities and is in the process of completing another comprehensive EIS for the Southgate Project—an FEIS which will include a comprehensive cumulative impacts analysis that considers the Mainline Facilities and two Transcontinental Gas Pipe Line Company, LLC ("Transco") compressor stations as "cumulative actions" within a resource-specific geographic scope of the Project.

Similarly, the DEIS provides a robust alternatives analysis consistent with NEPA requirements. The DEIS considered the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed above-ground facilities. Based on this, the DEIS reasonably concludes that no alternative "would provide

a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[8]

The DEIS also appropriately considered the principle of environmental justice in determining that the Southgate Project would not disproportionately impact minority or low-income populations. The DEIS identified the environmental justice communities within one mile of the proposed Lambert Compressor Station, and explains that impacts to these communities would not be disproportionately high or adverse because impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to *any* population.

The DEIS also addresses the potential greenhouse gas ("GHG") emissions attributable to the construction and operation of the Southgate Project, including cumulative impacts, and concludes that construction and operation-related emissions are not expected to have a significant impact on local or regional air quality. There is no NEPA requirement that the Commission consider impacts from upstream natural gas production allegedly induced by the Southgate Project, because the impacts of such activities are neither causally connected to the Southgate Project nor are they reasonably foreseeable.

With respect to downstream GHG emissions, Mountain Valley in both its Application and in its own comments on the DEIS has explained in detail that any potential downstream GHG emissions associated with the Southgate Project have already been accounted for in the Commission's "upper bound" estimate for the Mainline Facilities and by virtue of the fact that the expected deliveries of natural gas from East Tennessee into the Southgate Project will come from existing capacity and will not require any expansion

[8] DEIS at 3-48.

of the East Tennessee system. Thus, any further quantitative estimate would result in misleading and inaccurate double-counting of impacts. For the same reason, there is no need to consider upstream GHG emissions, as the Southgate Project is not transporting additional volumes of natural gas and cannot, therefore, be said to be "inducing" additional natural gas production.

In sum, the Commission's DEIS is consistent with the requirement that the Commission take a "hard look" at the environmental impacts of its actions.[9]

II.
ANSWER

A. Mountain Valley Has Fully Demonstrated the Need and Demand for the Project.

Commenters argue that the Southgate Project is not needed and that market demand in the Southeastern United States does not support the Project.[10] Notwithstanding that this argument is not a comment regarding the DEIS, Mountain Valley will once again explain why these commenters are incorrect. Commenters deliberately ignore that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for 300,000 Dth per day of capacity on the Southgate Project, representing approximately 80 percent of the total Project capacity, which fully supports the market need for the Project.[11]

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[9] *Mo. Coal. for the Env't v. FERC*, 544 F.3d 955, 958 (8th Cir. 2008) (quoting *Mayo Found. v. Surface Transp. Bd*., 472 F.3d 545, 549 (8th Cir. 2006)); *see also Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc*., 462 U.S. 87, 97 (1983).

[10] Comments of Appalachian Mountain Advocates, *et al.* on Draft Environmental Impact Statement for Mountain Valley Pipeline, LLC's Proposed Southgate Project, Docket No. CP19-14-000, at 5-7 (Sept. 16, 2019) ("AMA Comments"); Comments and Request for 60-Day Extension for Comments of Blue Ridge Environmental Defense League, Docket No. CP19-14-000, at 5-8 (Sept. 16, 2019) ("BREDL Comments").

[11] Application of Mountain Valley Pipeline, LLC for Authorization to Construct and Operate Pipeline Facilities Under the Natural Gas Act, Docket No. CP19-14-000, at 7 (Nov. 6, 2018) ("Application"). Mountain Valley will be at risk for the additional 20 percent of the capacity as stated in its Application.

The Commission's Certificate Policy Statement plainly states that binding precedent agreements are "significant evidence of demand for [a] project."[12] In approving the Mainline Facilities, the Commission explained that binding agreements are the "best evidence that additional gas will be needed" in the markets the Project is intended to serve.[13] On appeal, the D.C. Circuit unequivocally affirmed the Commission's finding of need based on long-term precedent agreements.[14] While Commenters introduce their own demand projections, this does not overcome the fact that the most objective evidence of market demand for the pipeline capacity created by the Project is Mountain Valley's precedent agreement with DENC for the overwhelming majority of the Project capacity. The D.C. Circuit consistently has upheld the Commission's finding of need based on the existence of precedent agreements under similar circumstances.[15] Therefore, in accordance with longstanding Commission practice and D.C. Circuit precedent, the Commission reasonably may conclude that Mountain Valley's long-term, binding precedent agreement with DENC provides adequate evidence of need for the Project.

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[12] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, at p. 61,748 (1999) ("Certificate Policy Statement"), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000). *See, e.g.*, *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 242 (D.C. Cir. 2013) (recognizing FERC's finding that precedent agreements supporting the project constituted "strong evidence of market demand") (citation omitted).

[13] Certificate Order, 161 FERC ¶ 61,043 at P 41.

[14] *Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *1 ("Notwithstanding petitioners' argument to the contrary, FERC's conclusion that there is a market need for the Project was reasonable and supported by substantial evidence, in the form of long-term precedent agreements for 100 percent of the Project's capacity"). *See also Sierra Club v. FERC*, 867 F.3d 1357, 1379 (D.C. Cir. 2017) (holding that applicants met the market need "by showing that 93% of their capacity has already been contracted for").

[15] *See Myersville Citizens for a Rural Community, Inc. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) ("[T]he Commission concluded that the evidence that the Project was fully subscribed was adequate to support the finding of market need. It is the case here, as it was in *Minisink*, that 'Petitioners identify nothing in the policy statement or in any precedent construing it to suggest that it *requires*, rather than *permits*, the Commission to assess a project's benefits by looking beyond the market need reflected by the applicant's existing contracts with shippers.") (quoting *Minisink Residents for Envtl. Pres. & Safety v. FERC*, 762 F.3d 97, 111 n.102 (D.C. Cir. 2014)) (emphasis added).

Commenters argue that the Commission must also consider indicators of project need other than precedent agreements. This is incorrect. While the Certificate Policy Statement *allows* the Commission to consider this type of information, it did not *require* the Commission to do so. The Certificate Policy statement *allows* pipelines to submit additional types of evidence that "*might include* . . . demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market."[16] Indeed, Mountain Valley submitted such a market study with its Application. However, precedent agreements remain "significant evidence of demand for [a] project."[17]

The Certificate Policy Statement permits additional evidence to allow pipelines to demonstrate project need even if the pipeline had executed few (or even no) agreements to support it, because the amount of capacity under contract may not fully reflect "all the public benefits that can be achieved by a proposed project."[18] Accordingly, benefits could include "the environmental advantages of gas over other fuels, lower fuel costs, access to new supply sources or the connection of new supply to the interstate grid, the elimination of pipeline facility constraints, better service from access to competitive transportation options, and the need for an adequate pipeline infrastructure."[19] Mountain Valley explained in its Application that the Project provides many of these benefits. The Project introduces meaningful competition as it represents an additional interstate pipeline into

[16] Certificate Policy Statement, 88 FERC at p. 61,747 (emphasis added).
[17] *Id.* at p. 61,748.
[18] *Id.* at p. 61,744.
[19] *Id*.

North Carolina, where Transco has a near monopoly. Further, the Project provides DENC with flexibility, optionality, and diversity of supply.[20]

Thus, Mountain Valley has not only demonstrated Project need through its precedent agreement with DENC, it also has identified additional public benefits upon which the Commission may rely as evidence of Project need.

B. The DEIS Includes Sufficient Information to Analyze Impacts and Provide for Meaningful Public Review.

Some commenters assert that the DEIS is incomplete and lacks information necessary to analyze environmental impacts under NEPA, and that without this information, "the public cannot meaningfully comment on the project."[21] As a result, commenters argue that the Commission must either prepare a revised DEIS and release it for public comment, or issue a supplemental DEIS that addresses new information.[22] Commenters misapprehend the purpose of a DEIS and overstate the requirements under NEPA to prepare a revised or supplemental DEIS. The DEIS contains more than sufficient information for the public to understand the impacts of the Project and comment meaningfully thereon.

As the D.C. Circuit has held, "[b]y its very name, the DEIS is a draft of the agency's proposed [final] EIS, and as such the purpose of a DEIS 'is to elicit suggestions for change[,]'" and to provide a "springboard for public comment."[23] In the same vein, the

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[20] Application at 7-9.

[21] *See, e.g.*, Southern Environmental Law Center Comments on FERC's Draft Environmental Impact Statement for Mountain Valley Pipeline's Southgate Project, Docket No. CP19-14-000, at 6 (Sept. 16, 2019) ("SELC Comments"); BREDL Comments at 1-2.

[22] SELC Comments at 6.

[23] *Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323, 1328, 1329 (D.C. Cir. 2004) (quoting *City of Grapevine, Tex. v. Dep't of Transp.*, 17 F.3d 1502, 1507 (D.C. Cir. 1994)); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). *See also Se. Supply Header, LLC*, 120 FERC ¶ 61,257, at P 27 (2007) (denying request to issue revised DEIS where DEIS called for submission information before the end of the comment period or prior to construction).

Commission has explained that the DEIS "put[s] interested parties on notice of the types of activities contemplated and of their impacts."[24] Commenters must show that any alleged omissions in the DEIS "left the public unable to make known its environmental concerns about the project's impact."[25] It is not sufficient that the public was not able to "analyze each aspect of the project, such as specific rather than generalized statements of proposed sitings."[26] Courts have recognized that due to "the practical realities of large projects," such as the Southgate Project, "[i]f every aspect of the project were required to be finalized before any part of the project could move forward, it would be difficult, if not impossible, to construct the project."[27]

These practical realities are evidenced by the Commission's "longstanding practice to issue environmental documents along with recommended mitigation measures that request specific documentation of agency consultation, construction plans, and detailed information to supplement baseline data."[28] It is thus reasonable—and consistent with Commission practice—for the DEIS to contemplate that certain information will be provided subsequent to issuance of the DEIS.[29] The mere fact that additional information will be submitted after issuance of the DEIS does not, as commenters erroneously suggest,

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[24] *Constitution Pipeline Co.*, 154 FERC ¶ 61,046, at P 31 (2016).
[25] *New River*, 373 F.3d at 1329. The volume of comments received in response to the DEIS indicates the opposite—that commenters were more than able to make environmental concerns known to the Commission. *See id.*, 373 F.3d at 1329-30.
[26] *Id.*, 373 F.3d at 1329.
[27] *Id.* (quoting *E. Tenn. Nat. Gas Co.*, 102 FERC ¶ 61,225, at P 25 (2003)); *see also Robertson*, 490 U.S. at 350 (NEPA does not require all plans to be finalized and complete in draft or even final EIS).
[28] *Algonquin Gas Transmission, LLC*, 150 FERC ¶ 61,163, at P 56 (2015), *reh'g denied*, 154 FERC ¶ 61,048 (2016).
[29] SELC alleges that key information is missing from the DEIS (*see* SECL Comments at 5-6). However, the DEIS instructs Mountain Valley to either provide such information prior to the comment period deadline for the DEIS, or at a future date (*see* DEIS at 5-14 – 5-21). Mountain Valley complied with the DEIS and submitted the information required by the comment period deadline (*see, e.g.*, Mountain Valley Pipeline, LLC, Response to FERC Staff's Recommended Mitigation, Docket No. CP19-14-000 (Sept. 13, 2019)). Mountain Valley will continue to comply with all Commission directives contained within the DEIS, FEIS, and Commission orders.

in and of itself require the Commission to prepare a revised DEIS. "NEPA does not require agencies to constantly revise their issued analyses as new information becomes available."[30] The "fact that many of the permits, approvals, consultations, and variances required for the . . . project have been or will be filed after the formal public notice and comment periods does not mean that the public is excluded from meaningful participation."[31] On the contrary, information filed after the comment period continues to be "accessible to the public in the Commission's electronic database."[32]

This practice is consistent with the Council on Environmental Quality's ("CEQ") regulations implementing NEPA. CEQ regulations provide that an agency shall prepare a revised DEIS if the "draft statement is so inadequate as to preclude meaningful analysis."[33] The CEQ regulations further provide that an agency shall prepare a supplemental DEIS if: "(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[34] Neither of these conditions is present in this case; there is no basis to warrant a revised or supplemental DEIS.

Likewise, the Commission is not required to prepare a supplemental DEIS because the practical realities of the Southgate Project necessitate additional filings after issuance of the DEIS. The Supreme Court has soundly rejected the notion that an agency is required to prepare a supplemental DEIS each time new information becomes available. According

[30] *Dominion Cove Point LNG, LP*, 151 FERC ¶ 61,095, at P 52 (2015), *aff'd sub nom. EarthReports, Inc. v. FERC*, 828 F.3d 949 (D.C. Cir. 2016).
[31] *Constitution Pipeline*, 154 FERC ¶ 61,046 at P 31.
[32] *Id.*
[33] 40 C.F.R. § 1502.9(a).
[34] *Id.* § 1502.9(c)(1)(i)-(ii).

to the Court, requiring otherwise "would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made."[35] Whether to prepare a supplemental DEIS is subject to the Commission's discretion.[36] The Commission's decision on whether to prepare a supplemental DEIS is subject to a "rule of reason:" "if the new information is sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared."[37] The significance of the new information depends on whether it "provides a *seriously* different picture of the environmental landscape."[38] In this case, none of the information that commenters allege is missing or deficient would present a "*seriously* different picture" of the impacts of the Project, and the Commission should appropriately decline to issue a supplemental DEIS.

C. The Commission Has Not Inappropriately Segmented Its Review of the Southgate Project From the Mainline Facilities.

Some commenters assert that the DEIS impermissibly "segments" the Southgate Project by failing to evaluate the Mainline Facilities as a "connected action" in the same environmental document.[39] This argument is nonsensical. According to these commenters, the failure to include the Mainline Facilities in the Commission's review of the Southgate Project undermines its cumulative impacts analysis and determination that

[35] *Marsh v. Ore. Nat. Res. Council*, 490 U.S. 360, 373 (1989). *See also Altamont Gas Transmission Co.*, 75 FERC ¶ 61,348, at p. 62,106 (1996) (denying request for supplemental EIS).
[36] *Wisconsin v. Weinberger*, 745 F.2d 412, 417 (7th Cir. 1984).
[37] *Marsh*, 490 U.S. at 374.
[38] *City of Olmsted Falls, OH v. FAA*, 292 F.3d 261, 274 (D.C. Cir. 2002) (quoting *Wisconsin*, 745 F.2d at 418).
[39] *See* AMA Comments at 8-10; BREDL Comments at 3-5.

the Southgate Project will cause only limited adverse environmental impacts.[40] However, commenters conveniently ignore the entire purpose of the rule against segmentation—to ensure that agencies do not analyze projects in smaller components to avoid a finding of significance that would trigger the need to prepare an EIS.[41] Here, the Commission is preparing an EIS for the Southgate Project, and commenters are opining on that very document.[42] Further, the Commission already completed a thorough environmental review of the Mainline Facilities, including preparation of a full DEIS and Final EIS, and concluded that it would have limited adverse environmental impacts.[43] The Commission cannot go back in time more than two years and add the impact of the Southgate Project into the Mainline Facilities' DEIS and FEIS. There is thus no segmentation.

Moreover, as discussed further below,[44] the DEIS considers the Mainline Facilities as a "cumulative action" in its cumulative impacts analysis, including an evaluation of cumulative impacts to certain water resources.[45] To the extent that commenters argue the

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[40] AMA Comments at 8; BREDL Comments at 3. *See also* DEIS at 5-1 (noting that any adverse environmental impacts would be reduced to less than significant levels with recommended mitigation measures).

[41] *See* 40 C.F.R. § 1508.27(b)(7); *Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294, 299 (D.C. Cir. 1987) ("'Piecemealing' or 'Segmentation' allows an agency to avoid the NEPA requirement that an EIS be prepared for all major federal actions with significant environmental impacts by dividing an overall plan into component parts, each involving action with less significant environmental effects.").

[42] The Commission's decision to prepare an EIS for the Southgate Project is the most detailed review under NEPA and in contrast to most projects of this size where the Commission prepares an EA. *See, e.g., Cheyenne Connector, LLC*, 168 FERC ¶ 61,180 (2019) (Commission staff prepared an EA for a new 70-mile pipeline project); *Spire STL Pipeline LLC*, 164 FERC ¶ 61,085 (2018) (Commission staff prepared an EA for a new 65-mile pipeline); *Gulf South Pipeline Company, LP*, 155 FERC ¶ 61,287 (2019) (Commission staff prepared an EA for a new 66-mile pipeline).

[43] Mountain Valley Pipeline, LLC, Final Environmental Impact Statement, Docket No. CP16-10-000, at 5-1 (June 23, 2017) ("Final EIS"). The Final EIS did note that impacts to forested resources would be more significant, but would be reasonably reduced through adherence to certain mitigation measures. *Id. See also* Certificate Order, 161 FERC ¶ 61,043 at P 308 (Mainline Facilities would be "environmentally acceptable actions" if constructed in accordance with requisite mitigation measures). The Commission's environmental review of the Mainline Facilities lasted nearly three years, beginning with the environmental pre-filing review process in 2014. *See generally* Docket No. PF15-3-000.

[44] *See infra* pages 14-17.

[45] DEIS at 4-246.

cumulative impacts analysis should include the "full impacts of each project in a single EIS," commenters are incorrect.[46] The Commission is not required to re-analyze the entire Mainline Facilities as part of its cumulative impacts analysis.[47] Rather, the DEIS properly addresses cumulative impacts to specific resources within a defined geographic scope, in accordance with CEQ regulations.[48] Thus, the Commission is already undertaking what commenters are requesting, and concerns over segmentation are wrong and disingenuous.

Commenters'[49] reliance on the D.C. Circuit's decision in *Delaware Riverkeeper Network v. FERC*[50] is similarly misplaced because, unlike the projects at issue in *Delaware Riverkeeper*, the Commission has already completed a thorough, nearly three-year environmental review of the Mainline Facilities, including preparation of an EIS, not an EA, and is now in the process of preparing yet another EIS for the Southgate Project. Therefore the Commission is certainly addressing the "true scope and impact" of the Southgate Project.[51]

D. The DEIS's Cumulative Impacts Analysis Takes a Sufficient Hard Look at Cumulative Impacts Associated with the Project.

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[46] AMA Comments at 10.

[47] *See Coal. on Sensible Transp. v. Dole*, 826 F.2d 60, 71 (D.C. Cir. 1987) (noting that "[f]urther analysis" of projects already fully evaluated for environmental impacts would be unnecessarily redundant and "in no material way serve the purposes of NEPA").

[48] DEIS at 4-235 – 4-243; *see* 40 C.F.R. § 1508.7.

[49] AMA Comments at 8-10; BREDL Comments at 4-5.

[50] 753 F.3d 1304 (D.C. Cir. 2014).

[51] *Id.* at 1309, 1319. Note that since issuing the decision in *Delaware Riverkeeper*, the D.C. Circuit has decided several cases clarifying and limiting its application to the unique set of facts present in that case. *See City of Boston Delegation v. FERC*, 897 F.3d 241, 252 (D.C. Cir. 2018) (projects were not "under simultaneous consideration by the agency," nor were they "financially and functionally interdependent"); *Myersville*, 783 F.3d at 1326 (noting that the court had "premised [its] decision [in *Delaware Riverkeeper*] requiring joint NEPA consideration on the unquestionable connectedness of the projects, the fact that the projects all were under consideration by the Commission at the same time, and the fact that the projects were financially interdependent"); *Minisink*, 762 F.3d at 113 n.11 (noting that the "critical facts" in *Delaware Riverkeeper* were "worlds apart" from the facts in *Minisink*). These cases indicate that the same unique factors present in *Delaware Riverkeeper* must be present for the court to reach the same result in a subsequent case.

Some commenters assert that the DEIS failed to take a hard look at the cumulative impacts of the Southgate Project because the temporal and geographic scope of the analysis is too narrow.[52] According to these commenters, the DEIS must be revised to broaden the scope of its analysis to include "massive projects" that would affect the same environmental resources.[53] Such projects, according to commenters, include a mixed-used development,[54] as well as two existing compressor stations within the vicinity of Lambert Compressor Station proposed as part of the Southgate Project.[55] Other commenters argue that the DEIS only includes a "minimal analysis" of cumulative impacts associated with the Mainline Facilities.[56] Contrary to these assertions, the cumulative impacts analysis in the DEIS is thorough and comprehensive, and properly defines the geographic and temporal scope of the analysis.

A "cumulative impact" is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."[57] The D.C. Circuit has explained that

> a meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the

[52] SELC Comments at 10-11.
[53] *Id.* at 11.
[54] SELC argues the DEIS fails to address the cumulative impacts of Chatham Park, a mixed-use development in Pittsboro, North Carolina. *Id.* at 10-11. The Chatham Park development is approximately 25 miles south of the Project in Chatham County, North Carolina and none of the Project facilities are located in Chatham County.
[55] *Id.* at 10; BREDL Comments at 15.
[56] AMA Comments at 10.
[57] 40 C.F.R. § 1508.7.

individual impacts are allowed to accumulate.[58]

The DEIS's cumulative impacts analysis satisfies this criteria. The DEIS properly explained that "[f]or a cumulative impact to occur, another project(s) must impact the same resource(s) as the Southgate Project."[59] Because [i]impacts often vary in extent and duration," the DEIS accounts for this variation "by considering resource-specific geographic scopes" for a range of resources, including: soils; groundwater, surface water, and wetlands; vegetation; wildlife; fisheries and aquatic resources; land use, recreation special interest areas, and visual resources; socioeconomics and environmental justice; cultural resources; and air quality and noise.[60] The DEIS then identified other past, present, and reasonably foreseeable projects within the resource-specific geographic scope of analysis, and analyzed the cumulative effects of such projects combined with the Southgate Project.[61]

The DEIS identifies both jurisdictional and non-jurisdictional projects within proximity to the Southgate Project, including *both* Transco Compressor Stations 165 and 166 and the Mainline Facilities.[62] The DEIS then analyzes the cumulative impacts associated with those projects within the geographic scope of each resource. With respect to water resources in particular, the DEIS looked at projects within the same HUC-12 watershed for impacts to groundwater, and within the larger HUC-10 watershed for impacts

[58] *Grand Canyon Tr. v. FAA*, 290 F.3d 339, 345 (D.C. Cir. 2002) (amended Aug. 27, 2002) (citation omitted).
[59] DEIS at 4-236.
[60] *Id.*
[61] *Id.*
[62] *Id.* at 4-244 – 4-246 (identifying the Virginia Southside Expansion Project, the Virginia Southside Expansion II Project, and the Mainline Facilities); *see also id.* at 2-246 – 2-248 (identifying non-jurisdictional Southgate Project-related facilities, other energy projects, mining operations, transportation and road improvement projects, and commercial, industrial, and residential projects).

on surface water.[63] Importantly, both analyses included the Mainline Facilities as a project that could have cumulative impacts on water resources.[64] The DEIS concluded with respect to groundwater, that "it is unlikely that pipeline activities would negatively affect groundwater supplies from wells" due to the "shallow . . . nature of pipeline trenching."[65] Concerning surface water, the DEIS explained that because most impacts are short-term, and would be minimized by the installation and maintenance of best management practices, the cumulative effect of the Project, combined with the 37 other projects within the HUC-10 watershed, would be minor.[66]

The DEIS also evaluated cumulative impacts on air quality resulting from construction and operation of the Southgate Project facilities. Specifically with respect to the Lambert Compressor Station, the DEIS evaluated cumulative impacts on air quality as a result of the Southgate Project and projects within 31.1 miles of the Lambert Compressor Station.[67] The DEIS acknowledges that operation of both Transco Compressor Station 165 and 166, as well as the Southgate Project, would result in long-term, stationary sources of air emissions. Importantly, none of the major source thresholds would be exceeded, and the facilities would continue to operate in compliance with all applicable permitting

[63] *Id.* at 2-450. To the extent that Appalachian Mountain Advocates, *et al.* ("AMA") asserts that the DEIS only analyzed the cumulative impacts of the Southgate Project and the Mainline Facilities on HUC-12 watersheds, AMA is incorrect. The DEIS considered projects within the HUC-12 watershed for groundwater, and within the larger HUC-10 watershed for surface water. Both analyses included the Mainline Facilities. *Id.*

[64] DEIS at 2-450.

[65] *Id.*

[66] DEIS at 4-252. The DEIS explained that most projects, including the Mainline Facilities, would be required by permit to install erosion and stormwater control devices, so "any cumulative impacts from upland construction of multiple projects . . . would not likely be significant." *Id.* at 4-251 – 4-252. It also noted that because of geographic and temporal separation of waterbody crossings, "it is unlikely that cumulative impacts would be significant." *Id.* at 4-252.

[67] *Id.* at 4-265.

requirements, including federal, state, and local air regulations.[68] As a result, the DEIS reasonably concluded that "operation of the Southgate Project combin[ed] with other projects would not result in significant cumulative impacts on air quality."[69]

Thus, contrary to commenters' assertions, the DEIS comprehensively evaluates cumulative impacts associated with the Southgate Project and other projects within its resource-specific geographic scope, including the Mainline Facilities and both Transco Compressor Stations.

E. The DEIS Properly Articulates the Purpose and Need of the Project and Evaluates Reasonable Alternatives.

Commenters incorrectly argue the DEIS ignores the "question of whether there is a real public need for the [Project]" and "improperly restricts its analysis of alternatives to those that can transport Mountain Valley's full desired volume of gas from its desired starting and ending points."[70] However, the DEIS articulates properly the purpose and need of the Project and evaluates sufficiently the Project alternatives as required by NEPA.

Courts and the Commission have properly explained that NEPA requires the Commission to identify and analyze reasonable alternatives during its review of a proposed action.[71] Importantly, "NEPA is a procedural statute; it does not mandate particular results, but simply prescribes the necessary process."[72] CEQ's NEPA regulations require the Commission to "briefly specify the underlying purpose and need to which the agency is

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[68] *Id.* The DEIS also explained that because the Transco compressor stations were constructed more than three years ago, these emissions are "considered part of the ambient air quality within the Southgate Project geographic scope and are accounted for in existing facility permits." *Id.* Any future upgrades to Compressor Station 165 "would be reviewed for compliance with [National Ambient Air Quality Standards] and required air quality permits." *Id.*

[69] *Id.*

[70] AMA Comments at 1-2.

[71] *Minisink*, 762 F.3d at 102; *Millennium Pipeline*, 157 FERC ¶ 61,096 at P 112 (citing 42 U.S.C. § 4332(2)(C) (2012) and 40 C.F.R. §§ 1502.1, 1502.14, and 1502.16 (2016)).

[72] *Minisink*, 762 F.3d at 111 (internal quotation marks omitted) (quoting *Robertson*, 490 U.S. at 350).

responding in proposing the alternatives including the proposed action."[73] It is not the intent of the DEIS to "reach a conclusion on whether there is a need for a proposed project."[74] Rather, "[t]he function of a statement of purpose and need . . . is to define the objectives of the proposed action such that the agency can identify and consider legitimate alternatives."[75]

In this case, the DEIS properly articulates the purpose and need of the Project:

> In general, as described by Mountain Valley, the purpose and need for the Southgate Project is to meet the specific requests for natural gas transportation service of its anchor shipper, [DENC], a local natural gas distribution company. Mountain Valley states that the Project will provide additional firm natural gas transportation services for [DENC] to meet its growing supply needs via interconnections with the under construction Mountain Valley Pipeline project in southern Virginia and the interstate pipeline of East Tennessee in North Carolina to two new delivery points on the [DENC] distribution system in Rockingham and Alamance Counties, North Carolina.[76]

This purpose and need is consistent with the requirements of the Project shipper, DENC. Based on this purpose and need, the DEIS properly evaluates reasonable alternatives to the Project, consistent with the Commission's stated methodology and precedent.

CEQ regulations on the alternatives analysis require the Commission to "[r]igorously explore and objectively evaluate all *reasonable* alternatives."[77] While NEPA does not define what constitutes a "reasonable alternative," CEQ guidance clarifies that alternatives are not reasonable if they are not feasible.[78] CEQ guidance further provides

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[73] 40 C.F.R. § 1502.13. *See also Kern River Gas Transmission Co.*, 138 FERC ¶ 61,037, at P 27 (2012) ("The Council on Environmental Quality (CEQ) regulations implementing NEPA requires only that an EA include a brief discussion of the need for the proposal.") (citing 40 C.F.R. § 1508.9 (2011)).
[74] *Kern River Gas Transmission*, 138 FERC ¶ 61,037 at P 27.
[75] *Id.* (citing *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1175 (10th Cir. 1999)).
[76] DEIS at 1-2.
[77] 40 C.F.R. § 1502.14 (emphasis added).
[78] *Enable Gas Transmission*, LLC, 153 FERC ¶ 61,055, at P 25 (2015) (citing *Guidance Regarding NEPA Regulations*, 48 Fed. Reg. 34,263 (July 28, 1983)).

that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense."[79]

When evaluating whether an alternative is preferable to a proposed action, the Commission considers three evaluation criteria.[80] These criteria are: (1) whether "the alternative meets the stated purpose of the project;" (2) whether the alternative "is technically and economically feasible and practical; and" (3) whether the alternative "offers a significant environmental advantage over a proposed action."[81] The Commission, therefore, is not required to consider "alternatives that are not consistent with the purpose and need of the proposed project."[82] Consistent with these criteria, the DEIS considers the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed aboveground facilities.[83] Based on this analysis, the DEIS reasonably concludes that no alternative "would provide a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[84]

Despite this comprehensive review of alternatives, Commenters nevertheless argue that the Commission "must consider other systems, including *non-gas energy alternatives, and/or energy conservation or efficiency*."[85] But because such alternatives cannot "meet[] the stated purpose of the project," i.e., to meet the specific request for natural gas

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[79] *See Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).
[80] DEIS at 3-1.
[81] *Id*.
[82] *Dominion Transmission, Inc.*, 155 FERC ¶ 61,106, at P 113 (2016) (citing *Pac. Coast Fed'n of Fishermen's Ass'ns v. Blank*, 693 F.3d 1084, 1100 (9th Cir. 2012)).
[83] DEIS at 3-1 – 3-48.
[84] *Id.* at 3-48.
[85] North Carolina Department of Environmental Quality Comment on the Draft Environmental Impact Statement (DEIS) for the Southgate Project, Docket No. CP19-14-000, at 3 (Sept. 16, 2019) ("NCDEQ Comments").

transportation service of its anchor shipper, DENC, they are not "reasonable" alternatives that the Commission must consider under NEPA.[86] Commission precedent recognizes that the use of renewable energy sources and increased energy conservation may not meet the purpose of a natural gas pipeline project.[87] Not surprisingly, these commenters fail to explain how the customers of DENC can utilize solar energy or wind energy or energy conservation programs to operate their gas appliances, gas furnaces and other devices and machinery that are natural gas fueled. Therefore, the DEIS properly considered reasonable alternatives to the Project, consistent with Commission precedent and the requirements of NEPA.

Transco and Atlantic Coast Pipeline ("Atlantic Coast") each submitted comments on the hypothetical alternatives in the DEIS that address their respective pipeline systems.[88] Transco comments that it could, in theory, provide the same capacity required by DENC by using its existing system with minor modifications at an existing compressor station and constructing a 37.7-mile long lateral pipeline that would follow existing pipeline rights-of-way.[89] Unsurprisingly, in offering this hypothetical alternative, Transco fails to explain how it would meet a number of criteria DENC considered when it contracted for capacity

[86] *Dominion*, 155 FERC ¶ 61,106 at P 113 (citing *Pac. Coast*, 693 F.3d at 1100).
[87] *Id.* (citing *Pac. Coast*, 693 F.3d at 1100). *See also Envtl. Law & Policy Ctr. v. NRC*, 470 F.3d 676, 684 (7th Cir. 2006) (NRC properly declined to consider energy-efficiency alternatives when goal of project was to generate baseload energy and private applicant "was in no position to implement such measures"); *National Parks Conservation Ass'n v. Forest Service*, 177, F.Supp.3d 1, 14 (D.D.C. 2016) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991)) (noting that where an agency is "asked to sanction a specific plan," it must "take into account the needs and goals of the parties involved in the application," and holding that purpose of "exploration of private minerals" was consistent with NEPA).
[88] Transcontinental Gas Pipe Line Company, LLC, Comments on Draft Environmental Impact Statement, Docket No. CP19-14-000 (Sept. 18, 2019) ("Transco Comments"); Atlantic Coast Pipeline. Draft Environmental Impact Statement for Southgate Project, Docket No. CP19-14-000 (Sept. 16, 2019) ("Atlantic Coast Comments").
[89] Transco comments at 2.

on the Southgate Project.[90] Specifically, the Transco alternative to the Project would not (1) add competition to an interstate pipeline market where Transco has a near monopoly; (2) provide DENC with a third direct interstate pipeline connection improving reliability and adding resiliency to the interstate pipeline services that DENC receives; (3) diversify risk and provide access to the other pipelines to continue serving DENC's customers without interruption in the event of an unplanned outage or interruption; and (4) provide a direct connection of DENC's system to East Tennessee's pipeline through which DENC sources its gas storage on Saltville Gas Storage Company L.L.C.'s storage facilities, which will allow DENC to replace less reliable secondary-firm backhaul deliveries on Transco with primary-firm forward-haul deliveries on the Southgate Project. Mountain Valley is not alone in describing these benefits, as DENC filed a response in this proceeding on December 28, 2018 describing how the Southgate Project will provide many of these benefits, including filing testimony provided before the North Carolina Utilities Commission ("NCUC").[91] Moreover, regarding the first three criteria, the NCUC has recognized the need for competitive interstate pipeline capacity alternatives *other* than Transco—which Transco fails to explain or acknowledge.[92] DENC further filed its own

[90] In fact, DENC solicited interest for additional pipeline capacity necessary to meet anticipated incremental demand on its distribution system from all existing and proposed pipelines, including Transco and Atlantic Coast. Application at 3. In choosing Mountain Valley and the Southgate Project, DENC cited numerous reasons, including transportation cost, supply cost, supply diversity, reliability and resiliency, and operational efficiencies. *Id.* at 7.

[91] *See Motion for Leave to Answer, Answer, and Motion to Lodge of Public Service Company of North Carolina, Inc*., Docket No. CP19-14-000 (Dec. 28, 2018) ("*Answer*"). In the *Answer*, DENC [PSNC] referenced its application before the NCUC seeking approval for compensation under the Southgate agreement wherein its stated various benefits the Southgate Project provides, including " access to MVP capacity, which constitutes the best-cost alternative available to satisfy the Company's long-term interstate capacity needs;" "increase reliability, resiliency and direct to low-cost natural gas produced in the Marcellus and Utica shale regions;" "contribute to optionality of natural gas supply sources;" and "allow PSNC to replace secondary-firm backhaul deliveries with primary forward-haul deliveries." *Answer* at 5.

[92] *See* Docket No. G-100, Sub 91, *Investigation Regarding Competitive Alternatives for Additional Natural Gas Service Agreements*. The NCUC approved the Southgate Project as beneficial to consumers in North Carolina, and authorized payment under the precedent agreement. *See* Order on Annual Review of Gas

response to comments on the DEIS stating that Transco has failed to explain how it could provide mainline capacity to serve DENC and never presented this new proposal until now and accordingly it is too late.[93] In short, the only comment Transco offered that is helpful to the Commission's alternatives analysis is that Atlantic Coast is not a viable alternative.[94]

Atlantic Coast comments that Commission staff "should ***not*** assume when considering [Atlantic Coast Pipeline ("ACP")] as an alternative to Southgate that ACP would deliver gas to PSNC at the same delivery points proposed by [Mountain Valley]."[95] According to Atlantic Coast, instead of delivering gas where the Southgate Project is proposed to deliver gas and where DENC wants it delivered, the Commission should consider an alternative where Atlantic Coast would deliver gas on the eastern side of DENC's system, reducing the length of pipeline necessary for Atlantic Coast to deliver gas to DENC. Atlantic Coast further suggests that in order to do so, it would need additional capacity to be added to the Piedmont intrastate pipeline.[96] But this is not what DENC has requested. Moreover, an Atlantic Coast alternative would not provide the crucial connection to East Tennessee that the Project will provide. Therefore, Atlantic Coast's new suggested system alternative would not meet the purpose of the Southgate Project, which, rather than simply delivering gas to DENC, specifically includes receiving gas from

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Costs, *In re Application of Public Service Company of North Carolina, Inc. for Annual Review of Gas Costs Pursuant to N.C.G.S. § 62-133.4(c) and Commission Rule R1-17(k)(6)*, Docket No. G-5, Sub 591 (NCUC Dec. 6, 2018); Order Accepting Affiliated Agreements for Filing and Permitting operation Thereunder Pursuant to N.C. Gen. Stat. § 62-153, *In re Application of Public Service Company of North Carolina, Inc. for Approval of Payment of Compensation Under a Service Agreement with Mountain Valley Pipeline, LLC*, Docket No. G-5, Sub 591 (NCUC Oct. 9, 2018) (attached to Mountain Valley's Application as Ex. Z-1).

[93] *See* DENC [PSNC] Response filed October 17, 2019 in Docket No. CP19-14-000.

[94] Transco Comments at 2, n.1.

[95] Atlantic Coast Comments at 2 (emphasis in original). Atlantic Coast's lead developer and largest equity owner is Dominion. As noted earlier, Dominion acquired the former PSNC Energy in January 2019, after PSNC Energy entered into the binding precedent agreement with Mountain Valley. DENC/PSNC and ACP are now affiliates. DENC/PSNC and Mountain Valley are not affiliates.

[96] Atlantic Coast Comments at 3.

the interconnection with the Mainline Facilities (on which DENC is a customer) and from the new interconnection with East Tennessee and delivering gas to two new delivery points on the DENC distribution system in Rockingham and Alamance Counties, North Carolina. Neither would this alternative meet the goal of diversifying the interstate pipeline market in North Carolina, as evident by the NCUC's recognition of the need for competitive pipeline alternatives, notwithstanding the fact that DENC had an existing commitment on ACP.[97]

More fundamentally, however, is that neither the Atlantic Coast alternative or the Transco alternative as put forward are real projects. While it may be appropriate to evaluate those "alternatives" under NEPA, the alternatives are hypothetical only, as neither pipeline company has proposed either "alternative" as a viable project. As the Commission recently explained in *Cheyenne Connector, LLC*, even if a potential alternative assessed under NEPA may present an environmental advantage, "NEPA does not require the Commission to certificate the most environmentally favorable alternative."[98] Based on comments from a competing pipeline company that its hypothetical system alternative provided less environmental impact over the proposed project, the Commission explained that the competing pipeline did not present a "viable system alternative" because that pipeline company did not have commitments from shippers or submit an application for an alternative project.[99] Further, while the Commission assessed the potential impacts from the hypothetical alternative project for NEPA purposes, it ultimately issued a certificate for

[97] *See Answer* (explaining DENC's 20-year precedent agreement with Atlantic Coast for 100,000 dth/d). Atlantic Coast itself "fully understands and appreciates" the need for "a new pipeline alternative to serve North Carolina." Atlantic Coast Comments at 2.
[98] *Cheyenne Connector, LLC*, 168 FERC ¶ 61,180, at P 107 (2019).
[99] *Id*. at 105.

the proposed project because, among other things, the benefits of the proposed project "outweigh the potential environmental benefits of the non-viable, hypothetical system alternative proffered by [the competitor]."[100] The same analysis applies here where the Commission is faced with Atlantic Coast's and Transco's non-viable alternatives.

In this case, while both hypothetical alternatives may be appropriate for Commission consideration under NEPA (and have been considered), neither alternative is a real, viable project that the Commission has the ability to consider under the Natural Gas Act ("NGA"). The NGA restricts Commission action to issue certificates to an "*applicant*" when it finds that the "*proposed . . . construction . . .* is or will be required by the present or future public convenience and necessity."[101] Neither Atlantic Coast nor Transco are applicants for these proposed alternatives as both pipelines require construction of additional facilities to serve DENC. Furthermore, neither company has filed applications or presented evidence that they have customer support for their alternatives.[102] Therefore, their hypothetical alternatives are not viable projects and remain exactly what they are—hypothetical.

F. The DEIS Sufficiently Analyzes Impacts to Environmental Justice Populations.

Some commenters assert that the DEIS failed to analyze adequately impacts to environmental justice communities.[103] According to the SELC, the DEIS does not analyze

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[100] *Id*. at 107.

[101] 15 U.S.C. § 717f(e) (emphasis added).

[102] Atlantic Coast purports not to question DENC's decision to contract with Mountain Valley, as opposed to Atlantic Coast, and states that the Commission "should not look behind precedent agreements to judge a pipeline customer's decision." Atlantic Coast Comments at 2.

[103] SELC Comments at 7-8. The NCDEQ also raises environmental justice concerns with respect to the possibility that DENC will have a small increase in the total bill amount to its customers as a result of the Southgate capacity. Comments at 8-10. This argument is outside the scope of NEPA and not one properly before this Commission but rather an issue that should be raised before the applicable state utility commission.

the health impacts that the Lambert Compressor Station would have on environmental justice populations.[104] However, SELC's comments essentially boil down to a disagreement with the DEIS's analysis of air quality impacts in the vicinity of the Lambert Compressor Station—not the DEIS's evaluation of environmental justice. The DEIS appropriately considered the principles of environmental justice and determined that the Southgate Project "would not have a disproportionately high and adverse environmental or human health impact on minority or low-income populations."[105]

Consistent with CEQ environmental justice guidance, the DEIS identified environmental justice communities by identifying census block groups with a specified minority population or household poverty rate.[106] The DEIS specifically identified two census block groups within one mile of the Lambert Compressor Station containing environmental justice populations.[107] SELC acknowledges these two populations in the DEIS, but asserts that the DEIS "does not assess the health impacts that the compressor station would have on these populations."[108] This is incorrect. The DEIS explains that although construction and operation of the compressor station "would result in long-term impacts on air quality," these impacts would not be significant because Mountain Valley would take steps to minimize dust during construction and potential operational emissions would be below the NAAQS, "which are designated to protect public health."[109] As a

[104] *Id.* at 7.
[105] DEIS at 4-138.
[106] *Id.* at 4-128 – 4-130. Executive Order 12898 requires federal agencies to identify adverse environmental or human health effects that are disproportionally higher on low-income and minority populations. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, Executive Order 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994). CEQ promulgated guidance to assist federal agencies in identifying these populations. CEQ, *Environmental Justice: Guidance Under the National Environmental Policy Act* (Dec. 10, 1997).
[107] DEIS at 4-131; *see also* SELC Comments at 7.
[108] SELC Comments at 7.
[109] DEIS at 4-131. Impacts on air quality are more fully discussed in Section 4.11 of the DEIS.

result, the Southgate Project "would not have significant adverse air quality impacts on the low-income or minority populations in the Project area."[110]

SELC's comments do not pertain to the DEIS's identification and discussion of environmental justice populations. Rather, their comments take issue with the DEIS's conclusions with respect to the Lambert Compressor Station's impacts on air quality generally.[111] However, the DEIS thoroughly evaluated impacts (including cumulative impacts) to air quality resulting from construction and operation of the Lambert Compressor Station, concluding that impacts would not be significant.[112] With respect to its NEPA obligations to determine whether the Project will have a "disproportionately high and adverse impact on low-income and predominantly minority communities," the DEIS satisfies this standard.[113] By concluding that impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to the general population, the DEIS appropriately concluded the Southgate Project would not have a "disproportionately high and adverse impact" on the two identified environmental justice populations.[114] The DEIS thus satisfies NEPA's goal of informed decisionmaking by recognizing and discussing the Southgate Project's impacts on environmental justice populations.

G. Commission Review of GHG Emissions for the Project Is Consistent with NEPA.

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[110] *Id.*

[111] SELC Comments at 7 (arguing that "existing evidence" indicates impacts surrounding compressor station "could be significant").

[112] *See* DEIS §§ 4.11, 4.13.2.9.

[113] *See Sierra Club*, 867 F.3d at 1368 (internal quotations and citation omitted).

[114] *Id.* at 1369 (noting that the Commission had concluded that the project at issue would not have a high and adverse impact on any population, "meaning, in the agency's view, that it could not have a *disproportionately* high and adverse impact on any population, marginalized or otherwise") (internal quotations and citation omitted). *See also id.* at 1370 (noting that EIS had "explained that the [compressor] station's noise and air-quality effects on these [environmental justice] locations were expected to remain within acceptable limits").

The DEIS properly provides an estimate of the GHG emissions associated with construction and operation of the Southgate Project, and concludes that impacts on air quality during construction and operation will not be significant.[115] Several commenters assert that the DEIS's analysis of GHG emissions is deficient because it does not address emissions associated with upstream production and downstream combustion of natural gas to be transported by the Southgate Project.[116] Commenters argue that the DEIS should include a quantitative estimate of both upstream and downstream GHG emissions associated with the Southgate Project.[117] For the reasons explained below, the DEIS's analysis of GHG emissions associated with construction and operation of the Southgate Project fully complies with NEPA.

CEQ regulations implementing NEPA require consideration of direct and indirect effects of a proposed project.[118] Indirect effects are "caused by the [project] and are later in time or farther removed in distance, but are still reasonably foreseeable."[119] Commenters assert that the DEIS failed to estimate potential indirect downstream GHG emissions associated with natural gas to be transported by the Southgate Project.[120] According to one

[115] DEIS at 4-193 – 4-195, tbls. 4.11-4 and 4.11-5.
[116] *See* AMA Comments at 11-12; Motion to Intervene on Behalf of Food and Water Watch and Comments in Opposition to DEIS, Docket No. CP19-14-000, at 4 (Sept. 16, 2019) ("Food and Water Watch Comments"); NCDEQ Comments at 5-6; Institute for Policy Integrity at New York University School of Law, Comments on Failure to Quantify and Monetize Greenhouse Gas Emissions in the Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000, at 2, 4 (Sept. 16, 2019) ("NYU Law Comments").
[117] Some commenters further assert that the DEIS should also assess the significance of GHG emissions using available methodologies, including the Social Cost of Carbon. *See* AMA Comments at 18-23; NCDEQ Comments at 5; NYU Law Comments at 1-2. The DEIS properly explains (at 4-269) that there is not a "universally accepted methodology" "to determine the incremental impact of individual projects." Nothing more is required. *See Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *2 (noting that Commission provided reasons for declining to use Social Cost of Carbon tool, and holding that nothing more "is required for NEPA purposes").
[118] 40 C.F.R. § 1502.16(b).
[119] *Id.* § 1508.8(b).
[120] *See* AMA Comments at 13-15; Food and Water Watch Comments at 1-2; NCDEQ Comments at 5-6; NYU Law Comments at 1.

commenter, the specific end-use of the gas is irrelevant, because the Commission can provide a "full-burn" estimate of GHG emissions.[121] Ignoring the fact that the Commission has repeatedly explained why the "full-burn" estimate of GHG emissions is not accurate,[122] the Commission has already done what commenters request—provided an "upper bound" estimate of emissions associated with the Mainline Facilities. In analyzing the environmental impacts of the Mainline Facilities, the Commission conservatively estimated the full combustion of the Mainline Facilities' total volume of natural gas transportation capacity.[123] As Mountain Valley explained in Resource Report 9 submitted with its Application,[124] and in its comments on the DEIS submitted on September 13, 2019, it is unnecessary for the Commission to provide an estimate of the upper-bound GHG emissions resulting from end-use combustion for the Southgate Project. This is because potential downstream emissions associated with the Southgate Project have already been accounted for in the Commission's upper-bound estimate for the Mainline Facilities.

To clarify further, Commission approval of the Southgate Project will not cause any incremental downstream GHG emissions. As reflected in its precedent agreement, DENC expects to source more than 80 percent of the natural gas to be transported on the Southgate Project from the Mainline Facilities, and the remaining amount from East Tennessee's existing pipeline system.[125] Accordingly, there is no incremental pipeline capacity, and therefore no additional gas use, attributable to the Project. Downstream GHG emissions were already considered as part of the Commission's evaluation and approval of

[121] AMA Comments at 14-15.
[122] *See, e.g.*, Certificate Order, 161 FERC ¶ 61,043 at P 293.
[123] *Id.*
[124] *Mountain Valley Pipeline, LLC*, Application, Resource Report 9 at 9-24 (Nov. 6, 2018).
[125] Resource Report 9 at 9-24 (noting that natural gas will be received "at either the Mountain Valley Pipeline interconnection near Chatham, Virginia or from East Tennessee at the LN 3600 Interconnect near Eden, North Carolina").

the Mainline Facilities. The Project simply represents different future utilization of the natural gas transported on the Mainline Facilities or East Tennessee.[126] Thus, a quantitative estimate of GHG emissions for the Southgate Project is not only unnecessary, but would result in an inaccurate double-counting of impacts. In short, commenters simply fail to explain how natural gas can be consumed twice.

Similarly, the Commission is not required to assess alleged impacts the Project could have on upstream natural gas production "induced by" the Southgate Project, as asserted by some commenters.[127] As explained above, the Southgate Project is not transporting additional volumes of natural gas. Rather, it is an extension of the MVP

[126] The expected deliveries of natural gas from East Tennessee into the Southgate Project do not require an expansion project on the East Tennessee system.
[127] *See* AMA Comments at 11-12; Food and Water Watch Comments at 1-2.

Mainline Facilities and cannot, therefore, be said to be "inducing" additional natural gas production.

IV.
CONCLUSION

Mountain Valley requests that the Commission accept this Answer to comments filed in this proceeding.

Respectfully submitted,

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Dated: October 21, 2019

EXHIBIT 1

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010 (2019), I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 21st day of October 2019.

/s/ *Claire M. Brennan*

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MVP Southgate Project

Attachment 2

Response to Comments on the Draft Environmental Impact Statement dated September 16, 2019

October 2019

DEIS Comments from NCDEQ Division of Energy, Minerals, and Land Resources (DEMLR)

2.3 Land Requirements.

DEMLR Comment:
149.8 acres of contract yards. It is unclear from the DEIS if the contractor yards are land uses in keeping with utility line construction or if they are intended to be long term/permanent laydown areas that are to be used for utility maintenance or future expansion, going forward.

Post construction storm water control measures may be appropriate or required if these sites are to be used long term. No detail was provided on how contractor yard restoration would occur once work is completed. No details, criteria, schedules or detail on post deconstruction inspections were provided. No information was provided to address efforts to abate soil compaction, enhance infiltration, replanting efforts, or identify unauthorized uses, post construction.

MVP Response:
The proposed contractor yards are only intended to last through the completion of the Project's construction and restoration. Contractor yards will be stripped of topsoil and stockpiled. Upon Project completion, the yards will be seeded and stabilized. They will be monitored for at least two growing seasons following the completion of the Project.

DEMLR Comment:
62.4 acres of access roads. DEIS does not clearly explain MVP's criteria for temporary roads. Many different type of land uses install "temporary roads." However, "temporary roads" are often or at least periodically put back into service for use. This commonly occurs in forestry, agriculture and industrial settings. Thereby, the roads are not truly temporary, rather the uses are episodic and fallow roads often remain as an ongoing source of sedimentation. The DEIS does not explain how MVP will ensure the roads are truly temporary and will not remain sources off site sedimentation. No details, criteria, schedules or detail on post deconstruction inspections were provided. No information was provided to address efforts to abate soil compaction, enhance infiltration, replanting efforts, or identify and abate unauthorized uses, post construction.

MVP Response:
The proposed temporary access roads are only intended to last through the completion of the Project's construction and restoration. The Project tried to utilize existing roads to every extent practical in an effort to minimize environmental impacts. Where new access roads had to be created, every effort will be taken to return to pre-existing condition unless otherwise specified by a landowner. They will be monitored for at least two growing seasons following the completion of the Project.

DEMLR Comment:
Additional Temporary Workspace - 184.9 acres in NC. The DEIS includes no detail on restoration. No information is provided detailing revegetation and abating soil compaction to address increase storm water runoff and decrease infiltration, post construction.

MVP Response:
The project will be considered stabilized when "a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion". Full restoration details, outlined in the project's erosion and sediment control plan, outline the steps necessary to ensure the project is constructed to final grade, has a permanent stabilization cover, has permanent post-construction devices installed, and meets the

definition of stabilized so that temporary ECDs may be removed. These details are included in the ESC plans so that the steps may be reviewed and approved by the appropriate state agency and comply with the state's general construction permit

Stormwater plans will be submitted to the NCDEQ in the 4th quarter of 2019 for review.

2.4.1.2 Clearing and Grading.

DEMLR Comment:
DEIS does not detail how areas beyond construction corridor would be identified to ensure work/land disturbance and impacts to waters do not occur beyond the footprint of the approved construction corridor.

MVP Response:
Construction activities will be limited to the approved limits of disturbance. No additional ground disturbance will be allowed without applicable state and FERC approval.

In all (or most) cases, the Additional Temporary Work Spaces (ATWS) are enclosed with perimeter controls - silt/sediment fence, super silt fence or clean water diversion dike - for erosion & sediment control purposes. In cases where there is none needed, the boundaries will be staked and flagged with safety fence, tape, etc. to ensure the boundary is established so no work occurs beyond the permitted project LOD.

2.4.1.3 Trenching.

DEMLR Comment:
The DEIS states "excess rock would be trucked to approved disposal areas." However, the DEIS does not detail how this approval process will occur and be managed to ensure impacts to waters, wetlands, or need for additional erosion control measures would not occur.

MVP Response:
A record of each load that is taken to an approved landfill or permitted storage/disposal site will be kept in the SWPPP or other on-site documentation. Areas where the rock/stone is to remain are recorded in the landowner agreement or the commitments list. Redlines on the erosion and sedimentation control plans may also be necessary depending on the scope or extent of stone remaining. Unless specifically allowed through additional state and Federal permitting, no impacts to aquatic resources will occur through the placement of excess rock.

2.4.1.5 Lowering-in and Backfilling.

DEMLR Comment:
The DEIS states "The pipeline would then be lowered into the trench by side-boom tractors. Trench breakers (such as sand bags or foam) would then be installed in the trench on slopes at specified intervals to prevent subsurface water movement along the pipeline." The DEIS includes no detail, requirements or construction criteria} was detailed on installation, construction or specifics of when anti-seep/trench breakers are to be used. Detail is not provided as to how MVP will ensure contractors understand when to install these measures. Failure to do properly do so could result in impacts to waters and wetlands.

The DEIS states "first 12 inches at the bottom of the trench above the pipe would be clean fill, absent of rocks. Limestone dust may be brought in and used as padding material only when other local suitable fill is unavailable." In this section, the DEIS fails to clearly state that suitable material will not consist of soils contaminated with oil, petroleum, hazardous materials, or coal combustion residuals.

MVP Response:
Use of trench breakers/anti-seep collars will be further within the landslide mitigation plans and narrative of the erosion and sediment plans which have started the review process. Mountain Valley will use existing soils to recompact the trench and therefore existing soils should be clean. Any contaminated materials resulting from construction activities will be isolated and removed from the project footprint and disposed of per the requirements of the state;

The location of trench breakers is explicitly shown on the plan and profile sheets as well as in the general construction sequence of the erosion & sediment control plans. Further specifics are presented in the construction typical details such as spacing, cross section views, and composition of trench breakers. MVP will also ensure the first 12 inches at the bottom of the trench are free of contamination. Language clearly stating these requirements was also added to Erosion and Sediment Control Plans, General Construction Narrative.

2.4.1.8 Cleanup and Restoration.

DEMLR Comment:
DEIS states that "excess rock/stone would be disposed of within the construction right-of-way with landowner approval or at an approved landfill." Based on this cleanup and restoration approach, the DEIS does not address how this process will occur and be managed to ensure impacts to waters, wetlands, or the need for additional erosion control measures would not occur.

MVP Response:
Application of excess rock/stone would be disposed of within the right-of-way in a stabilized manner and only within upland areas.

A record of each load that is taken to an approved landfill or permitted storage/disposal site will be kept in the SWPPP or other on-site documentation. In areas where the rock/stone is to remain, included in landowner approval is acknowledgement that additional erosion and sediment control may be needed, as well as permanent stormwater management, to be handled in Post-Construction/Restoration Plans. Unless specifically allowed through additional state and Federal permitting, no impacts to aquatic resources will occur through the placement of excess rock.

2.4.2.1 Waterbody Crossing.

DEMLR Comment:
The DEIS states that "Trench spoil would be placed on the banks above the high water mark for use during backfilling. In some cases, the pipeline would be coated with concrete for negative buoyancy." The DEIS does not explain what measures will be taken to prevent direct contact between uncured or curing concrete and waters of the state. The DEIS does not detail how inadvertent contact of uncured concrete will be managed to ensure that discharges to waters of the state do not occur.

MVP Response:
No concrete will be cured along the right-of-way.

Staging areas to be located above the high water mark and enclosed with perimeter erosion and sediment control, as indicated in the ESC Plans. The top trench material within the stream is to be separated and stored separately from the deeper trench material so that the stream bed can be restored to reflect original conditions. Any use of concrete would be outside of the stream and in a protected area to ensure to material was able to enter the water. Additionally, a wash-out pit will be implemented and materials disposed of properly should concrete need to be mixed on-site.

The location of trench breakers is explicitly shown on the plan and profile sheets as well as in the general construction sequence of the erosion & sediment control plans. Further specifics are presented in the construction typical details such as spacing, cross section views, and composition of trench breakers.

2.4.2.2 Wetland Crossings.

DEMLR Comment:
The DEIS states that "After the pipeline sinks into position, trench breakers are installed where necessary to prevent the subsurface drainage of water out of the wetland." Details are not included to describe how MVP will ensure contractors understand when to install these measures. Failure to do this properly could result in impacts to waters and wetlands.

MVP Response:
Engineers will have determined where trench breakers need to be installed and they will be included in the erosion and sediment controls designs to be approved by the DEMLR.

2.4.2.5 Foreign Utilities.

DEMLR Comment:
The DEIS does not clearly address how MVP plans to respond to impacts to potable waterlines, reuse lines, sewer lines (both gravity lines and force mains), and other fuel supply lines that may be encountered along the Project route. It is imperative that MVP have contacts with all local governments and utilities along the Project route and have a firm understanding of their reporting, remediation, and any other requirements. This was not addressed in the DEIS.

MVP Response:
As described in the Project's November 2018 Resource Report 11, Section 11.4.9 Utility Protection, prior to construction, existing utility lines and other sensitive resources identified in easement agreements or by federal and state agencies, will be located and marked to prevent accidental damage during pipeline construction.

The Project’s contractors will contact the one-call system to verify and mark utilities along the Project workspaces to minimize the potential for damage to other buried facilities in the area. Where there is a question as to the location of utilities (i.e. water, cable, oil, gas, product, and sewer lines), they will be located by field instrumentation and/or test pits.

4.1.4.6 Shallow Bedrock and Blasting.

DEMLR Comment:
The DEIS states that "As outlined in the General Blasting Plan, Mountain Valley would:

- use seismograph equipment to monitor the velocity of the blasts at select monitoring locations including closest adjacent facilities;
- use excess rock from blasting to restore the right-of-way, placed as per landowner agreements, or hauled off-site to an approved disposal site."

The DEIS fails to provide specific detail on actual blasting procedures, clearly whether and when seismographs will be used to monitor ground vibration and noise levels.

The DEIS does not detail how excess rock disposal approval process will take place and be managed to ensure impacts to waters, wetlands, or need for additional erosion control measures would not occur.

MVP Response:
The Projects Blasting Plan is included as Attachment 3. Bedrock will be placed aside in an area managed by erosion controls and used as backfill where possible.

4.1.4.7 Flooding.

DEMLR Comment:
The DEIS explains that mitigation measures may include using concrete coating, gravel filled blankets, or concrete weights on the pipeline to maintain negative buoyancy.

The DEIS does not explain what measures will be taken to prevent direct contact between uncured or curing concrete and water of the state. Furthermore, the DEIS does not detail how inadvertent contacts of uncured concrete will be managed to ensure that discharge to waters of the state do not occur.

MVP Response:
No concrete will be poured along the Project's right-of-way.

4.3.2.6 Surface Water Appropriations.

Hydrostatic Test Water
DEMLR Comment:
The hydrostatic test water would be discharged through sediment filters in vegetated uplands away from waterbodies and wetlands. MVP did not detail in the DEIS how it will ensure discharges occur at non-erosive velocities. The DEIS does not include or propose sampling to determine or demonstrate if protective coatings, sediment, turbidity or other constituents would be discharged with test water.

MVP Response:
The project is working with various federal and state agencies, including the DEQ, to determine the appropriate discharge locations and methods. In general, discharges will occur in well-vegetated areas within structures to control for sediment runoff.

The holding tanks will be regulated by valves, for which product-specifics can be provided to ensure a non-erosive discharge to adjacent areas is achieved. That said, field conditions will be assessed at each

selected discharge location to determine the appropriate energy dissipation device, including but not limited to, a combination of filter bags, compost filter sock, and/or sediment (silt) fence, in order to enhance the protection of downstream properties and receiving channels. Although no hydrostatic discharge permit is required, MVP will conduct sampling to ensure that discharges meet regulatory thresholds. Additionally, drilling fluid will not be discharged to the ground but rather hauled away and disposed of at an approved and properly permitted waste facility.

Horizontal Drilling Water

DEMLR Comment:

The HDD process requires water to be added to a bentonite clay mixture to create drilling fluid. The disposal of the drilling fluid is not adequately detailed in the DEIS. "All drilling fluid would be disposed of at an approved facility or recycled in an approved manner in accordance with the HDD Contingency Plan. Mountain Valley would separate all water from HDD equipment washing areas from wetlands or waterbodies by drainage barriers to prevent any runoff entry."

MVP Response:

See Attachment 4 for the HDD Contingency Plan.

2.4.2.6 Agriculture Lands.

DEMLR Comment:

The DEIS explains that other mitigation measures in agricultural lands would include relief from compaction and removal of rocks from topsoil.

MVP Response:

Prior to seeding, the contractor will disc areas to a depth of 4-6" to facilitate revegetation. Discing will be performed on subsoils to a depth of 4-6" and again following tops oiling. MVP will also remove as many rocks from the topsoil as practical. Compaction testing will also be completed, as necessary.

4.1.2 Mineral Resources.

DEMLR Comment:

The DEIS states that "The East Alamance Quarry is a crushed stone aggregates operation in Haw River and is owned and operated by Martin Marietta Materials, Inc. (North Carolina Department of Environmental and Natural Resources Permit No. 01-08) on 600 acres of land, 375 acres of which are bound under Permit No. 01-08. This permit also provides limitations on blasting practices at the quarry, restricting maximum peak particle velocities to 1.0 inch per second. The Project alignment would cross parcels owned by the East Alamance Quarry for approximately 230 feet, near MP 67. Mountain Valley obtained public information that indicates that the operator has not yet filed for a mining permit on the parcel in question (NC-AL-128); however, through discussions with the operator, it was identified that future mining operations may be completed on this parcel. Mountain Valley therefore proactively rerouted the pipeline on this parcel in an attempt to minimize impacts on any future expansion of the East Alamance Quarry. Currently, the Project alignment is approximately 430 feet from disturbed areas at MP 66.7 and more than 1,200 feet from disturbed areas at MP 67. Mountain Valley has committed to working with the East Alamance Quarry regarding landowner easement agreements to minimize inconvenience and impact to the quarry. Based on these factors, we conclude that the Project would not significantly impact or be affected by the East Alamance Quarry." The DEIS explains that the project alignment would cross parcels owned by the East Alamance Quarry for approximately 230 feet. A permit modification was submitted to DEMLR

on April 15, 2019, by Martin Marietta Materials, Inc. for this mine. This modification has not yet been approved by the Division and it did not address this MVP alignment crossing.

The modification plans submitted by Martin Marietta Materials will either need to release this area from the permit or Marin Marietta Materials will need to request a modification for its mining permit. Further, the description in the DEIS, as included above, does not accurately depict/address blasting permit conditions as set forth in the East Alamance mining permit 01-08, which includes seismic monitoring.

MVP Response:
The Project has eliminated all expected impacts to the East Alamance Quarry by rerouting the pipeline off of the Martin Marietta-owned properties and providing a significant buffer to the property line. The current pipeline route will be provided in the Project's Supplemental Filing to be filed October 2019. As the Project understands, the quarry's April 25, 2019 permit modification is within the existing permit boundary, which does not change the Project's analysis.

4.6.5.3 General Fisheries and Aquatic Resources Impacts and Mitigation.

DEMLR Comment:
In the DEIS, Mountain Valley states that it "would minimize impacts from water withdrawals by adhering to the measures in Mountain Valley's Procedures and E&SC Plan. The measures outlined in these plans include preventing water withdrawal from and discharges into exceptional value waters or waters that provide habitat for federally listed threatened and endangered species, unless approved by applicable resource and permitting agencies; screening and positioning water intakes at the water surface to minimize the entrainment of fish and other biota; maintaining adequate flow rates to protect aquatic species; placing water pumps in secondary containment devices to minimize the potential for fuel spills or leaks; regulating discharge rates; and using energy dissipating devices and sediment barriers to prevent erosion. Mountain Valley would obtain and comply with all state water withdrawal and discharge permits." This is not typically required as a part of the state Erosion and Sedimentation Control Plan approval process, and oversight and management of this activity needs to be revisited by MVP.

MVP Response:
MVP is coordinating with the USFWS and NC Wildlife Resources Commission (NCWRC) with regards to freshwater withdrawals. Any applicable ground disturbance from these activities will be captured and reflected in the erosion and sediment control plans provided to NC DEQ, otherwise all other coordination and specifics will be directed to USFWS and NCWRC.

4.8.1.1 Pipeline Facilities. Agriculture Lands.

DEMLR Comment:
The DEIS explains that "To avoid and minimize impacts on agricultural lands, Mountain Valley would implement numerous measures as identified in FERC's Plan including measures that address soil segregation, soil compaction, and irrigation systems and would adhere to all other applicable federal, state, and local permit requirements." The DEIS does not clearly detail how soil compaction will be addressed or abated.

MVP Response:
Prior to seeding, the contractor will disc areas to a depth of 4-6" to facilitate revegetation. Discing will be performed on subsoils to a depth of 4-6" and again following topsoiling. MVP will also remove as many rocks from the topsoil as practical. Compaction testing will also be completed, as necessary.

DEIS Comments from NCDEQ Division of Water Resources (DWR)

4.3.2.2 Surface Water Crossings.

NCDWR Comment:
The DEIS does not explicitly provide that MVP will comply with all the requirements in the state 404 permit and 401 water quality certification, in addition to complying with other pertinent federal and state requirements.

MVP Response:
The Project continues to work diligently with the state of North Carolina to comply with all pertinent federal and state requirements, including the 401 Water Quality Certification.

4.3.2.3 Contaminated Sediments and Impaired Waters.

NCDWR Comment:
The DEIS does not specifically address whether the Project will cross any watersheds draining to impaired waters and if so, what additional measures will be employed to protect these watersheds.

MVP Response:
Any TMDL watersheds crossed by the project footprint will adhere to an enhanced inspection schedule. Per the NCG01 and TMDL watershed requirements, projects must complete inspections twice within 7 days. MVP will continue to coordinate with the NCDEQ in development of the erosion and sediment control plans to ensure these areas are properly identified along with the enhanced inspection schedule (if applicable).

4.3.2.4 Federal and State Designated Use and Exceptional Waters.

NCDWR Comment:
The DEIS provides that "North Carolina administers a river designation intended to protect specific rivers with outstanding natural, scenic, educational, recreational, geologic, fish and wildlife, historic, scientific, cultural or other values. The Project does not cross any North Carolina rivers with these designations." DEQ repeats its request made in our comment on Draft Resource Report 2 that MVP address whether the Project crosses the watershed of any of these rivers, and if so, describe the additional measures MVP will take to protect these valuable resources.

MVP Response:
There are four rivers in North Carolina designated with one or more outstanding natural, scenic, or recreational values (https://www.ncparks.gov/more-about-us/about-state-parks-system/components, January 2019). The four rivers are the Horsepasture, Linville, Lumber, and New rivers. The Project is not located within the watershed of these four rivers."

The Project will protect all water resources affected by the Project as described in its November 2018 Resource Report 2, Section 2.3.6 Construction and Operation Impacts and Mitigation.

NCDWR Comment:
The DEIS provides that the Project will cross WS-II, WS-IV, Nutrient Sensitive Waters (NSW), and HQW, but there is no discussion of what measures MVP will take to avoid those crossings or what additional measures will be employed within the watershed of those classified waters to ensure they are protected. In particular, the Department calls attention to the WS-11 watershed (the entire watershed not just the "watershed" designated in the WS rules for development).

DEQ repeats its request made in our comment on DRR2 that MVP address specific alternatives analysis in addition to the general discussion of these waterbodies in the DEIS.

MVP Response:
"The Project crosses the following WS-II, WS-IV, NSW, HQW waters in North Carolina: Giles Creek (MP 48.7), Stony Creek (MP 63.6), Deep Creek (MP 64.1RR), and Boyds Creek (MP 67.6). Giles and Boyds creek will be crossed using the open cut method while Stony and Deep creek will be crossed using the horizontal directional drill and conventional bore methods, respectively.

These construction methods are described in the Project's November 2018, Resource Report, Section 1.4.1.1 Standard Construction and Restoration Techniques and the waterbodies and measures to protect them during construction are presented in the Project's November 2018 Resource Report 2, Section 2.3.6 Construction and Operation Impacts and Mitigation.

Additional measures the Project will adhere to during construction to minimize impacts within all watersheds are included in the Project's Upland Erosion Control, Revegetation, and Maintenance Plan (""Plan"") and Wetland and Waterbody Construction and Mitigation Procedures(""Procedures"") and the Project's Project-specific Erosion and Sediment Control Plan (""E&SCP"") included in the October 2019 FERC filing. **"**

4.3.2. 7 General Impacts and Mitigation on Surface Water.

NCDWR Comment:
The DEIS states that hydrostatic test water would be discharged over vegetated land surfaces and the discharge rate would be regulated using valves and energy dissipation devices. DEQ requests a detailed evaluation of discharge rates be included in the final EIS.

MVP Response:
The holding tanks will be regulated by valves, for which product-specifics can be provided to ensure a non-erosive discharge to adjacent areas is achieved. That said, field conditions will be assessed at each selected discharge location to determine the appropriate energy dissipation device, including but not limited to, a combination of filter bags, compost filter sock, and/or sediment (silt) fence, in order to enhance the protection of downstream properties and receiving channels.

MVP Southgate Project

Attachment 3

General Blasting Plan

October 2019

MVP Southgate Project

Docket No. CP19-14-000

General Blasting Plan

Revised March 2019

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1 INTRODUCTION

The MVP Southgate Project General Blasting Plan (Plan) outlines the procedures and safety measures that the contractor(s) will adhere to while implementing blasting activities during the construction of the MVP Southgate Project. This Plan addresses blasting for the proposed pipeline route alignment and associated Project facilities filed with the Federal Energy Regulatory Commission (FERC or commission).

Mountain Valley Pipeline, LLC (Mountain Valley) is seeking a certificate of public convenience and necessity (certificate) from FERC pursuant to section 7C of the Natural Gas Act to construct and operate the MVP Southgate Project (Project). The Project will be located in Pittsylvania County, Virginia and Rockingham and Alamance Counties, North Carolina. Mountain Valley proposes to construct approximately 73 miles of natural gas pipeline (known as the H-650 pipeline) to provide timely, cost-effective access to new natural gas supplies to meet the growing needs of natural gas users in the south eastern United States. The approximately 73 mile pipeline will be constructed of 24-inch diameter steel and welded pipe starting at milepost 0.00 and ending a milepost 31.0 at which point the pipeline diameter will be reduced to 16-inch diameter steel and welded pipe starting at milepost 31.0 and ending at milepost 73.11.

This plan includes a brief description of the pipeline alignment and overall physio geographic setting and bedrock geology in the vicinity of the Project. Information on shallow bedrock soils and bedrock outcroppings is taken from the Project's Resource Report 6 – Geological Resources. A map depicts the location of the Project's route is provided in Figure 1.2-1 Project overview Resource Report 1- General Project Description.

Information for blast and rip characteristics of the bedrock may be elevated, at least in a general sense, and applied toward an appropriate bedrock excavating method. The hard and intact nature of the un-weathered bedrock may possibly be removed by ripping or mechanical means.

Other geologic features may control the effects of blasting, rock fabric, or the arrangement of minerals determines intrinsic rock stressing, and thus influence rock excavation, joint spacing, bedding, and foliation also influence rock excavation.

2 PROJECT ALIGNMENT

The proposed FERC jurisdictional facilities described in this plan will consist of approximately 31.0 miles of 24-inch diameter pipeline and 42.1 miles of 16-inch diameter pipeline for a pipeline length of 73.1 miles; installing one new compressor station; aboveground sites for interconnections; main line block valves; launchers and receivers; control systems; and other facilities, as further described in Resource Report 1 - General Project Description.

The proposed pipeline, compressor stations, and interconnect facilities are summarized below:

- **Pipeline – Facilities would include:** Installation of approximately 73 miles of 24-inch and 16-inch diameter pipeline with a 1,440 pounds per square inch gauge (psig) maximum allowable operating pressure (MAOP), with portions of the pipeline paralleling existing buried natural gas pipelines. The pipeline will be located in the Virginia County of Pittsylvania and the North Carolina Counties of Rockingham and Alamance. The proposed pipeline will extend from the existing Mountain Valley Pipeline in Pittsylvania County, Virginia to its terminal at the T-21 Haw River Interconnect in Alamance County, North Carolina.

- **Compression** – The project will consist of the construction of one new compressor station, totaling approximately 28,915 horsepower of new compression.

- **Interconnections** – The Project will have a total of four (4) interconnections at Lambert Interconnect in Pittsylvania County, Virginia; LN 3600 Interconnect in Rockingham County, North Carolina; T-15 Dan River Interconnect in Rockingham County, North Carolina; and T-21 Haw River Interconnect in Alamance County, North Carolina.

3 GEOLOGIC SETTING

The proposed Project route begins in Pittsylvania County, Virginia and proceeds in a southeasterly direction through one Virginia county into North Carolina County of Rockingham and at the Dan River, the route turns southeasterly through the remainder of Rockingham county into Alamance County, North Carolina to the T-21 Haw River interconnect. Along the proposed project route, topography ranges from 470 to 880 feet above mean sea level (amsl) and crosses over several synclines and anticlines, as well as mineral resources that are discussed in detail by Resource Report 6-Geological Resources.

3.1 Regional Physiographic Setting

The proposed Project is located within the Piedmont Uploads Section of the Piedmont Physiographic Province. The project's physiographic settings discussed in detail by Resource Report 6-Section 6.2.1

3.2 Regional Geology

The Project will traverse geology of numerous timeframes and rock types, as discussed in detail in Resource Report 6 – Table 6-B-2 in Resource Report 6.

3.3 Active Faults

The Project alignment was evaluated for the presence of Quaternary-age faulting and the potential for ground movement and failure. The findings of the evaluation are discussed in detail in Resource Report 6–Section 6.5.

3.4 Areas of Shallow Bedrock

The pipeline will be installed to allow a minimum cover of 36 inches in areas of shallow bedrock. Therefore, the proposed Project area was evaluated for areas where bedrock might be encountered above a depth of 80 inches (Resource Report 6 - Appendix A Figure 6-13).

Areas where shallow bedrock may be encountered are discussed in detail in Resource Report 6 – Section 6.2 and Resource Report 7 – Appendix 7-A.

Where un-rippable subsurface rock is encountered, approved alternative methods of excavation will first be explored including: rock trenching machines, rock saws, hydraulic rams, jack hammers, blasting, etc. The alternative method to be used will be dependent on the proximity to: structures, pipelines, wells, cables, water resources, etc., and the capabilities of the alternative excavation method. Should blasting for pipeline grade or trench excavation or site development be necessary, care will be taken to prevent damage to underground structures (e.g., cables, conduits, and pipelines) or to springs, water wells, or other water sources. Blasting mats or padding will be used as necessary to prevent the scattering of loose rock (fly-rock). All blasting will be conducted during daylight hours and will not begin until occupants of nearby buildings, stores, residences, places of business, and farms have been notified. Where competent bedrock occurs in the stream bed, blasting may be used to reduce bedrock, so the trench can be excavated. Specific locations requiring blasting will be determined in the field, based on the limitations of the mechanical excavation equipment.

3.5 Mineral Resources

Mineral resources, quarries, and other mineral extraction along and within the proposed route of the pipeline and its related facilities are discussed in detail in Resource Report 6 – Section 6.4

No blasting is foreseen to occur within the limits of active mining areas or past mining areas, both surface and deep.

4 BLASTING SPECIFICATIONS

Blasting for pipeline facilities grade or trench excavation, compressor station and interconnect site development will be considered only after all other reasonable means of excavation have been evaluated and determined to be unlikely to achieve the required results. MVP may specify locations (foreign line crossings, nearby structures, etc.) where consolidated rock will be removed by approved mechanical equipment, such as rock trenching machines, rock saws, hydraulic rams, or jack hammers, instead of blasting. Areas where blasting may be required will be surveyed for features, such as Karst terrain, structures, utilities, and wells. The pre-construction condition of human-occupied buildings will be documented. Occupied buildings and their condition within 150 feet of the blasting area will be documented as to their pre-blast condition, as set forth in Appendix A - Pre-Blast Survey, and their condition after blasting, as set forth in Appendix E - Post-Blast Survey. MVP will provide verbal notification, followed by written documentation, to the buildings' occupant(s) of any blasting activity during both pre-construction and post-construction within 150 feet of a blast location.

If blasting is conducted within 150 feet of an active water well, as necessary, The Project will offer pre- and post-construction quality and yield testing for all water wells and water supple springs located within 150 feet of construction workspaces. Landowners will be contacted by an MVP representative, and a qualified independent contractor will conduct the testing. Wells within 150 feet of proposed Project work areas are tabulated in Resource Report 2 - Water Use and Quality.

MVP will evaluate, on a timely basis, landowner complaints regarding damage resulting from blasting to wells, homes, or outbuildings. If the damage is substantiated, MVP will negotiate a settlement with the landowner that may include repair or replacement.

Before any blasting occurs, Contractor will complete a project/site-specific blasting plan and provide it to MVP for review. No blasting shall be done without prior approval of MVP. In no event shall explosives be used where, in the opinion of MVP, such use will endanger existing facilities and/or structures. The Contractor shall obtain MVP approval, and provide forty-eight (48) hours' notice prior to the use of any explosives. MVP will provide at least a 24-hour notice to occupants of nearby (within 150 feet of blasting area) buildings, stores, residences, businesses, farms, and other occupied areas prior to initiating blasting operations. These notices will be verbal, followed by written documentation of the 24-hour notice.

4.1 Specifications

Blasting shall adhere to the following federal, state, county, township, local, and MVP standards and regulations. These standards and regulations are to be considered as the minimum requirements. Should there be a conflict between jurisdictions, standards, and regulations, the most stringent jurisdictions, standards, and regulations shall be followed.

These blasting requirements for the MVP Project are as follows:

- MVP Project, Resource Report 6 - Geological Resources, Docket No. PF18- 4-000.
- MVP, Design and Construction Manual, Design Standard, Pipeline, 4.11 Blasting Proximate to Buried Pipelines.

- MVP, Design and Construction Manual, Design Standard, Pipeline, 4.17 Blasting Activities During Construction.
- 29 CFR 1926 Subpart U – Blasting and the Use ofExplosives.
- 27 CFR 555 Subpart K, U. S. Bureau of Alcohol, Tobacco, andFirearms.
- 30 CFR 816.68 Mine Safety and Health Administration(MSHA).
- 49 CFR Part 192 USDOT.
- 27 CFR Part 55.
- 30 CFR '715.19.
- National Fire Protection Association 495.
- U. S. Bureau of Mines Report of Investigations 8507.
- Virginia 4 VAC25-130-816.11, 4 VAC25-130-816.64, 4 VAC25-110-210, and 3 VAC25-150-250.
- North Carolina Chapter 33 Explosives and Fireworks 2006 North Carolina State Fire Prevention Code (Fire Code).

5 PRE-BLAST INSPECTIONS

As required by Resource Report 6 – Geological Resources, MVP shall conduct pre- blast surveys, with landowner permission, to assess the conditions of structures, wells, springs, and utilities within 150 feet of the proposed construction ROW. Should local or state ordinances require inspections in excess of 150 feet from the work, the local or state ordinances shall prevail. The survey will include, at a minimum:

- Informal discussions to familiarize the adjacent property owners with blasting effects and planned precautions to be taken on this project;
- Determination of the existence and location of site-specific structures, utilities, septic systems, and wells;
- Detailed examination, photographs, and/or video records of adjacent structures and utilities; and
- Detailed mapping and measurement of large cracks, crack patterns, and other evidence of structural distress.

The results will be summarized in a Pre-Blast Condition Report that will include photographs and be completed prior to the commencement of blasting. The pre-blast conditions will be documented with the information outlined by “Pre-Blast Survey, MVP Project”. This Pre-Blast Survey Form is considered the minimum information needed. Appendix A presents the Pre-Blast Survey Form. The completion of the Pre-Blast Survey Form is in addition to all other local, county, township, state, or federal reporting/survey data collection and reports.

6 MONITORING OF BLASTING ACTIVITIES

During blasting, MVP contractors will take precautions to minimize damage to adjacent areas and structures. Precautions include:

- Dissemination of blast warning signals in the area ofblasting.
- Backfilling with subsoil (no topsoil to be used) or blasting mats or other approved methods.
- Blast warning in congested areas, in shallow water bodies, or near structures that could be damaged by fly-rock.
- Use of matting or other suitable cover, as necessary, to prevent fly-rock from damaging adjacent protected natural resources.
- Posting warning signals, flags, and/orbarricades.
- Following Federal, State, Local, and MVP procedures and regulations for safe storage, handling, loading, firing, and disposal of explosivematerials.
- Manning adjacent pipelines at valves for emergency response, as appropriate.
- Posting of portable signage, portable barricades, and visual survey of the blast area access ways to prevent unauthorized entrance into the blast zone by spectators and/or intruders.
- Maintain communications between all persons involved for security of the blast zone during any and all blasting/firing.

Excessive vibration will be controlled by limiting the size of charges and by using charge delays, which stagger each charge in a series of explosions.

If the Contractor must blast near buildings, structures, or wells, a qualified independent Contractor will inspect structures or wells within 150 feet, or farther if required by local or state regulations, of the construction right-of-way prior to blasting, and with landowner permission. Post-blast inspections by company's representative will also be performed, as warranted. All blasting will be performed by registered blasters and monitored by experienced blasting inspectors. Recording seismographs will be installed by the Contractor at selected monitoring stations under the observation of MVP personnel. During construction, the Contractor will submit blast reports for each blast and keep detailed records as described in Section 7.10.

As appropriate, effects of each discharge will be monitored at the outer limits of the construction right of way and closest adjacent facilities by seismographs.

If a charge greater than eight pounds per delay is used, the distance of monitoring will be in accordance with the U. S. Bureau of Mines Report of Investigations 8507.

To maximize its responsiveness to the concerns of affected landowners, MVP will evaluate all complaints of well or structural damage associated with construction activities, including blasting. A toll-free landowner hotline will be established by MVP for landowners to use in reporting complaints or concerns. In the unlikely event that blasting activities temporarily impair a water well, MVP will provide alternative sources of water or otherwise compensate the owner. If well or structural damage is substantiated, MVP will either compensate the owner for damages to the structure and well, or arrange for a new well to be drilled.

7 BLASTING REQUIREMENTS

MVP has standard practices for blasting operations, as outlined by Sections 1.0 and 4.0 of this Blasting Plan. The potential for blasting along the pipeline to affect any wetland, municipal water supply, waste disposal site, well, septic system, spring, or pipelines will be minimized by controlled blasting techniques and by using mechanical methods for rock excavation as much as possible. Controlled blasting techniques have been effectively employed by MVP and other companies to protect active gas pipelines within 15 feet of trench excavation. The following text presents details of procedures for powder blasting.

7.1 General Provisions

- The contractor will provide all personnel, labor, and equipment to perform necessary blasting operations related to the work. The Contractor will provide a permitted blaster possessing all permits required by the local, county, township, and states in which blasting is required during construction, and having a working knowledge of state and local laws and regulations that pertain to explosives.
- Project blasting will be done in accordance with 27 CFR Part 55, 30 CFR '715.19, National Fire Protection Association 495 – Explosive Materials Code; the above referenced Specification; and all other state and local laws, when required; and regulations applicable to obtaining, transporting, storing, handling, blast initiation, ground motion monitoring, and disposal of explosive materials and/or blasting agents.
- The Contractor shall be responsible for supplying explosives and blasting materials that are perchlorate-free in order to eliminate the potential for perchlorate contamination of ground water. Further, the use of ammonium nitrate is prohibited. However, the use of emulsion type explosives, including those having ammonium nitrate as a constituent, such as Dyna 1062 Bulk Emulsion, shall be permitted, as these types of explosives are considered industry standard for area blasting related to large scale earthwork construction. In addition, detonators containing small amounts of perchlorate, such as Dyno Nobel NONEL EZ Dets, are an industry standard and shall be permitted.
- The contractor shall be responsible for securing and complying with all necessary permits required for the transportation, storage, and use of explosives. The Contractor shall be responsible for all damages or liabilities occurring on or off the right-of-way resulting from the use of explosives. When the use of explosives is necessary to perform the work, the Contractor shall use utmost care not to endanger life or adjacent property, and shall comply with all applicable laws, rules, and regulations governing the storage, handling, and use of such explosives. MVP will conduct a pre- and post- surficial leak survey along the centerline of each adjacent live pipeline to the planned blast area. The surficial leak survey will be conducted by MVP's employees and/or designated representative, with the surficial leak survey extending a minimum of 100- feet (both directions) past the limits of the planned blast area.
- Blasting activities will strictly adhere to all MVP, local, state, and federal regulations and requirements applying to controlled blasting and blast vibration limits regarding structures, underground gas pipelines, and underground utilities. In addition to following state and federal blasting guidelines, MVP will contact each governmental agency (if project is not undertaken within twelve months as of the date of this Blasting Plan) along the proposed route to determine local ordinances or guidelines for blasting (refer to Table 7.1.1).

TABLE 7.1.1 MVP PROJECT
CONTACTS AND RELATED PERMITTING PRIOR TO BLASTING

JURISDICTION	CONTACT	AGENCY	PERMIT/REGULATION
Virginia	Marshal R. Moore 276.415.9700	DMME Virginia Department of Mines, Minerals, and Energy	Permit and Notification
Virginia	Region 3 Marion Office 276.783.4860	DGIF Virginia Department of Game and Inland Fisheries	Notification: 48 hour notice
Virginia	Office: 804.371.0220 statefiremarshal@ vdfp.virginia.gov	SFMO Virginia State Fire Marshal's Office	Permit and Notification: 24 hour notice
Virginia	Anita Bradburn Realty Specialist Management Branch Huntington District USACE 304.399.5890	US Army Corps of Engineers	Notification: Blasting within 0.25-mile of Weston and Gauley Bridge Turnpike Trail
Virginia	Joby Timm Forest Supervisor O: 540.265.5118 C: 540.339.2523 jtimm@fs.fed.us	US Forest Service	Notification: Blasting within 0.25-mile of the Jefferson National Forest
North Carolina	Matthew Gantt Engineering Supervisor 336-776-9654 matt.ganttencdeur.gov	NC DEQ	Permit and Notification Notice
North Carolina	Tonya Caddle Director- Planning and Inspection 336-342-8137 tcaddieco.rockingham.nc.us	Rockingham CO, NC	Permit and Notification Notice
North Carolina	Robert L. Key Director -Inspection 336-570-4060 Robert.key@alamance-nc.com	Alamance Co, NC	Permit and Notification Notice

The Construction Contractor will be made aware of all applicable procedures and local requirements, and it will ultimately be the Contractor's responsibility to notify officials and receive appropriate blasting permits and authorization.

Typically, local regulations require copies of the blasting Contractor's Certificate of Insurance and License. In some jurisdictions, a Certificate of Bond will also be required, as well as a qualified person hired to oversee the blasting procedure.

The MVP Chief Blasting Inspector (CBI) or designated representative shall have the opportunity to witness all rock excavations or other use of explosives. The Contractor shall conduct all blasting operations in a safe manner which will not cause harm to the existing pipelines and structures in the vicinity. If the CBI determines that any project blasting operations have been conducted in an unsafe manner, the CBI will notify the Contractor of the unsafe activity. If any further unsafe actions occur on the part of the blasting firm, the CBI will request the Contractor terminate the Contract of the blasting firm and hire another blasting company.

Any failure to comply with the appropriate law and/or regulations is the sole liability of the Contractor. The Contractor and the Contractor's permitted blaster shall be responsible for the conduct of all blasting operations, which shall be subject to inspection requirements.

A Blasting Fact Sheet will be distributed to landowners where blasting is proposed and affected landowners will be contacted prior to any blasting activities.

7.2 Storage Use at Sites

Explosives and related materials shall be stored in approved facilities required under the applicable provisions contained in 27 CFR Part 55, Commerce in Explosives. The handling of explosives may be performed by the person holding a permit to use explosives or by other employees under his or her direct supervision, provided that such employees are at least 21 years of age. While explosives are being handled or used, smoking shall not be permitted, and no one near the explosives shall possess matches, open light, or other fire or flame within 50 feet of the explosives, in accordance with OSHA requirements. Suitable devices or lighting safety fuses are exempt from this requirement. No person shall handle explosives while under the influence of intoxicating liquors or narcotics at any time during construction of the Project. Original containers or Class II magazines shall be used for taking detonators and other explosives from storage magazines to the blasting area. Partial reels of detonating cord do not need to be in closed containers, unless transported over public highways. Containers of explosives shall not be opened in any magazine or within 50 feet of any magazine. In opening kegs, or wooden cases, no sparking metal tools shall be used; wooden wedges and either wood, fiber or rubber mallets shall be used. Non-sparking metallic slitters may be used for opening fiberboard cases.

No explosive materials shall be located or stored where they may be exposed to flame, excessive heat, sparks, or impact.

Explosives or blasting equipment that are obviously deteriorated or damaged shall not be used. Explosive materials shall be protected from unauthorized possession and shall not be abandoned.

No attempt shall be made to fight a fire if it is determined the fire cannot be contained or controlled before it reaches explosive materials. In such cases, all personnel shall be immediately evacuated to a safe location and the area shall be guarded from entry by spectators or intruders.

No firearms shall be discharged into or in the vicinity of a vehicle containing explosive materials or into or in the vicinity of a location where explosive materials are being handled, used, or stored.

Contractor shall maintain a daily blast inventory record of all explosive materials transported (to and from blast area), used, and returned to off-site storage, when no storage is located on blast site.

7.3 Pre-Blast Operations

The Contractor is required to submit a planned schedule of blasting operations to the CBI or his designated representative for approval, prior to commencement of any blasting or pre-blast operation, which indicates the maximum charge weight per delay, hole size, spacing, depth, and blast layout. If blasting is to be conducted adjacent to an existing pipeline, approval must be received from the pipeline's Engineering Department. The Contractor shall provide this schedule to the CBI at least five working days prior to any pre-blast operation for approval and use. Where residences or other structures are within 150 feet of the blasting operation, the CBI may require notification in excess of five days. The blasting schedule is to include the blast geometry, drill hole dimensions, type and size of charges, stemming, and delay patterns and should also include a location survey of any dwelling or structures that may be affected by the proposed operation. Face material shall be carefully examined before drilling to determine the possible presence of unfired explosive material. Drilling shall not be started until all remaining butts of old holes are examined for unexploded charges, and if any are found, they shall be re-fired before work proceeds. No person shall be allowed to deepen the drill holes that havecontained explosives.

Drill holes shall be large enough to permit free insertion of cartridges of explosive materials. Drill holes shall not be collared in bootlegs or in holes that have previously contained explosive materials. Holes shall not be drilled where there is a danger of intersecting another hole containing explosive material. Charge loading shall be spread throughout the depth of the drill hole or at the depths or rock concentration in order to obtain the optimum breakage of rock.

Loading and firing shall be performed or supervised only by a person possessing an appropriate blasting permit and license. All drill holes shall be inspected and cleared of any obstruction before loading. No holes shall be loaded, except those to be fired in the next round of blasting. After loading, all remaining explosives shall be immediately returned to an authorized magazine.

A maximum loading factor of 4.0 pounds of explosive per cubic yard of rock shall not be exceeded. However, should this loading fail to effectively break up the rock, a higher loading factor shall be allowed if the charge weight per delay is reduced by a proportional amount and approved by the CBI. The minimum safe distance from the blasting area to a live buried pipeline is placed at 10 feet measured horizontally from the edge of the blasting area to the outer edge of the affected pipeline. The site-by-site minimum safe distance between blasting areas and adjacent live natural gas pipelines will be calculated each time blasting is to occur using PIPEBLAST computer modeling program or other recognized industrial standards and applying the measured site conditions. The minimum safe distance and supporting calculations and site measurements are to be submitted for approval to MVP's CBI at least 48 hours before blasting is to occur.

All blasts will be monitored (Seismograph Monitoring-Transverse,Vertical, Longitudinal, PPV, and Acoustic) to ensure the peak particle velocity does not exceed the following specified maximum velocities:

- Four (4) inches per second for underground, welded, steel pipeline.
- Two (2) inches per second for underground, coupled, steel pipelines; above ground and underground structures; or waterwells.

The MVP Engineering Department may approve higher peak particle velocities in writing, given site-specific conditions.

The maximum amplitude of the elastic wave created by any blast shall not exceed 0.0636 inches.

The type of explosive and initiation system to be used is as follows:

7.3.1 Dyno Nobel Unimax TM (or equivalent)

An extra-gelatin dynamite with a specific gravity of 1.51 g/cc, a detonation rate of 17,400 f/s (unconfined) and a calculated energy of 1,055 c/g. The cartridge size will generally be 2” x 8” (1.25 lbs/cartridge) or 2” x 16” (2.50 lbs/cartridge).

7.3.2 Dyno Nobel Unigel TM (or equivalent)

A semi-gelatin dynamite with a specific gravity of 1.30 g/cc, a detonation rate of 14,200 f/s (unconfined) and a calculated energy of 955 c/g. The cartridge size will generally be 2” x 8” (1.15 lbs/cartridge) or 2” x 26” (2.30 lbs/cartridge).

7.3.3 Dyno Nobel Dynomax Pro TM (or equivalent)

A propagation-resistant dynamite, with a specific gravity of 1.45 g/cc, a detonation rate of 19,700 f/s (unconfined) and a calculated energy of 1,055 c/g. The cartridge size will generally be 2” x 8” (1.225 lbs/cartridge) or 2” x 16” (24.45lbs/cartridge).

7.3.4 Dyno Nobel NONEL TM 17 or 25 Millisecond Delay Connectors or Dyno Nobel NONEL EZ Det TM (or equivalent)

A nonelectric delay detonator with a 25/350, 25/500, or 25/700 millisecond delay.

7.3.5 Dyno Nobel NONEL TM Nonelectric Shock Tube System Detonator (or equivalent)

The Shock Tube will be used to initiate all shots. The Shock Tube will be attached at one point only for initiation of the entire shot and will not be used for down hole priming.

7.3.6 Dyno Nobel 1062 Bulk Emulsion (or equivalent)

An emulsion/gel product commonly used for area blasting such as road alignments or large pads. It contains the following major components: ammonium nitrate (30 to 80% w/w, calcium nitrate, sodium nitrate, and No. 2 diesel fuel (1 to 8% w/w).

Each borehole shall be primed with NONEL EZ Def™ system. The total grains of the detonator system should be limited to prevent blowing stemming out of the drill hole. Boreholes shall be delayed with a minimum of 25 milliseconds (“ms”). Slightly longer delays may be used over steep hills with prior approval of the CBI. Primers shall not

be assembled closer than 50 feet (15.25 m) from any magazine. Primers shall be made up only when and as required for immediate needs.

Blasting shall not be permitted if any part of the live pipeline lies within the perimeter of the crater zone, regardless of size of the blast/shot. Crater zone shall be defined as a circle created by turning a radius along the ground surface equal to the length of the depth below the surfaces where the shot is placed.

Tamping shall be done only with wood rods without exposed metal parts, but non-sparking metal connectors may be used for jointed poles. Plastic tamping poles may be used, provided the authority having jurisdiction has approved them. Violent tamping shall be avoided.

Recommended stemming material shall consist of clean crushed stone with d50 – 3/8 inch, which will not bridge over like dirt and will completely fill voids in the hole.

When safety fuse is used, the burning rate shall be determined and in no case shall fuse lengths less than 120 seconds be used. The blasting cap shall be securely attached to the safety fuse with a standard ring type cap crimper.

Pneumatic loading of blasting agents in blast holes primed with electric blasting caps or other static-sensitive initiation systems shall comply with the following requirements:

- A positive grounding device shall be used for the equipment to prevent accumulation of static electricity;
- A semi-conductive discharge hose shall be used; and
- A qualified person shall evaluate all systems to assure they will adequately dissipate static charges under field conditions.

No blasting caps or other detonators shall be inserted in the explosives without first making a hole in the cartridge for the cap with a wooden punch of proper size or standard cap crimper.

After loading for a blast is completed, all excess blasting caps or electric blasting caps and other explosives shall immediately be removed from the area and returned to their separate storage magazines.

7.4 Discharging Explosives

Persons authorized to prepare explosive charges or conduct blasting operations shall use every reasonable precaution, including, but not limited to, warning signals, flags, barricades, or woven wire mats to ensure the safety of the general public and workmen.

The Contractor shall obtain MVP's approval and provide them at least 24-hour notice prior to the use of any explosives. The Contractor shall comply with local and state requirements for pre-blast notifications, such as the One-Calls of Virginia and North Carolina, which require a 72 hour, minimum, notice.

Whenever blasting is being conducted in the vicinity (within 150 feet) of gas, electric, water, fire alarm, telephone, telegraph, and other utilities, (above or below grade) the blaster shall notify the appropriate representatives of such utilities at least 24-hours, or as required by the utility, in advance of blasting. Verbal notice shall be confirmed with written notice. In an emergency, the local authority issuing the original permit may waive this time limit. MVP's CBI is to be notified, both verbally and copied, with the written notice for notifications.

Blasting operations, except by special permission of the authority having jurisdiction and MVP, shall be conducted during daylight hours. No blasting shall occur on Sundays or legal holidays except by special permission of the authority having jurisdiction and MVP

When blasting is done in congested areas or in proximity to a significant natural resource, structure, railway, highway, or any other installation that may be damaged, the blast shall be backfilled before firing or covered with a mat, constructed so it is capable of preventing fragments from being thrown. In addition, all other possible precautions shall be taken to prevent damage to livestock and other property and inconvenience to the property owner or tenant during blasting operations. Any rock scattered outside the right-of-way by blasting operations shall immediately be hauled off or returned to the right-of-way.

Precautions shall be taken to prevent accidental discharge of blasting caps from currents induced by lightning, adjacent power lines, dust and snow storms, or other sources of extraneous electricity. These precautions shall include:

- Suspension of all blasting operations and removal of all personnel from the blasting area during the approach and progress of an electrical storm; and
- The use of lightning detectors is mandatory.

No blast shall be fired until the blaster in charge has made certain that all surplus explosive materials are in a safe place, all persons and equipment are at a safe distance or under sufficient cover, and an adequate warning signal has been given.

No loaded holes shall be left unattended or unprotected. Explosive shall not be primed or fused until immediately before the blast. After each blasting sequence, the Blasting Contractor shall inspect the site for cut-offs and misfires. All explosives or blasting agents shall be verified as discharged prior to starting/resuming excavation.

Only the person making connections between the cap and fuse system shall fire the shot. All connections should be made from the bore hole back to the source of ignition. If there are any misfires while using cap and fuse, all persons shall remain away from the charge for at least 15 minutes. Misfires shall be handled under the direction of the person in charge of the blasting and the construction right-of-way shall be carefully searched for the unexploded charges.

Explosives shall not be extracted from a hole that has once been charged or has misfired unless it is impossible to detonate the unexploded charge by insertion of a fresh additional primer.

7.5 Waterbody Crossing Blasting Procedures

Blasting should not be conducted within or near a stream channel without prior consultation and approval from the appropriate federal, state, and local authorities having jurisdiction to determine what protective measures must be taken to minimize damage to the environment and aquatic life of the stream. At a minimum, a five work day notice must be provided to the appropriate federal, state, and/or local authorities. In addition to the blasting permits a separate permit and approvals are required for blasting within the waters of the states of Virginia and North Carolina.

Rock drill or test excavation will occur within the limits of a flowing stream only after the streamflow has been redirected and maintained via dam and pump or flume crossing, as presented in Resource Report 2 - Section 2.3.1.4 Waterbody Crossing Methods. For those streams that have no flow at the time of rock drill or test excavation activities, the rock testing will be conducted in the streambed and the streambed disturbance created by the rock testing will be restored within the same day of disturbance.

Rock drill or test excavation and resulting blasting will only occur once the streamflow has been redirected and maintained via dam and pump or flume crossing method. For these crossings of flowing streams, work will commence immediately after the initial disturbance and continue until the stream crossing is completely installed and the streambed restored. Stream crossing methods and crossing mitigation measures are presented in Resource Report 2 – Section 2.3.

To facilitate planning for blasting activities for waterbody crossings, rock drilled or test excavations may be used in waterbodies to test the ditch-line during mainline blasting operations to evaluate the presence of rock in the trench-line. The excavation of the test pit or rock drilling is not included in the time window requirements for completing the crossing. For testing and any subsequent blasting operations, streamflow will be maintained through the site. When blasting is required, the FERC timeframes for completing in-stream construction begin when the removal of blast rock from the waterbody is started. If, after removing the blast rock, additional blasting is required, a new timing window will be determined in consultation with the Environmental Inspector. If blasting impedes the flow of the waterbody, the Contractor can use a backhoe to restore the stream flow without triggering the timing window. The complete waterbody crossing procedures are included in MVP's E&SCP.

MVP will immediately halt all construction activities if the loss of streamflow occurs after a blasting event. The construction contractor and MVP's Environmental Inspector will immediately evaluate the loss of water and develop a Contingency Plan to restore streamflow. This Contingency Plan will be provided to the local, state, and federal agencies having jurisdiction over the stream impacted, for their review and approval. Congruent with the contractor's and MVP's Environmental Inspector's evaluation, temporary emergency contingency measures will be employed to halt the loss of streamflow. Immediately upon the agencies' approval of the Contingency Plan, the contractor will implement the measures outlined in the agency-approved Contingency Plan.

The temporary emergency contingency measures and the agency-approved Contingency Plan measures will be implemented in accordance with Resource Report 2

- Section 2.4.1 Construction and Operation Impacts and Mitigation.

7.6 Karst Terrain Blasting Procedures

Karst Terrain Mitigation Plan has been developed for the Karst Terrain areas identified (Resource Report Appendix 6-Section 6.5.1 and Table 6.5.1). This Karst Terrain Mitigation Plan will be followed should any blasting be required for grade and trench excavation.

Blasting in a Karst Terrain will only be considered after all other reasonable means of excavating have been evaluated and determined to be unlikely to achieve the required grade.

Blasting should not be conducted within or near a Karst Area without MVP's Karst Specialist (KS) review and the Karst Blasting Plan obtaining approval from the appropriate federal, state and local authorities having jurisdiction to determine protective measures that must be taken to minimize damage to the Karst Terrain. At a minimum, the individual Karst Terrain Blasting Plan will be provided to the appropriate federal, state and local authorities for review and approval five working days prior to conducting the blasting.

Blasting will be conducted in a manner that will not compromise the structural integrity of the karst hydrology of known karst structures. If rock is required to be blasted to achieve grade, then the following parameters will be adhered to:

- The excavation will be carefully inspected for any voids, openings or other tell-tale signs of solution activity by MVP's KS.
- If the rock removal intercepts an open void, channel, or cave, the work in that area will be stopped until a remedial assessment can be carried out by MVP's KS.
- All use of explosives will be limited to low-force charges that are designed to transfer the explosive force only to the rock which is designated for removal (e.g., maximum charge of 2 inches per second ground acceleration).

7.7 Wetland Crossing Blasting Procedures

Wetland Crossings Mitigation Plan has been developed for the wetland crossings identified (Resource Report 2 - Section 2.4 Wetland Resources). This Wetland Crossings Mitigation Plan will be followed should any blasting be required for trench excavation.

Blasting for trench excavation crossing a wetland will only be considered after all other reasonable means of excavating have been evaluated and determined to be unlikely to achieve the required trench grade.

Blasting should not be conducted within or near a wetland without MVP's Environmental Inspector review and development of a Wetland Crossing Blasting Plan that includes protective measures to minimize damage to wetlands. At a minimum, the individual Wetland Crossing Blasting Plan will be provided to the appropriate federal, state and local authorities for review and approval five working days prior to conducting the blasting.

Blasting will be conducted in a manner that will not compromise the structural integrity of the wetland hydrology of known wetlands. If rock is required to be blasted to achieve trench grade, then the following parameters will be adhered to:

- The excavation will be carefully inspected for any voids, openings, fractures, or other tell-tale signs of dewatering activity by MVP's Environmental Inspector.
- If the rock removal intercepts an open void, channel, or fracture, the work in that area will be stopped until a remedial assessment can be carried out by MVP's Environmental Inspector.
- All use of explosives will be limited to low-force charges that are designed to transfer the explosive force only to the rock which is designated for removal (e.g., maximum charge of 2 inches per second ground acceleration).

7.8 Rock Disposal Due to Blasting

During the course of blasting for grade and trench excavation excess rock fragments that are deemed as unacceptable for trench backfill may be incurred. This excess rock may be used in the restoration of the disturbed right-of-way limits, with the rock buried within the reclamation limits of the right-of-way. With the acceptance, approval and signed individual landowner agreements for the placement of this excess rock, the rock placement will be to a depth that will help stabilize the right-of-way restoration and will be below the root zones of the cover vegetation.

If the excess rock is to be removed from the construction area, it is to be hauled to an approved local- and state-permitted disposal site. This disposal facility will need to demonstrate that it is permitted to accept and dispose of the excess rock from the blasting operations. MVP will obtain a copy of the disposal facility's permit, as issued by the local jurisdiction having authority over the disposal facility and the disposal site within.

7.9 Disposal of Explosive Materials

All explosive materials that are obviously deteriorated or damaged shall not be used and shall be destroyed according to applicable local, state, and federal requirements.

Empty containers and packages and paper or fiberboard packing materials that have previously contained explosive materials shall not be reused for any purpose. Such packaging materials shall be destroyed by burning (outside of the construction right-of- way) at an approved outdoor location or by other approved method. All personnel shall remain at a safe distance from the disposal area.

All other explosive materials will be transported from the job site in approved magazines per local and/or state regulations.

7.10 Blasting Records

A record of each blast shall be made and submitted, along with seismograph reports, to MVP's CBI. The record shall contain the following minimum data for each blast:

- Name of company or contractor;
- Location, date and time of blast;
- Name, signature and license number of contractor and blaster in charge;
- Blast location referenced to the pipeline station/milepost;
- Picture record of the blast area disturbance and of blasted trench;
- Type of material blasted;
- Number of holes, depth of burden and stemming, and spacing;
- Diameter and depth of holes;
- Volume of rock in shot;
- Types of explosives used, specific gravity, energy release, pounds of explosive per delay, and total pounds of explosive per shot;
- Delay type, interval, total number of delays and holes per delay;
- Maximum amount of explosives per delay period of 17 milliseconds or greater;
- Power factor;
- Method of firing and type of circuit;
- Direction and distance in feet to nearest structure and utility neither owned or leased by the person conducting the blasting;
- Weather conditions;
- Type and height or length of stemming;
- If mats or other protection were used; and
- Type of detonators used and delay periods used.

Within 48 hours following a blast, a Blast Report is to be provided to the MVP's CBI. The Blast Report shall provide the information outlined by "Blast Report MVP Project". This Blast Report

form is considered the minimum information needed. Appendix B and C present the Blast Report forms. In addition to the completed Blast Report, the blast design is to be attached and made part of the Blast Report. The Blast Report MVP Project is in addition to all other local, county, township, state, or federal reporting requirements. Copies of these Blast Reports are to be provided to the CBI.

At the conclusion of each blasting event, the Blasting Contractor is to conduct and inventory blasting/explosive materials with a written inventory report attached to the Blast Report. All blasting/explosive materials are to be accounted for. Any discrepancies are to be immediately reported to the governing agencies and the MVP's CBI.

The person taking the seismograph reading shall accurately indicate the exact location of the seismograph, if used, and shall also show the distance of the seismograph from the blast.

Seismograph records should include:

- Name of person and firm operating and analyzing the seismograph record;
- Seismograph serial number;
- Seismograph reading; and
- Maximum number of holes per delay period of 17 milliseconds orgreater.

Within 72 hours following a blast, at sites monitored by a seismograph, a Seismograph Report is to be provided to the MVP's CBI. Appendix D presents the Seismograph Report Form for the MVP Project. In addition to the completed Seismograph Report, the seismograph readings and written interpretations are to be attached to the report. This reporting is in addition to all other local, county, township, state, or federal reporting requirements. Copies of these Seismograph Reports are to be provided to the CBI.

8 POST-BLASTING INSPECTION

An approved independent contractor, with landowner permission, will examine the condition of structures within 150 feet, or as required by state or local ordinances, of the construction area after completion of blasting operations, to identify any changes in the conditions of the these properties or confirm any damages noted by the landowner. The independent contractor, with landowner approval, will conduct a resampling of wells within 150 feet, or as required by state or local ordinances, of the construction area. Should any damage or change occur during the blasting operations, an additional survey of the affected property may be made.

Upon receiving notice that a structure or other damages have possibly occurred due to the blasting operations, the Blasting contractor is to conduct a post-blast conditions survey. The post-blast conditions survey shall be conducted within 48 hours after being notified or at the landowner's schedule and permission. The post-blast conditions will be documented with the information outlined by "Post-Blast Survey for the MVP Project". This post-blast form is considered the minimum information needed. Appendix E presents the Post-Blast Survey form.

MVP Southgate Project

Attachment 4

Horizontal Directional Drill Contingency Plan

October 2019

MVP Southgate Project

Horizontal Directional Drill Contingency Plan

REVISED MARCH 2019

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APPENDICES

ACRONYMS

HDD	Horizontal Directional Drilling
Project or Southgate Project	MVP Southgate Project
IR	inadvertent return
CI	Chief Inspector
EI	Environmental Inspector
PC	Permit Coordinator
CM	Construction Project Manager

1.0 INTRODUCTION

Horizontal Directional Drilling ("HDD") is a trenchless excavation method that is accomplished in three phases. The first phase consists of drilling a small diameter pilot hole along a designed directional path. The second phase consists of enlarging the pilot hole to a diameter suitable for installation of the pipe. The third phase consists of pulling the pipe into the enlarged hole. HDD is accomplished using a specialized horizontal drilling rig with ancillary tools and equipment. A properly executed HDD crossing will allow for the pipeline to be installed in a minimally invasive manner.

The HDD method is proposed for the MVP Southgate Project ("Project" or "Southgate Project") crossings in North Carolina of the Dan River in Rockingham County and Stony Creek Reservoir in Alamance County. The Project is still evaluating the route and additional HDD's may be proposed based on feedback from field surveys and stakeholders.

The inadvertent return ("IR") of drilling lubricant is a potential concern when HDD methods are utilized. The HDD procedure for these crossings will utilize bentonite for drilling lubricant. In general, IRs can occur because of existing rock fractures, low density soils, or unconsolidated geology. There is a potential for inadvertent returns to directly impact surface and ground waters via existing or enhanced fracture zones or if there is a release upland which flows over ground into wetlands or streams.

The purpose of this HDD Contingency Plan is to:

- Minimize the potential for an IR associated with horizontal directional drilling activities.
- Provide for the timely detection of an IR.
- Protect areas that are considered environmentally sensitive (streams, wetlands, other biological resources, cultural resources).
- Provide an organized, timely, and "minimum-impact" response in the event of an IR.
- Provide that all appropriate notifications are made to the North Carolina Department of Environmental Quality and other appropriate regulatory agencies, and that documentation is completed.
- Provide an alternative crossing method if the HDD is deemed unsuccessful.

Table 3.1-1 Proposed HDD Locations

Crossing Name	Pipeline Diameter (inches)	Approximate Entry Milepost	Approximate Exit Milepost	Total Length (feet)	Subsurface Material
Project Component Name					
Dan River	24	30.37	29.9	2,523	Fine-grained silty sand/ Sandstone/Limestone
Stony Creek Reservoir	16	63.75	63.44	1,619	Clay/Sandstone/Schist/Quartzite

2.0 PERSONNEL AND RESPONSIBILITIES

The actions in this HDD Plan are to be implemented by the following personnel:

Construction Project Manager – A Construction Project Manager (CM) has authority over all aspects of the field work during construction. The Chief Inspector reports directly to the CM and the CM has final approval over all field decisions for the project.

Chief Inspector – The Project will designate a Chief Inspector ("CI") for the Project. The CI has overarching authority over all inspection activities occurring throughout the Project and works directly with the contractor.

Environmental Inspector – The Project will designate a minimum of one Environmental Inspector ("EI") to monitor HDD activities. The EI(s) will monitor the HDD alignment for IRs and other signs of environmental impact (such as sinkhole development or subsidence over the alignment). The EI is in the same peer group with all other inspectors and reports directly to the CI. The EI has authority to stop any activities which are out of compliance with the FERC certificate (if applicable), other applicable permits, or landowner requirements. Additionally, the EI can order corrective action.

HDD Superintendent – The HDD contractor's senior representative on-site is the HDD Superintendent. It is the HDD Superintendent's responsibility to implement this HDD Plan on the contractor's behalf. The HDD Superintendent must be familiar with all aspects of the drilling activities, the contents of this HDD Plan and the conditions of approval under which the activity is permitted. The HDD Superintendent will maintain a copy of this HDD Plan on all drill sites and distribute, as appropriate, to construction personnel. The HDD Superintendent ensures that workers are properly trained and familiar with the necessary response procedures to implement should there be an inadvertent release.

HDD Operator – The HDD operator is employed by the HDD contractor to operate the drilling rig, driller and fluid pumps. The HDD Operator is responsible for monitoring circulation through entry and exit locations as well as annular pressures during the drilling of the pilot-hole. Should circulation loss or higher than expected annular pressures occur, the HDD Operator must communicate the relevant details of this event to the HDD Superintendent and HDD contractor field crews as well as the on-site Project inspection staff. The HDD Operator is responsible for stopping or changing the drilling program in the event of observed or anticipated inadvertent returns.

HDD Contractor Personnel – During HDD installation, field crews and the Project's field representatives will be responsible to monitor the HDD alignment. Field crews will coordinate with the EI and are responsible for timely notifications and responses to observed releases in accordance with this HDD Plan. The EI ultimately must sign off on corrective action plans mitigating releases.

Permit Coordinator – Company individual(s) that is accountable for all permit approvals and communication with respective agencies for the project.

3.0 PRE-CONSTRUCTION ACTIVITIES

Prior to implementation of the HDD, the Southgate Project and the contractor will identify the potential for inadvertent releases at the HDD location. The review will include a visual review of entry and exit points, and entire HDD drill path. The contractor will review the Project's HDD Geotechnical Investigations Report, which may include descriptions of subsurface conditions, laboratory testing, design recommendations, and construction recommendations.

In addition, private water supplies within 150 feet, if identified, will be protected by implementing the following measures:

- The drilling contractor will review the site conditions prior to the start of work.
- Construction limits will be clearly marked.
- Barriers will be erected between the bore site and nearby sensitive resources prior to drilling as per the Project-specific Erosion and Sediment Control Plan.
- On-site briefings will be conducted for the workers to identify and locate sensitive resources at the site.
- Provide that all field personnel understand their responsibility for timely reporting of IRs.
- Maintaining necessary response equipment on-site and in good working order.

The primary areas of concern for IRs occur at the entrance and exit points where the drilling equipment is generally at their shallowest depths. The likelihood of an IR decreases as the depth of the pipe increases.

To minimize the potential extent of impacts from an IR, HDD operations will be continuously monitored to look for observable IR conditions or lowered pressure readings on the drilling equipment. Early detection is essential to minimizing the area of potential impact.

No oil or gas wells were identified within 0.25 mile of the Project areas based on review of Virginia and North Carolina databases (VDMME, 2018 and NCGS, 2016).

3.1 Training

Prior to the start of construction, the Site Supervisor/Foreman will ensure that the crew members receive training on the following:

- The provisions of this Contingency Plan.
- Inspection procedures for IR prevention and containment equipment materials.
- Contractor/crew obligation to immediately stop the drilling operation upon first evidence of the occurrence of an IR and to immediately report any IRs to the Project's Environmental Inspector and Environmental Coordinator.
- Contractor/crew member responsibilities in the event of an IR.
- Operation of release prevention and control equipment and the location of release control materials, as necessary and appropriate.

- Protocols for communication with agency representatives who might be on site during the clean-up effort.
- Copies of this contingency plan and the contractor's site-specific contingency plan will always be maintained at the HDD entry and exit sites in a visible and accessible location.

3.2 Site Inspection

The Project will inspect each drill path prior to construction. Any site-specific condition(s) that impedes the ability to conduct the visual and pedestrian field inspection of any portion of a drill path will be identified, and a site-specific modification to the proposed inspection routine will be developed for that location. The Project will incorporate modifications into site-specific HDD crossing plans, as applicable, prior to construction and communicate these modifications to HDD contractors as part of the initial environmental training. If necessary, the Project will also file updated HDD crossing plans within its implementation plan or within a variance request should modifications be required outside of certificated workspace areas.

Appropriate monitoring and reporting protocols include:

- If circulation is lost or annular fluid pressure increase is observed that is not within the normal pressure variations the HDD Operator will immediately notify the HDD Superintendent and field crews of the event and approximate position of the tooling;
- Where it is possible to safely do so, field crew personnel will visually inspect the ground surface near cutting head location;
- If an inadvertent release is observed, the following chain of command and associated procedures should be implemented:
    - Field crew will immediately notify the HDD Operator;
    - The HDD Operator will stop pumping drilling fluid and notify the HDD Superintendent, EI and CI;
    - The CI/EI notifies the CM and PC and they formulate a response;
    - The PC will notify the appropriate regulatory authorities (see Section 3.4) as necessary relaying relevant details of the event, the proposed response and required documentation within 24 hours;
    - The PC will immediately notify the applicable state agency, VADEQ or NCDEQ, (see Section 3.4) of any inadvertent drilling fluid returns within wetlands, waterbodies, or regulated wetland adjacent areas, and;
- The PC will prepare a report summarizing the incident, the response and outcome.

3.3 Landowner Notification Procedures

The Project will notify landowners (via mail, phone or direct contact) where HDD activities will occur a minimum of 48 hours prior to the commencement of drilling. In addition, the Project will request written

access permission for limited pedestrian surveys outside of the approved workspace areas to facilitate monitoring of the HDD activities and identification of and response to potential IRs. Copies of these permissions will be included within the final HDD Contingency Plan.

3.4 Agency Notification Procedures

The PC will notify the appropriate regulatory authorities of the event as soon as possible and within 24 hours of identification of the release, to coordinate site-specific response procedures.

EQM Midstream Partners, LP Environmental Team:

Mr. Cory Chalmers
Permit Coordinator 304-848-0061 (office)
304-627-8173 (cell)

Ms. Megan Stahl
Environmental Permitting - Supervisor 412-553-7783 (office)
412-737-2587 (cell)

Ms. Hanna McCoy
Director - Environmental Permitting 724-873-3476 (office)
412-216-9316 (cell)

Include the following information:

- Time the spill was first identified
- Description of where the spill occurred – Project MP/Station
- Latitude and Longitude of spill
- Size of spill and control measures in place
- Name of affected water resource (if known/applicable)
- Photographs of spill area and corrective measures – when available. (Do not wait to notify the Project until pictures are available. Photo documentation should begin immediately upon detection and continued throughout the duration of the cleanup).

Regulatory authorities that will be contacted in the event of a release include the following:

1. *FERC (all releases)*

   First Call: Amanda Mardiney – 202-502-8081
   Alternate if no response from first call: FERC Enforcement Hotline - 1-888-889-8030

2. *Virginia Department of Environmental Quality (releases in Virginia)*

   First Call: Mr. Michael Johnson - 757-247-2255
   Alternate if no response from first call: VADEQ Spill Hotline - 1-800-468-8892

3. *North Carolina Department of Environmental Quality (releases in North Carolina)*

   First Call: Ms. Susan Homewood – 336-776-9693
   Alternate if no response from first call: NCDEQ Spill Hotline - 1-800-858-0368

4.0 DOCUMENTATION

A copy of this HDD Contingency Plan will be provided within the environmental compliance binders that are developed for construction, and copies will also be kept at each HDD location as well as at the contractor field offices. Additional documentation that will be maintained by the Project for each HDD location and includes, but is not limited to the following:

- Records of employee training detailing when training was conducted, material covered and employees in attendance. This training may coincide with the overall environmental training for the Project;
- Logs of HDD visual and pedestrian monitoring events – these may coincide with the daily environmental inspection reports;
- Drilling fluid composition – the contractor will maintain a log of drilling fluid physical properties such as mud weight, viscosity, sand content and pH during drilling activities; and
- Records of communication with landowners and applicable regulatory agencies that occur during HDD activities. These records may include inquiries and comments as well as Project response actions.

5.0 DRILLING FLUID MANAGEMENT

During the HDD process drilling fluid consisting of bentonite clay and water is maintained in drilling pits within the construction work area and used for continuous pumping into the boring. Drilling fluid is a slurry composed of water and bentonite clay, usually approximately 95 percent fresh water, intended to maintain the stability of the drilling hole, lubricate the drilling head and reduce soil friction. Bentonite clay (sodium montmorillonite) is a naturally occurring and extremely hydrophilic; it can absorb up to ten times its weight in water.

The HDD Contractor strives to maintain the integrity of the fluid by continuously sampling, testing and recording its properties throughout drilling operations. Analysis of samples allows for adjustments to be made to the slurry which helps maintain the most efficient drilling fluid flow adaptable to various geological conditions.

Bentonite is not hazardous nor is it toxic to aquatic ecosystems. The formulation of drilling fluids and its engineering properties are specified and tested to ensure their suitability for the given subsurface conditions encountered along the alignment and at each individual HDD location.

The slurry is designed to:

- Stabilize the hole against collapse;
- Lubricate, cool, and clean the cutters;

- Transport cuttings by suspension and flow to entry and exit points; and
- Reduce soil friction and required pull loads during pilot hole, reaming, and carrier pipe installation.

5.1 Drilling Fluid Additives

Small amounts of additives (typically less than one percent) may be mixed with the drilling fluids to improve drilling performance, or in response to excessive fluid loss. If any additives are necessary, the Project's goal is to utilize only water soluble and non-hazardous substances. The following is a narrative of the drilling fluids, materials, and additives that may be incorporated into a unique drill, depending upon subsurface and other conditions.

Anticipated or Typical Drilling Mud Ingredients

1. Water - This is the largest component. It may be used in its natural state or salts may be added to change filtrate reactivity with the formation.
2. Weighting Agents - These are added to control down-hole fluid pressure. Sodium barite is most common agent.
3. Clay - Most commonly, bentonite is used to provide viscosity and create a filter cake on the bore-hole wall to control fluid loss. Clay can be replaced by organic colloids such as biopolymers, cellulose polymers or starch.
4. Polymers - These are used to reduce filtration, stabilize clays, flocculate drilled solids and increase cuttings-carrying capacity. Cellulosic, polyacrylic and natural gum polymers are used to help maintain hole stability and minimize dispersion of the drill cuttings.
5. Thinners - These are added to the mud to reduce its resistance to flow. They are typically plant tannins, polyphosphates, lignilic materials, lignosulfonates.
6. Surfactants - These agents serve as emulsifiers, foamers and defoamers, wetting agents, detergents, lubricators and corrosion inhibitors.
7. Inorganic chemicals - A variety of inorganic chemicals are added to mud to carry out various functions. Typical chemicals: calcium hydroxide, sodium hydroxide and potassium hydroxide (caustic soda and caustic potash) are used to increase mud pH; sodium carbonate (soda ash) to remove hardness, sodium chloride for inhibition and sodium chloride to increase salinity and density.
8. Bridging Materials - Calcium carbonate or cellulose fibers are added to build-up a filler cake on the borehole wall and help reduce filtrate loss.
9. Lost Circulation Materials -These are used to block large openings in the borehole. These include walnut shells, mica and xanthum and cellulose.

There are several manufacturers that focus on products specifically for deep well drilling and/or shallow HDDs as they are similar processes. HDD contractors typically have preferred manufacturers that they use depending upon the specifics of each drill location. Technical data sheets for the more typical benign and environmentally friendly products that are approved for use by the Project are included in Appendix A. Manufacture substitutions, for like in kind products are acceptable, however, proprietary blends will be

avoided, and no materials will be allowed on site without current Material Safety Data Sheets being approved in advance. Specific Material Safety Data Sheets for products selected by the HDD contractor(s) must be submitted to the Project and/or FERC for approval, prior to use.

5.2 Drilling Fluid Physical Properties

The contractor shall submit a daily log at the end of each day. The Project shall provide the current version of the requested form which shall include at a minimum; the total length of drill or ream, average penetration rate, average mud flow rate, annular pressure, and basic mud properties (i.e. pH, funnel viscosity, density and sand content). Mud samples and drill statistics shall be recorded a minimum of three (3) times per shift with no less than two (2) hours between each record. If a Mud Engineer is on site, the daily log shall also include rheometer readings to determine plastic viscosity and yield point as well as gel strength. The Mud Engineer shall also supply filter press data in the form of API fluid loss and filter cake thickness. These measurements do not need to meet the three (3) times per shift quota.

5.3 Drilling Fluid Disposal

Disposal of excess drilling fluid will be the responsibility of the selected HDD contractor. Prior to beginning HDD operations, the contractor will be required to submit their proposed drilling fluid disposal procedures to the Project for approval. In some instances, a list of approved disposal sites will be provided to the contractor. The Project will review these procedures and verify that they comply with all environmental regulations, right-of-way and workspace agreements, and permit requirements.

Should, after the removal of cutting, bentonite slurry remains, it may be re-used (recycled) in the active HDD process. The method of disposal applied to each crossing will be dependent upon applicable regulations. Potential disposal methods include transportation to a remote disposal site and land farming on the construction right-of-way or an adjacent property. Land farming involves distributing the excess drilling fluid evenly over an open area and mechanically incorporating it into the soil. Where land farming is employed, the condition of the land farming site will be governed by the Project's standard clean up and site restoration specifications and FERC's *Upland Erosion Control, Revegetation and Maintenance Plan*.

6.0 HDD OPERATIONAL CONDITIONS AND RESPONSE ACTIONS

6.1 Drilling Procedures

Drilling pressures will be closely monitored so they do not exceed those needed to penetrate the formation. Pressure levels will be monitored continuously by the operator. Pressure levels will be set at a minimum level to reduce the risk of IRs. Cutters and reamers will be pulled back into previously drilled sections after each joint of pipe is added. The Project's HDD contractor will provide and maintain the following during the drilling process: instrumentation which will accurately measure the torsional loads, and the drilling fluid discharge rate and pressure. In addition to mud pump pressure monitoring. Additionally, the Project's HDD contractor will provide a means of measuring and monitoring annular pressure during pilot hole operations. Annular pressure monitoring will be required during reaming as well depending on whether pressure-sensitive situations were discovered during the pilot process. The Project will have access to instruments and their readings at all times.

Entry and exit pits will be enclosed by sediment barriers as specified in the Project-specific Erosion and Sediment Control Plan and straw bales. A spill kit will be on-site and used if an IR occurs. Except as noted below, a vacuum truck will be readily available on-site prior to and during all drilling operations. Per the Project's Spill Prevention, Control, and Countermeasure plan, containment materials (straw, fabric filter fence, sand bags, spill kits, boom and turbidity curtain, etc.) will be staged on-site at a location where they are readily available and easily mobilized for immediate use in the event of an IR. Filter Fence or Filter Sock will be installed between the bore sites and the edge of water sources prior to drilling.

The Site Supervisor will verify that:

- All equipment and vehicles are inspected and maintained daily to prevent leaks of hazardous materials.
- Spill kits and spill containment materials are available on-site at all times and that the equipment is in good working order.
- Equipment required to contain and clean up an IR is available at the bore sites during drilling activities.

*NOTE: It is the drilling contractor's responsibility to provide any IR containment materials that are necessary to respond to the release of drill fluids. The materials listed in this contingency plan are not to be considered inclusive and may require additional equipment depending on site conditions.

If the site of the IR is not able to be accessed by a vacuum truck, a pump with sufficient power to convey the released drill fluid to a containment area will be used instead. Along with the pump, an adequate amount of hose, several filter bags, straw bales, sand bags, and 18" Fabric Filter Fence (or Compost Filter Sock) will be kept on site to create a containment area on site. Water containing mud, silt, drilling fluid, or other materials from equipment washing or other activities, will not be allowed to enter a lake, flowing stream, or any other water source.

6.2 Monitoring and Pedestrian Surveys

6.2.1 Drilling Fluid Monitoring Protocol

The drilling fluid monitoring protocol to be applied will vary depending upon the following operational conditions.

- Condition 1: Full Circulation
- Condition 2: Loss of Circulation
- Condition 3: Inadvertent Returns

Monitoring Protocol for Condition 1 – Full Circulation

When HDD operations are in progress and full drilling fluid circulation is being maintained at one or both of the HDD endpoints, the following monitoring protocol will be implemented.

- Utilization of an annular pressure monitoring tool during pilot hole operations
- The presence of drilling fluid returns at one or both of the HDD endpoints will be periodically documented.
- Land-based portions of the drilled alignment will be regularly walked, visually inspected and documented by HDD contractor and environmental inspector to achieve early detection of inadvertent releases of drilling fluid as well as surface heaving and settlement. This will occur throughout the daytime and will continue to occur whenever night time operations are being undertaken. Waterways will be visually inspected from the banks for a visible drilling fluid plume.
- Constant communication between experienced driller and mud system operator to assist in the observation of fluid loss.
- Proper mud pumping volume and pressures to be managed for the ground conditions encountered.
- Swabbing of the borehole to assist in cuttings removal and maintaining circulation when drilling conditions allow.
- Proper mud properties to be maintained for the conditions encountered. A drilling fluid specialist may be consulted if any changes to mud properties are required.
    - Mud properties that will be monitored include mud weight, viscosity, sand content and pH.
    - The monitoring of mud properties will occur every 3 hours during drilling operations.
    - A drilling fluid specialist will be consulted if the following scenarios are encountered:
        - if there is a fluid spike in the annular pressure tool during pilot hole drilling;
        - if cuttings are not being removed from the hole during pilot hole drilling and/or reaming;
        - if there is a total loss of drilling fluid circulation; or
        - if high torque or pull back forces are encountered during any of the drilling phases.
- Electronic monitoring of the mud tank level will be utilized. Drilling fluid products present at the jobsite will be documented.

If an IR is detected during routine monitoring, the monitoring protocol associated with condition 3 will immediately be implemented. *Monitoring Protocol for Condition 2 – Loss of Circulation*

When HDD operations are in progress and drilling fluid circulation to the HDD endpoints is lost or severely diminished, the following monitoring protocol will be implemented. It should be noted that lost circulation is common and anticipated during HDD installation and does not necessarily indicate that drilling fluid is inadvertently returning to a point on the surface.

- Immediate stoppage of fluid pumps after any noticed loss of drilling fluids, followed by an immediate surface walk to look for any fluids that may have reached the surface.

- The Project and its HDD contractor will implement a protocol of conducting terrestrial walks along accessible drill pathway locations to monitor for surface returns whenever a loss of downhole pressure is detected. At a minimum, accessible locations will be monitored once per hour when operating under Condition 2. For less accessible locations an aerial drone or marine craft may be utilized to conduct monitoring for surface returns.
- The Project's environmental inspector will notify the Environmental Project Manager that drilling fluid circulation to the HDD endpoints has been lost or severely diminished.
- The Project's environmental and HDD inspectors will document steps taken by the HDD contractor to restore circulation. Should the contractor fail to comply with the requirements of the HDD Specification, the Project's environmental and HDD inspectors will notify the Environmental Project Manager and the Project Manager so that appropriate actions can be taken.
- If circulation is regained, the Project's environmental inspector will inform the Environmental Project Manager and resume the monitoring protocol associated with Condition 1.
- If circulation is not re-established, the Project's environmental inspector will increase the frequency of visual inspection along the drilled path alignment as appropriate. Additionally, the Project's environmental inspector will document periods of contractor downtime (during which no drilling fluid is pumped) and the contractor's drilling fluid pumping rate in case it should become necessary to estimate lost circulation volumes.

Monitoring Protocol for Condition 3 – Inadvertent Returns

If an inadvertent return of drilling fluids is detected, the following monitoring protocol will be implemented.

- The Project's environmental inspector will inform the Construction Project Manager that an inadvertent drilling fluid return has occurred and provide documentation with respect to the location, magnitude, and potential impact of the return.
- If the inadvertent return occurs on land, the Project's environmental inspector will document steps taken by the HDD contractor to contain and collect the return. Should the contractor fail to comply with the requirements of the HDD Specification, the Project's environmental inspector will notify the Construction Project Manager so that appropriate actions can be taken.
- If the inadvertent return occurs in a waterway, the Project, in consultation with appropriate parties, will determine if the return poses a threat to the environment or public health and safety.
- If it is determined that the return does not pose a threat to the environment or public health and safety, HDD operations will continue. the Project's environmental inspector will monitor and document the inadvertent return as well as periods of contractor downtime and the contractor's drilling fluid pumping rate in case it should become necessary to estimate inadvertent return volumes.
- If it is determined that the return does pose a threat to the environment or public health and safety, drilling operations will be suspended until containment measures can be implemented by the contractor. Documentation of any containment measures employed will be provided by the Project's environmental inspector. Once adequate containment measures are in place, the

contractor will be permitted to resume drilling operations subject to the condition that drilling operations will again be suspended immediately should the containment measures fail. the Project's environmental inspector will periodically monitor and document both the inadvertent return and the effectiveness of the containment measures. Periods of contractor downtime and the contractor's drilling fluid pumping rate will also be documented in case it should become necessary to estimate inadvertent return volumes. Upon completion of the HDD installation, the Project will ensure that the inadvertent drilling fluid returns are cleaned up to the satisfaction of governing agencies and any affected parties.

7.0 RESPONDING TO INADVERTENT RELEASES

Throughout the HDD process there is a loss of drilling fluid into the geologic formation through which the drill passes. In some cases, the drilling fluid may be forced to the surface resulting in what is commonly referred to as an inadvertent return. Therefore, while the intent of the HDD method is to avoid surface disturbance, surface disturbance may occur when there is an inadvertent return of drilling fluid.

It is extremely important to note that a loss of drilling fluid into the formation is not necessarily an indication that an inadvertent return has occurred or is about to occur. It is normal to lose a significant amount of fluid into the formation without ever having an inadvertent return. In fact, in very soft ground formations or in highly fractured formations it is normal to lose all the drill fluid pumped into the borehole without an inadvertent return occurring. Drill fluid pumping rates can be as high as 750 gallons per minute.

An inadvertent return cannot occur unless drill fluid escapes from the borehole into the formation. Hence preventing and managing such escapes will in turn prevent and manage inadvertent returns. Drilling fluid releases are typically caused by pressurization of the drill hole beyond the containment capability of the overburden soil material. In some cases, an inadvertent return of drilling fluid can be caused by existing conditions in the geologic materials (e.g., fractures) even if the down hole pressures are low.

Drill fluid pressures are generally the highest during the pilot hole process and hence it is this process that presents the greatest risk for an inadvertent return. If an inadvertent return occurs during the pilot hole it opens a path through the ground formation for drill fluid to escape during the subsequent processes. Hence inadvertent returns are likely, at the same location during the hole opening and pullback process. Similarly, if the pilot hole process can be completed without an inadvertent return then it is likely that the entire installation can also be completed without an inadvertent return.

The Project will conduct IR response activities in accordance with applicable regulatory requirements and will seek environmental and cultural resource clearances / approvals as necessary prior to the commencement of response activities. Additionally, the Project will conduct IR response activities in accordance with the standards and restrictions described within Resource Reports 1 and 2 for activities within uplands and wetlands / waterbodies, respectively. Therefore, the Project does not anticipate additional restrictions for equipment use and clearing to access and clean up IRs that may occur.

Considerations for managing inadvertent returns are described below.

7.1 Terrestrial Release Procedures

- Stop work immediately.
- The bore stem will be pulled back to relieve pressure on the IR.
- Isolate the area with hay bales, sand bags, filter sock, or silt fencing to surround and contain the drilling mud.
- Determine and document the following to the extent reasonably possible:
  - Quantity (gallons) of material released
  - Distance (feet) to the nearest waterbody
  - Name of the waterbody affected, if any
- Immediately contact the appropriate parties as listed in the "Required Notifications" section at the end of this document.
- A mobile vacuum truck (or pump if in an inaccessible area) will be used to pump the drilling mud from the contained area and into either a return pit or (if using a pump) into a filter bag surrounded by 18" Fabric Filter Fence or Compost Filter Sock.
- Once excess drilling mud is removed, the area will be seeded and/or replanted using species similar to those in the adjacent area or allowed to re-grow from existing vegetation.
- When there is no visible indication of flow at the IR location, the IR will be considered stabilized.

After the IR is stabilized, document the IR from discovery through post-cleanup conditions with photographs and prepare an IR incident report describing time, place, actions taken to remediate IR, and measures implemented to prevent recurrence. The incident report will be provided to the Project Environmental Coordinator within 24 hours of the occurrence.

7.2 Aquatic Release Procedures

- Stop work immediately.
- The bore stem will be pulled back to relieve pressure on the IR.
- Isolate the area with hay bales, sand bags (cofferdam), plastic sheeting, filter sock, silt fence or other appropriate containment structure to surround and contain the IR;
- Immediately contact the appropriate parties as listed in the "Required Notifications" section at the end of this document.
- Utilize clean water pumps to establish a pump around to convey upstream flow around the IR;
- Turbidity curtains may be deployed (depending on site conditions at time of IR);
- Determine and document the following to the extent reasonably possible:
  - Quantity (gallons) of the IR

- Quantity (gallons) that was released to the waterbody
- Distance (feet) the material traveled down the waterbody
- Name of the affected waterbody

- A mobile vacuum truck (or pump if in an inaccessible area) will be used to pump the drilling mud from the contained area and into either a return pit or (if using a pump) into a filter bag surrounded by 18" Fabric Filter Fence or Compost Filter Sock.
- Drilling mud will be collected and typically recycled through the drilling mud reclaimer, reused or disposed of at a licensed disposal facility.
- When there is no visible indication of flow at the IR location, the IR will be considered stabilized.

After the IR is stabilized, document the IR from discovery through post-cleanup conditions with photographs and prepare an IR incident report describing time, place, actions taken to remediate IR, and measures implemented to prevent recurrence. The incident report will be provided to the Project Environmental Coordinator within 24 hours of the occurrence.

If an IR impacts a private drinking water supply, the Southgate Project will supply temporary drinking water supply in accordance with the Project's Water Resources Identification and Testing Plan immediately after the problem is discovered. The temporary water would be supplied until testing confirms that the water quality of the water supply returns to baseline. Additional long-term measures will be employed in accordance with the Water Resources Identification and Testing Plan if necessary, including the installation of permanent treatment, connection to a secondary water source, or establishment of a new on-site source.

7.3 Wetland Release Procedures

The Project intends the final designs of the HDDs to minimize the potential for inadvertent releases at resource crossing locations. However, inadvertent releases are still possible. Should one occur, the following measures will be employed:

1. Estimate the amount of release to conclude if containment structures would effectively contain the release.
2. Implement necessary containment measures to contain and recover the slurry unless one of the following conditions is present:
    a. The sensitivity of wetland areas may result in containment and recovery efforts causing additional disturbance due to travel of equipment and personnel, possibly offsetting any benefit gained from containing and removing the slurry.
    b. Should the amount of the slurry be too small to allow practical collection from the affected area, the fluid will be diluted with fresh water or allowed to dry and dissipate naturally.
3. Suspend drilling operations if the release cannot be controlled or contained until appropriate containment can be installed.
4. Remove contained fluids by either a vacuum truck or by pumping to a location where a vacuum truck can access them.

5. Conduct final clean-up once HDD installation is complete

7.4 Accessing Releases Off Right-of-Way and in Inaccessible Areas

Prior to the commencement of HDD activities, the Project will attempt to acquire written permission from landowners crossed by the HDDs to allow for pedestrian monitoring and/or IR cleanup activities. The permission will allow for biological and cultural resource surveys as necessary as well as for limited equipment access for cleanup / restoration should an IR to surface or within a wetland / waterbody occur. Should an IR occur outside of approved workspaces or require a workspace variance for access to allow for cleanup / restoration, the Project will obtain the necessary environmental and/or cultural clearances and submit a request for variance to FERC for review and approval prior to the initiation of any activity outside of those approved workspaces.

8.0 RESTORATION

The Project will restore areas affected by IRs to pre-construction conditions and surface elevations to the extent practicable. Upland areas will be restored through standard right-of-way restoration procedures as detailed within Resource Report of the Environmental Report and applicable regulatory clearances and approvals. Restoration of wetlands and waterbodies will be conducted in accordance with the procedures identified within Resource Report 2 of the Environmental Report as well as applicable regulatory clearances and approvals.

9.0 CONTINGENCY PLANNING

9.1 Alternate Crossing Measures

If the HDD installation is unsuccessful and the Southgate Project determines abandonment of the HDD is necessary, the Project's proposed alternative is to use the Contingency Plan. The Contingency Plan includes implementation of an open cut wet or dry ditch crossing method (scenario dependent). This alternative crossing method would require Federal Energy Regulatory Commission and other environmental permitting approvals.

9.2 Abandonment

Should an HDD fail, and the drill hole needs to be abandoned to allow for a secondary attempt or an alternative construction method, the Project will, if necessary, seal the drill hole with grout to a point approximately five feet from the surface. The remainder of the annulus will be filled with soil and compacted as necessary to meet the density of the surrounding soil. Abandonment procedures will be completed in accordance with applicable regulatory requirements.

10.0 REFERENCES

This Contingency Plan was adapted from the following websites:

http://www.blm.gov/pgdata/etc/medialib/blm/wy/information/NEPA/cfodocs/greencore.Par.0871.File.dat/P ODappH.pdf

https://www.csx.com/index.cfm/library/files/customers/property-real-estate/permitting/sample-fraction-mitigation-plan/

http://www.energy.ca.gov/sitingcases/smud/documents/applicants_files/Data_Response_Set-1Q/APPENDIX_C_FRAC_OUT_PLAN3.PDF

Other References include:

Virginia Department of Environmental Quality (VDEQ). 2018. Division of Mineral Mining. Available online at: https://dmme.virginia.gov/DMM/uraniumpermit.shtml Accessed July 19, 2018.

North Carolina Geological Survey (NCGS). 2016. NC Oil and Gas Wells. Available online at: https://files.nc.gov/ncdeq/Energy%20Mineral%20and%20Land%20Resources/Energy/documents/Energy/NC_Oil_%26_Gas_Wells_terrane_plot.jpg Accessed July 16, 2018.

2200 Energy Drive | Canonsburg, PA 15317
833-MV-SOUTH | mail@mvpsouthgate.com
www.mvpsouthgate.com

October 21, 2019

Via Email

Mr. Vann Stancil
North Carolina Wildlife Resources Commission
Habitat Conservation Division
1721 Mail Service Center
Raleigh, NC 27699-1721

RE: Responses to Comments Received on the MVP Southgate Project

Dear Mr. Stancil:

In response to your comments on the Draft Environmental Impact Statement for the Southgate Project dated September 16, 2019, information is being provided in the enclosed attachment.

Should you have any additional questions or require further information to complete your review of the Project, please do not hesitate to contact Megan Stahl at (412) 737-2587 or via email at mstahl@equitransmidstream.com or myself at (561) 691-7054 or via email at kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador

Kathy Salvador
Senior Director, Environmental Services

cc: John Ellis, USFWS
Amanda Mardiney, FERC
Allen Jacks, Cardno
William Lavarco, MVP Southgate
Megan Stahl, MVP Southgate

MVP Southgate Project

FERC Docket No. CP19-14-000

Responses to North Carolina Wildlife Resources Commission Comments Received on the MVP Southgate Project

Attachments

October 2019

Request:

Pages ES-5 & ES-9

1. The amount of collocated pipeline is listed as 40 miles and 54% on page ES-5 and 39 miles and 52.5% on page ES-9. Table 2.1-2 on page 2-3 lists 38.7 miles or 52.5% of collocated pipeline. These discrepancies should be compared and clarified.

Response Submitted October 18, 2019:

The Project will provide a REVISED Appendix 1-E1 – Existing Utility Corridors Adjacent to the MVP Southgate Project in its October 2019 supplemental filing.

Request:

Cumulative Impacts, Page ES-8

2. The DEIS does not adequately address the cumulative impacts that will occur as a result of the Southgate Project. The DEIS does not consider the impacts associated with constructing new pipelines for distributing natural gas to customers once the project is complete.

Response Submitted October 18, 2019:

The Project provided a comprehensive cumulative impact analysis in its November 2018 Resource Report 1, Section 1.10 Cumulative Impacts and subsequent data response filings with the FERC. Please see Attachment 1 in response to comments raised by the NCWRC, and other stakeholders, regarding the Southgate's purpose and need.

Request:

Purpose and Need, Page 1-2

3. The proposed Southgate Project will interconnect with the Mountain Valley Pipeline which is still under construction. Until the Mountain Valley Pipeline project is complete and operational, constructing the Southgate Project is premature.

Response Submitted October 18, 2019:

Please see Attachment 1 in response to comments raised by the NCWRC, and other stakeholders, regarding the Southgate's planned construction schedule as it relates to the completion of the Mountain Valley Pipeline.

Request:

Additional Temporary Workspace, Page 2-9, Section 2.3.3

4. Appendix B.3 lists locations where additional temporary workspaces (ATW) are located less than 50 feet from a wetland or waterbody. Many of these ATWs are located 0 feet from surface water resources. Providing appropriate comments on ATWs within 50 feet of surface water features is not possible given the lack of detailed information provided in Appendix B.3. Maps showing delineated wetlands and waterbodies along with proposed ATWs are needed to provide comments on this aspect of the project.

Response Submitted October 18, 2019:

An additional temporary workspace justification table will be included in the October Supplemental as Revised [Oct 2019] Appendix 2-F.

Request:

Construction Procedures, Page 2-12, Section 2.4 and Page 4-34

5. Appendix B.8 lists locations where the construction workspace parallels a waterbody within 15 feet. Providing appropriate comments on construction workspaces paralleling surface water features within 15 feet is not possible given the lack of detailed information provided in Appendix B.3. Maps showing delineated wetlands and waterbodies along with proposed construction workspaces and contour lines are needed to provide comments on this aspect of the project.

Response Submitted October 18, 2019:

An additional temporary workspace justification table will be included in the October Supplemental as Revised [Oct 2019] Appendix 2-F.

Request:

Clearing and Grading, Page 2-15, Section 2.4.1.2

6. NCWRC recommends the use of biodegradable and wildlife-friendly sediment and erosion control devices. Silt fencing, fiber rolls, and/or other products should have loose-weave netting that is made of natural fiber materials with movable joints between the vertical and horizontal twines. Silt fencing or similar materials that have been reinforced with plastic or metal mesh should be avoided as they impede the movement of terrestrial wildlife species. Studies have shown the likelihood of many species, particularly birds, amphibians, and reptiles, to become entrapped in these devices and die due to their inability to escape.

Response Submitted October 18, 2019:

MVP will evaluate the use of erosion control devices with plastic or metal mesh reinforcement to determine if alternative devices could be installed in certain terrestrial sensitive areas. The project has requested additional information from the NCWRC for specific habitat types along the right-of-way as candidates for wildlife friendly alternatives.

Request:

Existing and Approved Natural Gas Pipeline Systems, Page 3-3, Section 3.3.1

7. The Atlantic Coast Pipeline is located east of the Southgate Project, not west.

Response Submitted October 18, 2019:

Comment noted.

Request:

Route Alternatives and Variations, Page 3-6

8. In a letter dated 10 August 2018, NCWRC recommended routes variations for the Southgate Project. MVP responded to these recommendations on 1 Nov. 2018. While most recommendations were not incorporated into the route, MVP indicated that they adjusted the route in the Town Creek watershed to reduce the number of stream crossings. We recommend that this adjustment be described in the EIS where appropriate.

Response Submitted October 18, 2019:

The Project is evaluating a route variation near Town Creek, see New Table 138b-1 Comparison of the Current Route (May 2019) and Moore Variation (MP 33.1 to MP 33.9) in its October 2019 Supplemental Filing.

Request:

Surface Water Crossings, Page 4-32, Section 4.3.2.2

9. Mussel surveys are not yet complete, therefore NCWRC cannot recommend where time of year restrictions (TOYR) are appropriate. In general, NCWRC recommends more stringent measures to control sedimentation and erosion in watersheds that drain to waterbodies with sensitive species. Such measures include installing sediment control fencing and stabilizing unvegetated fill. Unvegetated fill should be stabilized at the end of each work day with an acceptable erosion control cloth, blanket, or matting until the fill is ready to be permanently stabilized. In addition, no grubbing should occur with 50' of surface waters with sensitive species outside of the growing season (TOYR from Nov. 15 – April 1) to protect mussels from sedimentation impacts.

Response Submitted October 18, 2019:

Aquatic species surveys for the Project are now complete, and survey results will be submitted to NCWRC in October 2019. Additional information regarding the construction sequence for clearing and grubbing the right-of-way will be provided to the USFWS and NCWRC. As a standard construction practice, the Project will establish a 50' wetland and waterbody buffer with erosion and sediment control devices. The buffer will not be grubbed during the initial right-of-way clearing and grubbing sequence. These buffers will remain undisturbed (aside from hand felling trees) until the pipeline crossing is ready to be installed in the ephemeral, intermittent, or perennial stream. Since the disturbance within the riparian buffers and the stream will be of short duration, MVP believes that grubbing restrictions will not be necessary.

Request:

Surface Water Crossings, Page 4-33, Section 4.3.2.2

10. NCWRC may request additional HDD or conventional bore crossings if rare aquatic species are detected during surveys.

Response Submitted October 18, 2019:

Aquatic species surveys for the Project are now complete, and survey results will be submitted to NCWRC in October 2019. Mountain Valley does not anticipate the need for additional HDD or bore crossings beyond the five already scheduled for crossing via HDD or conventional bore, as no rare aquatic species were identified during surveys.

Request:

Appendix B.5

11. In the table Waterbodies Crossed by the Southgate Project, the crossing method listed is "Open Cut – Dam and pump, Flume". Open cut should be described in section 4.3.2.2 and/or the terminology in the table should be updated. It is unclear if open cut is a dry-ditch crossing method or a wet crossing method.

Response Submitted October 18, 2019:

In the Appendix B.5 table referenced, "dam and pump" and "flume" are dry open-cut crossing methods that separate stream flow from construction activities. No wet crossing pipeline construction methods will be used on the Project.

Request:

State Designated Use and Exceptional Waters, Page 4-38

12. Five streams with sensitive warmwater fish are proposed to be crossed using HDD or conventional bore. As long as these five streams are crossed using either HDD or conventional bore, NCWRC does not request a TOYR for warmwater fish.

Response Submitted October 18, 2019:

Mountain Valley proposes to conventionally bore or HDD five streams, including Cascade Creek, Dan River, Wolf Island Creek, Stony Creek, and Deep Creek.

Request:

Horizontal Directional Drill Water, Page 4-42 & Dust Control, Page 4-43

13. NCWRC supports the use of municipal water for HDD, dust control and other uses. More information is needed if surface water supplies will be used. If municipal water has any additives such as chlorine or chloramine or if an algicide is added to the water, it should not be released into surface waters unless it is safe for sensitive species including amphibians and aquatic invertebrates.

Response Submitted October 18, 2019:

The project is currently evaluating both a freshwater withdrawal and municipal water source. The project will also comply with ensuring any additives are removed from the water prior to discharging to upland areas. No discharging directly to aquatic resources will occur.

Request:

General Impacts and Mitigation Page 4-52, Section 4.4.2

14. One of the stated requirements for successful wetland revegetation is that invasive species and noxious plants are not present, unless "they are abundant in adjacent areas" undisturbed by construction. Abundant is not defined and it is unclear if the same species must be present and "abundant" to consider revegetation successful despite the presence of invasive species. Efforts should be made to control invasive species and noxious plants regardless of adjacent conditions.

Response Submitted October 18, 2019:

The project will install wash stations at contractor yards and also at select locations on the right-of-way during topsoiling activities to minimize the spread of invasive species. Invasive species management methods (as outlined in the Exotic and Invasive Species Control Plan) will be applied to control the spread of invasive species within the right-of-way, and spot eradications for invasive species will occur regardless of the conditions adjacent to the right-of way; however, the project cannot control the population outside of the LOD. Minimizing the population of invasive species within the right-of-way will help allow for planted species to grow and establish for a more successful revegetation effort.

Request:

Extra Workspace Within 50 Feet of Wetlands, Page 4-52

15. Appendix B.3 lists locations where additional temporary workspaces (ATW) are located less than 50 feet from a wetland or waterbody. Many of these ATWs are located 0 feet from the resources. Providing appropriate comments on ATWs within 50 feet of surface water features is not possible given the lack of detailed information provided in Appendix B.3. Maps showing delineated wetlands and waterbodies along with proposed ATWs are needed to provide comments on this aspect of the project.

Response Submitted October 18, 2019:

An additional temporary workspace justification table will be included in the October Supplemental as Revised [Oct 2019] Appendix 2-F.

Request:

Vegetation Communities of Special Concern or Value, Page 4-55, Section 4.5.2

16. The NCWRC does not have purview over plants that are state listed.

Response Submitted October 18, 2019:

Comment noted.

Request:

Pipeline Facilities, Page 4-62

17. The EIS should include seeding details such as specific plant species, seeding rates, composition of each species in plant mixes and location and conditions where different seed mixes would be used.

Response Submitted October 18, 2019:

MVP will comply. The project will continue to request input from the NCWRC on species selection for mixes. The seed mixes will be reviewed and approved by the North Carolina Department of Environmental Quality.

Request:

Interior Forest Fragmentation and Edge Effects, Page 4-64

18. While we recognize that a large percentage of the Southgate Project will be collocated, there are impacts to interior forests. More detail is needed regarding how the acreage of interior forest and forest edge was calculated. A table showing the acreage of forested blocks affected by the pipeline and the amount of interior forest and forest edge impacted in each block would be helpful.

Response Submitted October 18, 2019:

"The Project evaluated large tracts of forested land in the siting process to avoid fragmentation where practicable. As discussed in the Project's November 2018, Resource Report 3, Section 3.3.4, to minimize impacts from loss of forest cover and forest fragmentation, the Project is intentionally collocated with existing utility corridors and other disturbed lands.

Methodology for identifying interior forest and forest edge affected by the Project included the following:

1) The agricultural, commercial/industrial, open land, and residential land use areas identified for the Project (see Resource Report 8) were buffered by 300 feet. These 300-foot buffer areas were mapped as forest edge.

2) All other land use types (not including silviculture, herbaceous wetlands, or open water) that fell outside of the 300 foot buffer were mapped as forest interior.

3) The mapped interior forest was then further refined based on review of available aerial photography for areas adjacent to the mapped interior forest and outside of the Project survey corridor. The mapped interior forest was adjusted as needed where open fields were visible just outside of the survey corridor and abutting within 300 feet of the interior forest.

An updated Table 3.4-2 (Acreage of Forest Interior and Forest Edge Affected by Construction and Operation of the MVP Southgate Project) will be provided in the October 2019 FERC filing.

On August 10, 2018 the Southgate Project received a comment letter from NCWRC that recommended 14 specific locations where minor deviations from the current route would reduce forest fragmentation and riparian impacts at stream crossings (see the Project's November 2018, Resource Report 1, Appendix 1-K). The Project has evaluated these recommendations and has incorporated five of the recommended revisions into the route to reduce fragmentation and impacts to waterbodies. Of the remaining nine recommendations, seven were determined to be either infeasible based upon proximity to nearby residences and commercial facilities and inability to align the route with the final tie-in location or to have greater impact compared to the route and two are no longer relevant due to larger implemented route variations. On November 1, 2018, the Project responded to each route deviation provided by NCWRC (see Resource Report 1, Appendix 1-K)."

Request:

Vegetation Conclusions, Page 4-65, Section 4.5.5

19. Concluding that there is "extensive distribution of similar vegetation communities" in North Carolina underestimates the local impacts of the pipeline on interior forests and the wildlife species inhabiting them. We recommend efforts in addition to collocation to mitigate for lost acreage of interior forest.

Response Submitted October 18, 2019:

As discussed in Comment Response 18 above, to minimize impacts from loss of forest cover and forest fragmentation, the Project is intentionally collocated with existing utility corridors and other disturbed lands to the maximum extent practicable. The Project will continue to confer with the NCWRC regarding further efforts to mitigate for impacts.

Request:

Pipeline Facilities, Page 4-68, Section 4.6.1.1

20. The DEIS states that direct handling of any state or federally listed species will be prohibited unless approved by the applicable regulatory agencies. NCWRC can have further discussions with MVP regarding conditions and procedures for handling state listed species.

Response Submitted October 18, 2019:

Mountain Valley is aware that surveyors conducting biological surveys must obtain state and/or federal permits prior to initiating surveys targeting specific taxa groups. Survey plans are drafted and provided to NCWRC and USFWS for review and comment prior to initiating biological surveys. MVP will continue to coordinate with NCWRC/USFWS prior to initiating biological field surveys and will provide credentials for surveyors involved in these efforts.

Request:

Pipeline Facilities, Page 4-68, Section 4.6.1.1

21. The discussion of interior forest impacts and habitat fragmentation does not adequately address the increase in forest edge or loss of large blocks of interior forest. The NCWRC is concerned about forest fragmentation and the impacts on interior forest and their associated wildlife species resulting from the Southgate Project. North Carolina provides migratory corridors as well as breeding habitat for hundreds of species of birds. The loss of habitat and increased fragmentation will result in edge effect, which will intensify predation, reduce productivity, allow for the spread of invasive species and displace already imperiled species. More information is needed regarding forest block sizes before and after right-of-way (ROW) clearing and mitigative measures to reduce impacts to interior forest habitat.

Response Submitted October 18, 2019:

See Comment Response 18 above.

Request:

Sensitive and Managed Wildlife Habitats, Page 4-72, Section 4.6.2

22. In North Carolina, "Game Areas" should be referred to as Game Lands.

Response Submitted October 18, 2019:

Comment noted.

Request:

Migratory Birds, Page 4-73, Section 4.6.3.1

23. The last sentence of the fourth paragraph should also include the "NC Wildlife Action Plan as species of greatest conservation need" in the list of conservation priorities. Similarly, Table 4.6-2 should reference NCWRC for species such as northern bobwhite and brown-headed nuthatch.

Response Submitted October 18, 2019:

Table 4.6-2 was updated to reference the NC SWAP SGCN list and cite NCWRC as a source for species already present in the table as well as additional species incorporated into the table. This table is included with this submittal in Attachment 2.

Request:

Migratory Birds Impact and Mitigation, Page 4-75

24. Breeding bird capture data suggest that migratory bird breeding can occur as early as late March and continue through August in the Piedmont in North Carolina. Therefore, we support the recommendation from the US Fish and Wildlife Service that clearing be avoided from April through August to minimize impacts to breeding birds.

Response Submitted October 18, 2019:

Mountain Valley will attempt to avoid clearing activities during the peak nesting season of Project-specific Migratory Bird Species of Concern. If clearing cannot be avoided during this time, Mountain Valley will consult with the appropriate agencies to determine appropriate conservation measures to minimize impacts to the greatest extent practicable.

Request:

Migratory Birds Impact and Mitigation, Page 4-76

25. NCWRC recommends a TOYR for ROW maintenance from April 1 to October 1. This will reduce impacts to nesting wildlife, including reptiles, amphibians and ground-nesting birds.

Response Submitted October 18, 2019:

Per the VADCR recommendation provided on September 11, 2019 and the NCWRC filing of September 16, 2019, Mountain Valley will conduct vegetation mowing between October 15 and April 1.

Request:

Game Species Impacts and Mitigation, Page 4-79, Section 4.6.4.1

26. The DEIS states that measures to keep all-terrain vehicles (ATV) from using ROWs are discussed in Section 4.9 Transportation. Controlling ATV access to ROWs is an important topic but it is not addressed in Section 4.9. Off-road vehicles and ATVs can impact aquatic resources by driving across and along streams as well as impacting vegetation in riparian zones near streams. Access to streams along maintained ROWs will increase once the Southgate Project is completed.

Response Submitted October 18, 2019:

Although the Project cannot secure the right-of-way to prevent landowner access, Mountain Valley will report any landowner or public caused damage to the North Carolina Department of Environmental Quality. Gates will be installed to restrict access to permanent features such as compressor stations and main line valves. Efforts to collocate additionally minimize the creation of new access points for ATV's.

Request:

Fisheries of Special Concern Impacts and Mitigation, Page 4-80, Section 4.6.5.2

27. NCWRC can participate in future discussions to develop a detailed plan for relocating aquatic species
at crossing locations.

Response Submitted October 18, 2019:

Mountain Valley met with NCWRC on October 9, 2019. During that meeting both parties discussed that after aquatic species survey results are submitted, another meeting will be held to discuss procedures for aquatic species relocations at specific crossings locations.

Request:

Hydrostatic Testing and Water Withdrawals, Page 4-85

28. Text in this section of the DEIS indicates that water will be withdrawn from surface waters. Elsewhere in the DEIS, municipal water sources are listed as the primary or only source of water. This discrepancy needs to be addressed. To prevent entrainment and impingement of aquatic organisms, the NCWRC recommends intake velocities, as measured through the intake screening material, of 0.25 feet per second (fps) or less and mesh sizes of 1 mm in surface waters containing sensitive species.

Response Submitted October 18, 2019:

The Project is currently evaluating both a freshwater withdrawal and municipal water sources. The Project will comply with the above stated restrictions.

Request:

Mussel Surveys, Page 4-92, Section 4.7.4.5

29. NCWRC should also be consulted if listed or otherwise sensitive mussel species are documented during surveys.

Response Submitted October 18, 2019:

Mountain Valley's mussel survey study plan (submitted February 2019) stated that NCWRC will be notified within 24 hours via phone or e-mail if a sensitive mussel species is observed during survey efforts. Mussel survey efforts are complete, and a technical report of findings will be provided to NCWRC and USFWS for review and comment in October 2019.

Request:

Page 4-94, Table 4.7-2

30. Northern Long-eared Bats should be listed in the table as state threatened. Northern yellow bat does not occur in the study area. Records confirmed by biologists of the northern yellow bat are only from Brunswick County. Potential records occur in Mecklenburg and New Hanover counties.

Response Submitted October 18, 2019:

Table 4.7-2 has been updated and is attached with this submittal as Attachment 3.

Request:

Mammals, Page 4-95, Section 4.7.7.1

31. Little brown bats may also occur in Rockingham and Alamance counties.

Response Submitted October 18, 2019:

Mountain Valley acknowledges the NCWRC's comment that little brown bats may potentially occur in Rockingham and Alamance counties as well as Pittsylvania County.

Request:

Mammals, Page 4-95, Section 4.7.7.1

32. It is stated that "No roost trees for tri-colored bats occur in the Project area." This statement seems unlikely since in the summer, tri-colored bats have been found to roost in dead clusters of leaves, live foliage, and in hollows in trees.

Response Submitted October 18, 2019:

Mountain Valley acknowledges that potential roosting habitat for tri-colored bats may occur in the Project counties. No roost trees have been recorded within the Virginia Project area per VDGIF's online data mapping application for known tri-colored bat winter habitat and roosts.

Request:

Mammals, Page 4-96, Section 4.7.7.1

33. Due to the decline of bat populations, specifically those of myotis species and tricolored bats, we feel the project would not significantly impact bats if tree clearing activities were avoided during the maternity roosting season for bats (May 15 – August 15).

Response Submitted October 18, 2019:

In North Carolina, 52 mist net sites and 11 acoustic survey sites were completed between July 13 and August 14, 2018. No federally listed species were captured during mist net surveys, nor were any listed species confirmed based on manual vetting of acoustic data in North Carolina. As such, the Project is not likely to adversely affect any federally listed bat species and the Project is not subject to tree clearing restrictions.

Request:

Mammals, Page 4-96, Section 4.7.7.1

34. Due to the decline of bat populations, specifically myotis species and tricolored bats, we recommend that tree clearing activities not occur during the maternity roosting season for bats (May 15 – August 15). Adhering to this TOYR, which coincides with the TOYR for migratory birds, would enable the project to further avoid significant impacts to bats.

Response Submitted October 18, 2019:

No federally listed species were captured during mist net surveys, nor were any listed species confirmed based on manual vetting of acoustic data in North Carolina. As such, the Project is not likely to adversely affect any federally listed bat species; however, as stated in Resource Report 3, Mountain Valley will attempt to avoid tree clearing during the peak nesting season of Project-specific Migratory Bird Species of Concern and these restrictions will also benefit bats during the maternity roosting season.

Request:

Mussels, Page 4-97, Section 4.7.7.4

35. NCWRC can participate in future discussions to develop a detailed plan for relocating mussels and other aquatic species at crossing locations.

Response Submitted October 18, 2019:

MVP will coordinate with NCWRC regarding aquatic species relocation efforts at a date prior to instream construction events. Mussel/aquatic species relocations are currently anticipated to occur prior to the initiation of instream construction activities at crossings determined in consultation with NCWRC.

Request:

Wildlife and Aquatic Resources, Page 5-8, Section 5.1.6

36. While some fish species may migrate away from impacts, some benthic fish species may not move away and freshwater mussels will not move away from impacts.

Response Submitted October 18, 2019:

Mountain Valley will coordinate with NCWRC regarding aquatic species relocation efforts in the future and prior to instream construction activities.

Request:

Waterbodies Crossed by the Southgate Project, Appendix B-5

37. This table includes streams that are apparently not crossed by the pipeline because the crossing width is 0 and the crossing method is N/A. The reason for including these stream crossings is unclear. Additional commentary is needed.

Response Submitted October 18, 2019:

Crossing width is the intersection of the waterbody and the centerline of the pipeline or access road. If the crossing width is "0," the waterbody is not crossed by the centerline but is within the Project workspace.

Request:

Appendix B-8

38. The justification for locating construction workspace within 15 feet of surface waters is often avoiding side slope construction. Including more details about the side slopes, such as the slope percent, would help justify the decision to locate the construction workspace so close to surface waters. Including the minimum and average distance of the workspace to the waterbody and providing a name for streams would also be beneficial.

Response Submitted October 18, 2019:

During routing, the Project tried to avoid side slope construction to the greatest extent possible. Although in some areas this was unavoidable. An additional temporary workspace justification table will be included in the October Supplemental Filing as "Revised [Oct 2019] Appendix 2-F."

MVP Southgate Project

Attachment 1

Response to Comments Regarding the Southgate Project's Purpose and Need

October 2019

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Mountain Valley Pipeline, LLC	)	**Docket No. CP19-14-000**

ANSWER OF MOUNTAIN VALLEY PIPELINE, LLC TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

Pursuant to Rule 213 of the Federal Energy Regulatory Commission's ("FERC" or "Commission") Rules of Practice and Procedure,[1] Mountain Valley Pipeline, LLC ("Mountain Valley") hereby answers certain comments filed regarding the Commission's Draft Environmental Impact Statement prepared for the Southgate Pipeline Project ("Southgate Project" or "Project").[2]

BACKGROUND

The Commission issued a Notice of Availability of the DEIS for the Southgate Project on July 26, 2019, requiring comments on the DEIS be submitted by September 16, 2019.[3] The DEIS concludes that while the Southgate Project may result in some adverse environmental impacts, the majority of impacts "would be reduced to less-than-significant levels" with the implementation of various mitigation measures.[4] In this Answer, Mountain Valley responds to a number of comments on the Project filed by non-governmental organizations, state and local governments, and other commenters.[5]

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[1] 18 C.F.R. §§ 385.212 & 385.213 (2019).
[2] Mountain Valley Pipeline, LLC, Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000 (July 26, 2019) ("DEIS").
[3] Notice of Availability of the Draft Environmental Impact Statement for the Proposed Southgate Project, Docket No. CP19-14-000, at 2 (July 26, 2019).
[4] DEIS at ES-9; 5-1.
[5] Mountain Valley provided additional information in response to specific commenters in its response to the Commission's October 3, 2019 Environmental Information Request, Post-Application No. 4, submitted on October 18, 2019.

Mountain Valley responds to certain issues that are predominately legal in nature in this narrative and responds to other more discrete issues raised by commenters in the table attached as Exhibit 1.

The Southgate Project is a new natural gas pipeline system commencing near Chatham, Virginia and terminating at a delivery point with Dominion Energy North Carolina[6] ("DENC") near Graham, North Carolina. The Project includes approximately 73 miles of pipe, one compressor station, associated valves, piping, and appurtenant facilities, and will receive gas from two new interconnections, one with the Mountain Valley Pipeline Project ("Mainline Facilities")[7] and one with East Tennessee Natural Gas Transmission, LLC ("East Tennessee"). Mountain Valley has a long-term, binding precedent agreement with DENC for 300,000 dekatherms ("Dth") per day on the Project.

I.
EXECUTIVE SUMMARY

Notwithstanding protestations of insufficient time to comment, numerous detailed comments were filed on a multitude of issues in the DEIS. Certain commenters argue that Mountain Valley has failed to demonstrate that the Southgate Project is needed, but ignore the compelling fact that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for

[6] Formerly "PSNC Energy." After Mountain Valley filed the Application for the Southgate Project, Dominion Energy, Inc. ("Dominion") acquired PSNC Energy, which is now called Dominion Energy North Carolina and referred to as "DENC" in this Answer.

[7] The Commission issued the Certificate Order for the Mainline Facilities, which are currently under construction, on October 13, 2017. *See Mountain Valley Pipeline, LLC*, 161 FERC ¶ 61,043 (2017) ("Certificate Order"), *order denying reh'g*, 163 FERC ¶ 61,197 (2018), *aff'd*, *Appalachian Voices v. FERC*, No. 17-1271, 2019 WL 847199 (D.C. Cir. Feb. 19, 2019) (unpublished opinion). The MVP Certificate Order was upheld on appeal by the Court of Appeals for the District of Columbia Circuit ("D.C. Circuit"), which considered sixteen different challenges to FERC's environmental review of the Mainline Facilities and subsequent issuance of the certificate and denied all challenges, finding them without merit. *See Appalachian Voices v. FERC*, No. 17-1271 (D.C. Cir. Feb. 19, 2019).

300,000 Dth per day of capacity, representing approximately 80 percent of the total Project capacity. This is a strong demonstration of market need for the Project and is fully consistent with Commission policy and precedent.

Despite assertions otherwise, the National Environmental Policy Act ("NEPA") does not require the Commission to prepare a revised or supplemental DEIS for the Project. The DEIS, while not a final document, is thorough, comprehensive, and certainly does not warrant the preparation of a revised or supplemental draft. It contains more than sufficient information to provide the public an opportunity for meaningful analysis.

The DEIS analyzes all direct, indirect and cumulative impacts of, and reasonable alternatives to, the Project, consistent with the Commission's NEPA responsibilities. The DEIS does not improperly segment the Southgate Project by not evaluating the Mainline Facilities in the same environmental document. It is beyond reproach that any argument regarding segmentation does not apply in this situation, where the Commission has completed an EIS for the Mainline Facilities and is in the process of completing another comprehensive EIS for the Southgate Project—an FEIS which will include a comprehensive cumulative impacts analysis that considers the Mainline Facilities and two Transcontinental Gas Pipe Line Company, LLC ("Transco") compressor stations as "cumulative actions" within a resource-specific geographic scope of the Project.

Similarly, the DEIS provides a robust alternatives analysis consistent with NEPA requirements. The DEIS considered the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed above-ground facilities. Based on this, the DEIS reasonably concludes that no alternative "would provide

a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[8]

The DEIS also appropriately considered the principle of environmental justice in determining that the Southgate Project would not disproportionately impact minority or low-income populations. The DEIS identified the environmental justice communities within one mile of the proposed Lambert Compressor Station, and explains that impacts to these communities would not be disproportionately high or adverse because impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to *any* population.

The DEIS also addresses the potential greenhouse gas ("GHG") emissions attributable to the construction and operation of the Southgate Project, including cumulative impacts, and concludes that construction and operation-related emissions are not expected to have a significant impact on local or regional air quality. There is no NEPA requirement that the Commission consider impacts from upstream natural gas production allegedly induced by the Southgate Project, because the impacts of such activities are neither causally connected to the Southgate Project nor are they reasonably foreseeable.

With respect to downstream GHG emissions, Mountain Valley in both its Application and in its own comments on the DEIS has explained in detail that any potential downstream GHG emissions associated with the Southgate Project have already been accounted for in the Commission's "upper bound" estimate for the Mainline Facilities and by virtue of the fact that the expected deliveries of natural gas from East Tennessee into the Southgate Project will come from existing capacity and will not require any expansion

[8] DEIS at 3-48.

of the East Tennessee system. Thus, any further quantitative estimate would result in misleading and inaccurate double-counting of impacts. For the same reason, there is no need to consider upstream GHG emissions, as the Southgate Project is not transporting additional volumes of natural gas and cannot, therefore, be said to be "inducing" additional natural gas production.

In sum, the Commission's DEIS is consistent with the requirement that the Commission take a "hard look" at the environmental impacts of its actions.[9]

II.
ANSWER

A. Mountain Valley Has Fully Demonstrated the Need and Demand for the Project.

Commenters argue that the Southgate Project is not needed and that market demand in the Southeastern United States does not support the Project.[10] Notwithstanding that this argument is not a comment regarding the DEIS, Mountain Valley will once again explain why these commenters are incorrect. Commenters deliberately ignore that Mountain Valley has entered into a binding 20-year precedent agreement with DENC, a local distribution company operating in North Carolina, for 300,000 Dth per day of capacity on the Southgate Project, representing approximately 80 percent of the total Project capacity, which fully supports the market need for the Project.[11]

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[9] *Mo. Coal. for the Env't v. FERC*, 544 F.3d 955, 958 (8th Cir. 2008) (quoting *Mayo Found. v. Surface Transp. Bd*., 472 F.3d 545, 549 (8th Cir. 2006)); *see also Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc*., 462 U.S. 87, 97 (1983).

[10] Comments of Appalachian Mountain Advocates, *et al.* on Draft Environmental Impact Statement for Mountain Valley Pipeline, LLC's Proposed Southgate Project, Docket No. CP19-14-000, at 5-7 (Sept. 16, 2019) ("AMA Comments"); Comments and Request for 60-Day Extension for Comments of Blue Ridge Environmental Defense League, Docket No. CP19-14-000, at 5-8 (Sept. 16, 2019) ("BREDL Comments").

[11] Application of Mountain Valley Pipeline, LLC for Authorization to Construct and Operate Pipeline Facilities Under the Natural Gas Act, Docket No. CP19-14-000, at 7 (Nov. 6, 2018) ("Application"). Mountain Valley will be at risk for the additional 20 percent of the capacity as stated in its Application.

The Commission's Certificate Policy Statement plainly states that binding precedent agreements are "significant evidence of demand for [a] project."[12] In approving the Mainline Facilities, the Commission explained that binding agreements are the "best evidence that additional gas will be needed" in the markets the Project is intended to serve.[13] On appeal, the D.C. Circuit unequivocally affirmed the Commission's finding of need based on long-term precedent agreements.[14] While Commenters introduce their own demand projections, this does not overcome the fact that the most objective evidence of market demand for the pipeline capacity created by the Project is Mountain Valley's precedent agreement with DENC for the overwhelming majority of the Project capacity. The D.C. Circuit consistently has upheld the Commission's finding of need based on the existence of precedent agreements under similar circumstances.[15] Therefore, in accordance with longstanding Commission practice and D.C. Circuit precedent, the Commission reasonably may conclude that Mountain Valley's long-term, binding precedent agreement with DENC provides adequate evidence of need for the Project.

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[12] *Certification of New Interstate Natural Gas Pipeline Facilities*, 88 FERC ¶ 61,227, at p. 61,748 (1999) ("Certificate Policy Statement"), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000). *See, e.g.*, *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 242 (D.C. Cir. 2013) (recognizing FERC's finding that precedent agreements supporting the project constituted "strong evidence of market demand") (citation omitted).

[13] Certificate Order, 161 FERC ¶ 61,043 at P 41.

[14] *Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *1 ("Notwithstanding petitioners' argument to the contrary, FERC's conclusion that there is a market need for the Project was reasonable and supported by substantial evidence, in the form of long-term precedent agreements for 100 percent of the Project's capacity"). *See also Sierra Club v. FERC*, 867 F.3d 1357, 1379 (D.C. Cir. 2017) (holding that applicants met the market need "by showing that 93% of their capacity has already been contracted for").

[15] *See Myersville Citizens for a Rural Community, Inc. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) ("[T]he Commission concluded that the evidence that the Project was fully subscribed was adequate to support the finding of market need. It is the case here, as it was in *Minisink*, that 'Petitioners identify nothing in the policy statement or in any precedent construing it to suggest that it *requires*, rather than *permits*, the Commission to assess a project's benefits by looking beyond the market need reflected by the applicant's existing contracts with shippers.") (quoting *Minisink Residents for Envtl. Pres. & Safety v. FERC*, 762 F.3d 97, 111 n.102 (D.C. Cir. 2014)) (emphasis added).

Commenters argue that the Commission must also consider indicators of project need other than precedent agreements. This is incorrect. While the Certificate Policy Statement *allows* the Commission to consider this type of information, it did not *require* the Commission to do so. The Certificate Policy statement *allows* pipelines to submit additional types of evidence that "*might include* . . . demand projections, potential cost savings to consumers, or a comparison of projected demand with the amount of capacity currently serving the market."[16] Indeed, Mountain Valley submitted such a market study with its Application. However, precedent agreements remain "significant evidence of demand for [a] project."[17]

The Certificate Policy Statement permits additional evidence to allow pipelines to demonstrate project need even if the pipeline had executed few (or even no) agreements to support it, because the amount of capacity under contract may not fully reflect "all the public benefits that can be achieved by a proposed project."[18] Accordingly, benefits could include "the environmental advantages of gas over other fuels, lower fuel costs, access to new supply sources or the connection of new supply to the interstate grid, the elimination of pipeline facility constraints, better service from access to competitive transportation options, and the need for an adequate pipeline infrastructure."[19] Mountain Valley explained in its Application that the Project provides many of these benefits. The Project introduces meaningful competition as it represents an additional interstate pipeline into

[16] Certificate Policy Statement, 88 FERC at p. 61,747 (emphasis added).
[17] *Id.* at p. 61,748.
[18] *Id.* at p. 61,744.
[19] *Id*.

North Carolina, where Transco has a near monopoly. Further, the Project provides DENC with flexibility, optionality, and diversity of supply.[20]

Thus, Mountain Valley has not only demonstrated Project need through its precedent agreement with DENC, it also has identified additional public benefits upon which the Commission may rely as evidence of Project need.

B. The DEIS Includes Sufficient Information to Analyze Impacts and Provide for Meaningful Public Review.

Some commenters assert that the DEIS is incomplete and lacks information necessary to analyze environmental impacts under NEPA, and that without this information, "the public cannot meaningfully comment on the project."[21] As a result, commenters argue that the Commission must either prepare a revised DEIS and release it for public comment, or issue a supplemental DEIS that addresses new information.[22] Commenters misapprehend the purpose of a DEIS and overstate the requirements under NEPA to prepare a revised or supplemental DEIS. The DEIS contains more than sufficient information for the public to understand the impacts of the Project and comment meaningfully thereon.

As the D.C. Circuit has held, "[b]y its very name, the DEIS is a draft of the agency's proposed [final] EIS, and as such the purpose of a DEIS 'is to elicit suggestions for change[,]'" and to provide a "springboard for public comment."[23] In the same vein, the

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[20] Application at 7-9.

[21] *See, e.g.*, Southern Environmental Law Center Comments on FERC's Draft Environmental Impact Statement for Mountain Valley Pipeline's Southgate Project, Docket No. CP19-14-000, at 6 (Sept. 16, 2019) ("SELC Comments"); BREDL Comments at 1-2.

[22] SELC Comments at 6.

[23] *Nat'l Comm. for the New River, Inc. v. FERC*, 373 F.3d 1323, 1328, 1329 (D.C. Cir. 2004) (quoting *City of Grapevine, Tex. v. Dep't of Transp.*, 17 F.3d 1502, 1507 (D.C. Cir. 1994)); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989)). *See also Se. Supply Header, LLC*, 120 FERC ¶ 61,257, at P 27 (2007) (denying request to issue revised DEIS where DEIS called for submission information before the end of the comment period or prior to construction).

Commission has explained that the DEIS "put[s] interested parties on notice of the types of activities contemplated and of their impacts."[24] Commenters must show that any alleged omissions in the DEIS "left the public unable to make known its environmental concerns about the project's impact."[25] It is not sufficient that the public was not able to "analyze each aspect of the project, such as specific rather than generalized statements of proposed sitings."[26] Courts have recognized that due to "the practical realities of large projects," such as the Southgate Project, "[i]f every aspect of the project were required to be finalized before any part of the project could move forward, it would be difficult, if not impossible, to construct the project."[27]

These practical realities are evidenced by the Commission's "longstanding practice to issue environmental documents along with recommended mitigation measures that request specific documentation of agency consultation, construction plans, and detailed information to supplement baseline data."[28] It is thus reasonable—and consistent with Commission practice—for the DEIS to contemplate that certain information will be provided subsequent to issuance of the DEIS.[29] The mere fact that additional information will be submitted after issuance of the DEIS does not, as commenters erroneously suggest,

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[24] *Constitution Pipeline Co.*, 154 FERC ¶ 61,046, at P 31 (2016).
[25] *New River*, 373 F.3d at 1329. The volume of comments received in response to the DEIS indicates the opposite—that commenters were more than able to make environmental concerns known to the Commission. *See id.*, 373 F.3d at 1329-30.
[26] *Id.*, 373 F.3d at 1329.
[27] *Id.* (quoting *E. Tenn. Nat. Gas Co.*, 102 FERC ¶ 61,225, at P 25 (2003)); *see also Robertson*, 490 U.S. at 350 (NEPA does not require all plans to be finalized and complete in draft or even final EIS).
[28] *Algonquin Gas Transmission, LLC*, 150 FERC ¶ 61,163, at P 56 (2015), *reh'g denied*, 154 FERC ¶ 61,048 (2016).
[29] SELC alleges that key information is missing from the DEIS (*see* SECL Comments at 5-6). However, the DEIS instructs Mountain Valley to either provide such information prior to the comment period deadline for the DEIS, or at a future date (*see* DEIS at 5-14 – 5-21). Mountain Valley complied with the DEIS and submitted the information required by the comment period deadline (*see, e.g.*, Mountain Valley Pipeline, LLC, Response to FERC Staff's Recommended Mitigation, Docket No. CP19-14-000 (Sept. 13, 2019)). Mountain Valley will continue to comply with all Commission directives contained within the DEIS, FEIS, and Commission orders.

in and of itself require the Commission to prepare a revised DEIS. "NEPA does not require agencies to constantly revise their issued analyses as new information becomes available."[30] The "fact that many of the permits, approvals, consultations, and variances required for the . . . project have been or will be filed after the formal public notice and comment periods does not mean that the public is excluded from meaningful participation."[31] On the contrary, information filed after the comment period continues to be "accessible to the public in the Commission's electronic database."[32]

This practice is consistent with the Council on Environmental Quality's ("CEQ") regulations implementing NEPA. CEQ regulations provide that an agency shall prepare a revised DEIS if the "draft statement is so inadequate as to preclude meaningful analysis."[33] The CEQ regulations further provide that an agency shall prepare a supplemental DEIS if: "(i) The agency makes substantial changes in the proposed action that are relevant to environmental concerns; or (ii) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts."[34] Neither of these conditions is present in this case; there is no basis to warrant a revised or supplemental DEIS.

Likewise, the Commission is not required to prepare a supplemental DEIS because the practical realities of the Southgate Project necessitate additional filings after issuance of the DEIS. The Supreme Court has soundly rejected the notion that an agency is required to prepare a supplemental DEIS each time new information becomes available. According

[30] *Dominion Cove Point LNG, LP*, 151 FERC ¶ 61,095, at P 52 (2015), *aff'd sub nom. EarthReports, Inc. v. FERC*, 828 F.3d 949 (D.C. Cir. 2016).
[31] *Constitution Pipeline*, 154 FERC ¶ 61,046 at P 31.
[32] *Id.*
[33] 40 C.F.R. § 1502.9(a).
[34] *Id.* § 1502.9(c)(1)(i)-(ii).

to the Court, requiring otherwise "would render agency decisionmaking intractable, always awaiting updated information only to find the new information outdated by the time a decision is made."[35] Whether to prepare a supplemental DEIS is subject to the Commission's discretion.[36] The Commission's decision on whether to prepare a supplemental DEIS is subject to a "rule of reason:" "if the new information is sufficient to show that the remaining action will 'affec[t] the quality of the human environment' in a significant manner or to a significant extent not already considered, a supplemental EIS must be prepared."[37] The significance of the new information depends on whether it "provides a *seriously* different picture of the environmental landscape."[38] In this case, none of the information that commenters allege is missing or deficient would present a "*seriously* different picture" of the impacts of the Project, and the Commission should appropriately decline to issue a supplemental DEIS.

C. The Commission Has Not Inappropriately Segmented Its Review of the Southgate Project From the Mainline Facilities.

Some commenters assert that the DEIS impermissibly "segments" the Southgate Project by failing to evaluate the Mainline Facilities as a "connected action" in the same environmental document.[39] This argument is nonsensical. According to these commenters, the failure to include the Mainline Facilities in the Commission's review of the Southgate Project undermines its cumulative impacts analysis and determination that

[35] *Marsh v. Ore. Nat. Res. Council*, 490 U.S. 360, 373 (1989). *See also Altamont Gas Transmission Co.*, 75 FERC ¶ 61,348, at p. 62,106 (1996) (denying request for supplemental EIS).
[36] *Wisconsin v. Weinberger*, 745 F.2d 412, 417 (7th Cir. 1984).
[37] *Marsh*, 490 U.S. at 374.
[38] *City of Olmsted Falls, OH v. FAA*, 292 F.3d 261, 274 (D.C. Cir. 2002) (quoting *Wisconsin*, 745 F.2d at 418).
[39] *See* AMA Comments at 8-10; BREDL Comments at 3-5.

the Southgate Project will cause only limited adverse environmental impacts.[40] However, commenters conveniently ignore the entire purpose of the rule against segmentation—to ensure that agencies do not analyze projects in smaller components to avoid a finding of significance that would trigger the need to prepare an EIS.[41] Here, the Commission is preparing an EIS for the Southgate Project, and commenters are opining on that very document.[42] Further, the Commission already completed a thorough environmental review of the Mainline Facilities, including preparation of a full DEIS and Final EIS, and concluded that it would have limited adverse environmental impacts.[43] The Commission cannot go back in time more than two years and add the impact of the Southgate Project into the Mainline Facilities' DEIS and FEIS. There is thus no segmentation.

Moreover, as discussed further below,[44] the DEIS considers the Mainline Facilities as a "cumulative action" in its cumulative impacts analysis, including an evaluation of cumulative impacts to certain water resources.[45] To the extent that commenters argue the

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[40] AMA Comments at 8; BREDL Comments at 3. *See also* DEIS at 5-1 (noting that any adverse environmental impacts would be reduced to less than significant levels with recommended mitigation measures).

[41] *See* 40 C.F.R. § 1508.27(b)(7); *Taxpayers Watchdog, Inc. v. Stanley*, 819 F.2d 294, 299 (D.C. Cir. 1987) ("'Piecemealing' or 'Segmentation' allows an agency to avoid the NEPA requirement that an EIS be prepared for all major federal actions with significant environmental impacts by dividing an overall plan into component parts, each involving action with less significant environmental effects.").

[42] The Commission's decision to prepare an EIS for the Southgate Project is the most detailed review under NEPA and in contrast to most projects of this size where the Commission prepares an EA. *See, e.g., Cheyenne Connector, LLC*, 168 FERC ¶ 61,180 (2019) (Commission staff prepared an EA for a new 70-mile pipeline project); *Spire STL Pipeline LLC*, 164 FERC ¶ 61,085 (2018) (Commission staff prepared an EA for a new 65-mile pipeline); *Gulf South Pipeline Company, LP*, 155 FERC ¶ 61,287 (2019) (Commission staff prepared an EA for a new 66-mile pipeline).

[43] Mountain Valley Pipeline, LLC, Final Environmental Impact Statement, Docket No. CP16-10-000, at 5-1 (June 23, 2017) ("Final EIS"). The Final EIS did note that impacts to forested resources would be more significant, but would be reasonably reduced through adherence to certain mitigation measures. *Id. See also* Certificate Order, 161 FERC ¶ 61,043 at P 308 (Mainline Facilities would be "environmentally acceptable actions" if constructed in accordance with requisite mitigation measures). The Commission's environmental review of the Mainline Facilities lasted nearly three years, beginning with the environmental pre-filing review process in 2014. *See generally* Docket No. PF15-3-000.

[44] *See infra* pages 14-17.

[45] DEIS at 4-246.

cumulative impacts analysis should include the "full impacts of each project in a single EIS," commenters are incorrect.[46] The Commission is not required to re-analyze the entire Mainline Facilities as part of its cumulative impacts analysis.[47] Rather, the DEIS properly addresses cumulative impacts to specific resources within a defined geographic scope, in accordance with CEQ regulations.[48] Thus, the Commission is already undertaking what commenters are requesting, and concerns over segmentation are wrong and disingenuous.

Commenters'[49] reliance on the D.C. Circuit's decision in *Delaware Riverkeeper Network v. FERC*[50] is similarly misplaced because, unlike the projects at issue in *Delaware Riverkeeper*, the Commission has already completed a thorough, nearly three-year environmental review of the Mainline Facilities, including preparation of an EIS, not an EA, and is now in the process of preparing yet another EIS for the Southgate Project. Therefore the Commission is certainly addressing the "true scope and impact" of the Southgate Project.[51]

D. The DEIS's Cumulative Impacts Analysis Takes a Sufficient Hard Look at Cumulative Impacts Associated with the Project.

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[46] AMA Comments at 10.

[47] *See Coal. on Sensible Transp. v. Dole*, 826 F.2d 60, 71 (D.C. Cir. 1987) (noting that "[f]urther analysis" of projects already fully evaluated for environmental impacts would be unnecessarily redundant and "in no material way serve the purposes of NEPA").

[48] DEIS at 4-235 – 4-243; *see* 40 C.F.R. § 1508.7.

[49] AMA Comments at 8-10; BREDL Comments at 4-5.

[50] 753 F.3d 1304 (D.C. Cir. 2014).

[51] *Id.* at 1309, 1319. Note that since issuing the decision in *Delaware Riverkeeper*, the D.C. Circuit has decided several cases clarifying and limiting its application to the unique set of facts present in that case. *See City of Boston Delegation v. FERC*, 897 F.3d 241, 252 (D.C. Cir. 2018) (projects were not "under simultaneous consideration by the agency," nor were they "financially and functionally interdependent"); *Myersville*, 783 F.3d at 1326 (noting that the court had "premised [its] decision [in *Delaware Riverkeeper*] requiring joint NEPA consideration on the unquestionable connectedness of the projects, the fact that the projects all were under consideration by the Commission at the same time, and the fact that the projects were financially interdependent"); *Minisink*, 762 F.3d at 113 n.11 (noting that the "critical facts" in *Delaware Riverkeeper* were "worlds apart" from the facts in *Minisink*). These cases indicate that the same unique factors present in *Delaware Riverkeeper* must be present for the court to reach the same result in a subsequent case.

Some commenters assert that the DEIS failed to take a hard look at the cumulative impacts of the Southgate Project because the temporal and geographic scope of the analysis is too narrow.[52] According to these commenters, the DEIS must be revised to broaden the scope of its analysis to include "massive projects" that would affect the same environmental resources.[53] Such projects, according to commenters, include a mixed-used development,[54] as well as two existing compressor stations within the vicinity of Lambert Compressor Station proposed as part of the Southgate Project.[55] Other commenters argue that the DEIS only includes a "minimal analysis" of cumulative impacts associated with the Mainline Facilities.[56] Contrary to these assertions, the cumulative impacts analysis in the DEIS is thorough and comprehensive, and properly defines the geographic and temporal scope of the analysis.

A "cumulative impact" is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions."[57] The D.C. Circuit has explained that

> a meaningful cumulative impact analysis must identify (1) the area in which the effects of the proposed project will be felt; (2) the impacts that are expected in that area from the proposed project; (3) other actions—past, present, and proposed, and reasonably foreseeable—that have had or are expected to have impacts in the same area; (4) the impacts or expected impacts from these other actions; and (5) the overall impact that can be expected if the

[52] SELC Comments at 10-11.
[53] *Id.* at 11.
[54] SELC argues the DEIS fails to address the cumulative impacts of Chatham Park, a mixed-use development in Pittsboro, North Carolina. *Id.* at 10-11. The Chatham Park development is approximately 25 miles south of the Project in Chatham County, North Carolina and none of the Project facilities are located in Chatham County.
[55] *Id.* at 10; BREDL Comments at 15.
[56] AMA Comments at 10.
[57] 40 C.F.R. § 1508.7.

individual impacts are allowed to accumulate.[58]

The DEIS's cumulative impacts analysis satisfies this criteria. The DEIS properly explained that "[f]or a cumulative impact to occur, another project(s) must impact the same resource(s) as the Southgate Project."[59] Because [i]impacts often vary in extent and duration," the DEIS accounts for this variation "by considering resource-specific geographic scopes" for a range of resources, including: soils; groundwater, surface water, and wetlands; vegetation; wildlife; fisheries and aquatic resources; land use, recreation special interest areas, and visual resources; socioeconomics and environmental justice; cultural resources; and air quality and noise.[60] The DEIS then identified other past, present, and reasonably foreseeable projects within the resource-specific geographic scope of analysis, and analyzed the cumulative effects of such projects combined with the Southgate Project.[61]

The DEIS identifies both jurisdictional and non-jurisdictional projects within proximity to the Southgate Project, including *both* Transco Compressor Stations 165 and 166 and the Mainline Facilities.[62] The DEIS then analyzes the cumulative impacts associated with those projects within the geographic scope of each resource. With respect to water resources in particular, the DEIS looked at projects within the same HUC-12 watershed for impacts to groundwater, and within the larger HUC-10 watershed for impacts

[58] *Grand Canyon Tr. v. FAA*, 290 F.3d 339, 345 (D.C. Cir. 2002) (amended Aug. 27, 2002) (citation omitted).
[59] DEIS at 4-236.
[60] *Id.*
[61] *Id.*
[62] *Id.* at 4-244 – 4-246 (identifying the Virginia Southside Expansion Project, the Virginia Southside Expansion II Project, and the Mainline Facilities); *see also id.* at 2-246 – 2-248 (identifying non-jurisdictional Southgate Project-related facilities, other energy projects, mining operations, transportation and road improvement projects, and commercial, industrial, and residential projects).

on surface water.[63] Importantly, both analyses included the Mainline Facilities as a project that could have cumulative impacts on water resources.[64] The DEIS concluded with respect to groundwater, that "it is unlikely that pipeline activities would negatively affect groundwater supplies from wells" due to the "shallow . . . nature of pipeline trenching."[65] Concerning surface water, the DEIS explained that because most impacts are short-term, and would be minimized by the installation and maintenance of best management practices, the cumulative effect of the Project, combined with the 37 other projects within the HUC-10 watershed, would be minor.[66]

The DEIS also evaluated cumulative impacts on air quality resulting from construction and operation of the Southgate Project facilities. Specifically with respect to the Lambert Compressor Station, the DEIS evaluated cumulative impacts on air quality as a result of the Southgate Project and projects within 31.1 miles of the Lambert Compressor Station.[67] The DEIS acknowledges that operation of both Transco Compressor Station 165 and 166, as well as the Southgate Project, would result in long-term, stationary sources of air emissions. Importantly, none of the major source thresholds would be exceeded, and the facilities would continue to operate in compliance with all applicable permitting

[63] *Id.* at 2-450. To the extent that Appalachian Mountain Advocates, *et al.* ("AMA") asserts that the DEIS only analyzed the cumulative impacts of the Southgate Project and the Mainline Facilities on HUC-12 watersheds, AMA is incorrect. The DEIS considered projects within the HUC-12 watershed for groundwater, and within the larger HUC-10 watershed for surface water. Both analyses included the Mainline Facilities. *Id.*

[64] DEIS at 2-450.

[65] *Id.*

[66] DEIS at 4-252. The DEIS explained that most projects, including the Mainline Facilities, would be required by permit to install erosion and stormwater control devices, so "any cumulative impacts from upland construction of multiple projects . . . would not likely be significant." *Id.* at 4-251 – 4-252. It also noted that because of geographic and temporal separation of waterbody crossings, "it is unlikely that cumulative impacts would be significant." *Id.* at 4-252.

[67] *Id.* at 4-265.

requirements, including federal, state, and local air regulations.[68] As a result, the DEIS reasonably concluded that "operation of the Southgate Project combin[ed] with other projects would not result in significant cumulative impacts on air quality."[69]

Thus, contrary to commenters' assertions, the DEIS comprehensively evaluates cumulative impacts associated with the Southgate Project and other projects within its resource-specific geographic scope, including the Mainline Facilities and both Transco Compressor Stations.

E. The DEIS Properly Articulates the Purpose and Need of the Project and Evaluates Reasonable Alternatives.

Commenters incorrectly argue the DEIS ignores the "question of whether there is a real public need for the [Project]" and "improperly restricts its analysis of alternatives to those that can transport Mountain Valley's full desired volume of gas from its desired starting and ending points."[70] However, the DEIS articulates properly the purpose and need of the Project and evaluates sufficiently the Project alternatives as required by NEPA.

Courts and the Commission have properly explained that NEPA requires the Commission to identify and analyze reasonable alternatives during its review of a proposed action.[71] Importantly, "NEPA is a procedural statute; it does not mandate particular results, but simply prescribes the necessary process."[72] CEQ's NEPA regulations require the Commission to "briefly specify the underlying purpose and need to which the agency is

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[68] *Id.* The DEIS also explained that because the Transco compressor stations were constructed more than three years ago, these emissions are "considered part of the ambient air quality within the Southgate Project geographic scope and are accounted for in existing facility permits." *Id.* Any future upgrades to Compressor Station 165 "would be reviewed for compliance with [National Ambient Air Quality Standards] and required air quality permits." *Id.*

[69] *Id.*

[70] AMA Comments at 1-2.

[71] *Minisink*, 762 F.3d at 102; *Millennium Pipeline*, 157 FERC ¶ 61,096 at P 112 (citing 42 U.S.C. § 4332(2)(C) (2012) and 40 C.F.R. §§ 1502.1, 1502.14, and 1502.16 (2016)).

[72] *Minisink*, 762 F.3d at 111 (internal quotation marks omitted) (quoting *Robertson*, 490 U.S. at 350).

responding in proposing the alternatives including the proposed action."[73] It is not the intent of the DEIS to "reach a conclusion on whether there is a need for a proposed project."[74] Rather, "[t]he function of a statement of purpose and need . . . is to define the objectives of the proposed action such that the agency can identify and consider legitimate alternatives."[75]

In this case, the DEIS properly articulates the purpose and need of the Project:

> In general, as described by Mountain Valley, the purpose and need for the Southgate Project is to meet the specific requests for natural gas transportation service of its anchor shipper, [DENC], a local natural gas distribution company. Mountain Valley states that the Project will provide additional firm natural gas transportation services for [DENC] to meet its growing supply needs via interconnections with the under construction Mountain Valley Pipeline project in southern Virginia and the interstate pipeline of East Tennessee in North Carolina to two new delivery points on the [DENC] distribution system in Rockingham and Alamance Counties, North Carolina.[76]

This purpose and need is consistent with the requirements of the Project shipper, DENC. Based on this purpose and need, the DEIS properly evaluates reasonable alternatives to the Project, consistent with the Commission's stated methodology and precedent.

CEQ regulations on the alternatives analysis require the Commission to "[r]igorously explore and objectively evaluate all *reasonable* alternatives."[77] While NEPA does not define what constitutes a "reasonable alternative," CEQ guidance clarifies that alternatives are not reasonable if they are not feasible.[78] CEQ guidance further provides

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[73] 40 C.F.R. § 1502.13. *See also Kern River Gas Transmission Co.*, 138 FERC ¶ 61,037, at P 27 (2012) ("The Council on Environmental Quality (CEQ) regulations implementing NEPA requires only that an EA include a brief discussion of the need for the proposal.") (citing 40 C.F.R. § 1508.9 (2011)).
[74] *Kern River Gas Transmission*, 138 FERC ¶ 61,037 at P 27.
[75] *Id.* (citing *Colo. Envtl. Coal. v. Dombeck*, 185 F.3d 1162, 1175 (10th Cir. 1999)).
[76] DEIS at 1-2.
[77] 40 C.F.R. § 1502.14 (emphasis added).
[78] *Enable Gas Transmission*, LLC, 153 FERC ¶ 61,055, at P 25 (2015) (citing *Guidance Regarding NEPA Regulations*, 48 Fed. Reg. 34,263 (July 28, 1983)).

that "[r]easonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense."[79]

When evaluating whether an alternative is preferable to a proposed action, the Commission considers three evaluation criteria.[80] These criteria are: (1) whether "the alternative meets the stated purpose of the project;" (2) whether the alternative "is technically and economically feasible and practical; and" (3) whether the alternative "offers a significant environmental advantage over a proposed action."[81] The Commission, therefore, is not required to consider "alternatives that are not consistent with the purpose and need of the proposed project."[82] Consistent with these criteria, the DEIS considers the no-action alternative, system alternatives, major route alternatives and variations, and alternative locations for proposed aboveground facilities.[83] Based on this analysis, the DEIS reasonably concludes that no alternative "would provide a significant environmental advantage over the Project" and "that the proposed Project is the preferred alternative that can meet the Project's stated purpose."[84]

Despite this comprehensive review of alternatives, Commenters nevertheless argue that the Commission "must consider other systems, including *non-gas energy alternatives, and/or energy conservation or efficiency*."[85] But because such alternatives cannot "meet[] the stated purpose of the project," i.e., to meet the specific request for natural gas

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[79] *See Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations*, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).
[80] DEIS at 3-1.
[81] *Id*.
[82] *Dominion Transmission, Inc.*, 155 FERC ¶ 61,106, at P 113 (2016) (citing *Pac. Coast Fed'n of Fishermen's Ass'ns v. Blank*, 693 F.3d 1084, 1100 (9th Cir. 2012)).
[83] DEIS at 3-1 – 3-48.
[84] *Id.* at 3-48.
[85] North Carolina Department of Environmental Quality Comment on the Draft Environmental Impact Statement (DEIS) for the Southgate Project, Docket No. CP19-14-000, at 3 (Sept. 16, 2019) ("NCDEQ Comments").

transportation service of its anchor shipper, DENC, they are not "reasonable" alternatives that the Commission must consider under NEPA.[86] Commission precedent recognizes that the use of renewable energy sources and increased energy conservation may not meet the purpose of a natural gas pipeline project.[87] Not surprisingly, these commenters fail to explain how the customers of DENC can utilize solar energy or wind energy or energy conservation programs to operate their gas appliances, gas furnaces and other devices and machinery that are natural gas fueled. Therefore, the DEIS properly considered reasonable alternatives to the Project, consistent with Commission precedent and the requirements of NEPA.

Transco and Atlantic Coast Pipeline ("Atlantic Coast") each submitted comments on the hypothetical alternatives in the DEIS that address their respective pipeline systems.[88] Transco comments that it could, in theory, provide the same capacity required by DENC by using its existing system with minor modifications at an existing compressor station and constructing a 37.7-mile long lateral pipeline that would follow existing pipeline rights-of-way.[89] Unsurprisingly, in offering this hypothetical alternative, Transco fails to explain how it would meet a number of criteria DENC considered when it contracted for capacity

[86] *Dominion*, 155 FERC ¶ 61,106 at P 113 (citing *Pac. Coast*, 693 F.3d at 1100).
[87] *Id.* (citing *Pac. Coast*, 693 F.3d at 1100). *See also Envtl. Law & Policy Ctr. v. NRC*, 470 F.3d 676, 684 (7th Cir. 2006) (NRC properly declined to consider energy-efficiency alternatives when goal of project was to generate baseload energy and private applicant "was in no position to implement such measures"); *National Parks Conservation Ass'n v. Forest Service*, 177, F.Supp.3d 1, 14 (D.D.C. 2016) (quoting *Citizens Against Burlington, Inc. v. Busey*, 938 F.2d 190, 196 (D.C. Cir. 1991)) (noting that where an agency is "asked to sanction a specific plan," it must "take into account the needs and goals of the parties involved in the application," and holding that purpose of "exploration of private minerals" was consistent with NEPA).
[88] Transcontinental Gas Pipe Line Company, LLC, Comments on Draft Environmental Impact Statement, Docket No. CP19-14-000 (Sept. 18, 2019) ("Transco Comments"); Atlantic Coast Pipeline. Draft Environmental Impact Statement for Southgate Project, Docket No. CP19-14-000 (Sept. 16, 2019) ("Atlantic Coast Comments").
[89] Transco comments at 2.

on the Southgate Project.[90] Specifically, the Transco alternative to the Project would not (1) add competition to an interstate pipeline market where Transco has a near monopoly; (2) provide DENC with a third direct interstate pipeline connection improving reliability and adding resiliency to the interstate pipeline services that DENC receives; (3) diversify risk and provide access to the other pipelines to continue serving DENC's customers without interruption in the event of an unplanned outage or interruption; and (4) provide a direct connection of DENC's system to East Tennessee's pipeline through which DENC sources its gas storage on Saltville Gas Storage Company L.L.C.'s storage facilities, which will allow DENC to replace less reliable secondary-firm backhaul deliveries on Transco with primary-firm forward-haul deliveries on the Southgate Project. Mountain Valley is not alone in describing these benefits, as DENC filed a response in this proceeding on December 28, 2018 describing how the Southgate Project will provide many of these benefits, including filing testimony provided before the North Carolina Utilities Commission ("NCUC").[91] Moreover, regarding the first three criteria, the NCUC has recognized the need for competitive interstate pipeline capacity alternatives *other* than Transco—which Transco fails to explain or acknowledge.[92] DENC further filed its own

[90] In fact, DENC solicited interest for additional pipeline capacity necessary to meet anticipated incremental demand on its distribution system from all existing and proposed pipelines, including Transco and Atlantic Coast. Application at 3. In choosing Mountain Valley and the Southgate Project, DENC cited numerous reasons, including transportation cost, supply cost, supply diversity, reliability and resiliency, and operational efficiencies. *Id.* at 7.

[91] *See Motion for Leave to Answer, Answer, and Motion to Lodge of Public Service Company of North Carolina, Inc*., Docket No. CP19-14-000 (Dec. 28, 2018) ("*Answer*"). In the *Answer*, DENC [PSNC] referenced its application before the NCUC seeking approval for compensation under the Southgate agreement wherein its stated various benefits the Southgate Project provides, including " access to MVP capacity, which constitutes the best-cost alternative available to satisfy the Company's long-term interstate capacity needs;" "increase reliability, resiliency and direct to low-cost natural gas produced in the Marcellus and Utica shale regions;" "contribute to optionality of natural gas supply sources;" and "allow PSNC to replace secondary-firm backhaul deliveries with primary forward-haul deliveries." *Answer* at 5.

[92] *See* Docket No. G-100, Sub 91, *Investigation Regarding Competitive Alternatives for Additional Natural Gas Service Agreements*. The NCUC approved the Southgate Project as beneficial to consumers in North Carolina, and authorized payment under the precedent agreement. *See* Order on Annual Review of Gas

response to comments on the DEIS stating that Transco has failed to explain how it could provide mainline capacity to serve DENC and never presented this new proposal until now and accordingly it is too late.[93] In short, the only comment Transco offered that is helpful to the Commission's alternatives analysis is that Atlantic Coast is not a viable alternative.[94]

Atlantic Coast comments that Commission staff "should ***not*** assume when considering [Atlantic Coast Pipeline ("ACP")] as an alternative to Southgate that ACP would deliver gas to PSNC at the same delivery points proposed by [Mountain Valley]."[95] According to Atlantic Coast, instead of delivering gas where the Southgate Project is proposed to deliver gas and where DENC wants it delivered, the Commission should consider an alternative where Atlantic Coast would deliver gas on the eastern side of DENC's system, reducing the length of pipeline necessary for Atlantic Coast to deliver gas to DENC. Atlantic Coast further suggests that in order to do so, it would need additional capacity to be added to the Piedmont intrastate pipeline.[96] But this is not what DENC has requested. Moreover, an Atlantic Coast alternative would not provide the crucial connection to East Tennessee that the Project will provide. Therefore, Atlantic Coast's new suggested system alternative would not meet the purpose of the Southgate Project, which, rather than simply delivering gas to DENC, specifically includes receiving gas from

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Costs, *In re Application of Public Service Company of North Carolina, Inc. for Annual Review of Gas Costs Pursuant to N.C.G.S. § 62-133.4(c) and Commission Rule R1-17(k)(6)*, Docket No. G-5, Sub 591 (NCUC Dec. 6, 2018); Order Accepting Affiliated Agreements for Filing and Permitting operation Thereunder Pursuant to N.C. Gen. Stat. § 62-153, *In re Application of Public Service Company of North Carolina, Inc. for Approval of Payment of Compensation Under a Service Agreement with Mountain Valley Pipeline, LLC*, Docket No. G-5, Sub 591 (NCUC Oct. 9, 2018) (attached to Mountain Valley's Application as Ex. Z-1).

[93] *See* DENC [PSNC] Response filed October 17, 2019 in Docket No. CP19-14-000.

[94] Transco Comments at 2, n.1.

[95] Atlantic Coast Comments at 2 (emphasis in original). Atlantic Coast's lead developer and largest equity owner is Dominion. As noted earlier, Dominion acquired the former PSNC Energy in January 2019, after PSNC Energy entered into the binding precedent agreement with Mountain Valley. DENC/PSNC and ACP are now affiliates. DENC/PSNC and Mountain Valley are not affiliates.

[96] Atlantic Coast Comments at 3.

the interconnection with the Mainline Facilities (on which DENC is a customer) and from the new interconnection with East Tennessee and delivering gas to two new delivery points on the DENC distribution system in Rockingham and Alamance Counties, North Carolina. Neither would this alternative meet the goal of diversifying the interstate pipeline market in North Carolina, as evident by the NCUC's recognition of the need for competitive pipeline alternatives, notwithstanding the fact that DENC had an existing commitment on ACP.[97]

More fundamentally, however, is that neither the Atlantic Coast alternative or the Transco alternative as put forward are real projects. While it may be appropriate to evaluate those "alternatives" under NEPA, the alternatives are hypothetical only, as neither pipeline company has proposed either "alternative" as a viable project. As the Commission recently explained in *Cheyenne Connector, LLC*, even if a potential alternative assessed under NEPA may present an environmental advantage, "NEPA does not require the Commission to certificate the most environmentally favorable alternative."[98] Based on comments from a competing pipeline company that its hypothetical system alternative provided less environmental impact over the proposed project, the Commission explained that the competing pipeline did not present a "viable system alternative" because that pipeline company did not have commitments from shippers or submit an application for an alternative project.[99] Further, while the Commission assessed the potential impacts from the hypothetical alternative project for NEPA purposes, it ultimately issued a certificate for

[97] *See Answer* (explaining DENC's 20-year precedent agreement with Atlantic Coast for 100,000 dth/d). Atlantic Coast itself "fully understands and appreciates" the need for "a new pipeline alternative to serve North Carolina." Atlantic Coast Comments at 2.
[98] *Cheyenne Connector, LLC*, 168 FERC ¶ 61,180, at P 107 (2019).
[99] *Id*. at 105.

the proposed project because, among other things, the benefits of the proposed project "outweigh the potential environmental benefits of the non-viable, hypothetical system alternative proffered by [the competitor]."[100] The same analysis applies here where the Commission is faced with Atlantic Coast's and Transco's non-viable alternatives.

In this case, while both hypothetical alternatives may be appropriate for Commission consideration under NEPA (and have been considered), neither alternative is a real, viable project that the Commission has the ability to consider under the Natural Gas Act ("NGA"). The NGA restricts Commission action to issue certificates to an "*applicant*" when it finds that the "*proposed . . . construction . . .* is or will be required by the present or future public convenience and necessity."[101] Neither Atlantic Coast nor Transco are applicants for these proposed alternatives as both pipelines require construction of additional facilities to serve DENC. Furthermore, neither company has filed applications or presented evidence that they have customer support for their alternatives.[102] Therefore, their hypothetical alternatives are not viable projects and remain exactly what they are—hypothetical.

F. The DEIS Sufficiently Analyzes Impacts to Environmental Justice Populations.

Some commenters assert that the DEIS failed to analyze adequately impacts to environmental justice communities.[103] According to the SELC, the DEIS does not analyze

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[100] *Id*. at 107.

[101] 15 U.S.C. § 717f(e) (emphasis added).

[102] Atlantic Coast purports not to question DENC's decision to contract with Mountain Valley, as opposed to Atlantic Coast, and states that the Commission "should not look behind precedent agreements to judge a pipeline customer's decision." Atlantic Coast Comments at 2.

[103] SELC Comments at 7-8. The NCDEQ also raises environmental justice concerns with respect to the possibility that DENC will have a small increase in the total bill amount to its customers as a result of the Southgate capacity. Comments at 8-10. This argument is outside the scope of NEPA and not one properly before this Commission but rather an issue that should be raised before the applicable state utility commission.

the health impacts that the Lambert Compressor Station would have on environmental justice populations.[104] However, SELC's comments essentially boil down to a disagreement with the DEIS's analysis of air quality impacts in the vicinity of the Lambert Compressor Station—not the DEIS's evaluation of environmental justice. The DEIS appropriately considered the principles of environmental justice and determined that the Southgate Project "would not have a disproportionately high and adverse environmental or human health impact on minority or low-income populations."[105]

Consistent with CEQ environmental justice guidance, the DEIS identified environmental justice communities by identifying census block groups with a specified minority population or household poverty rate.[106] The DEIS specifically identified two census block groups within one mile of the Lambert Compressor Station containing environmental justice populations.[107] SELC acknowledges these two populations in the DEIS, but asserts that the DEIS "does not assess the health impacts that the compressor station would have on these populations."[108] This is incorrect. The DEIS explains that although construction and operation of the compressor station "would result in long-term impacts on air quality," these impacts would not be significant because Mountain Valley would take steps to minimize dust during construction and potential operational emissions would be below the NAAQS, "which are designated to protect public health."[109] As a

[104] *Id.* at 7.
[105] DEIS at 4-138.
[106] *Id.* at 4-128 – 4-130. Executive Order 12898 requires federal agencies to identify adverse environmental or human health effects that are disproportionally higher on low-income and minority populations. *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, Executive Order 12898, 59 Fed. Reg. 7629 (Feb. 16, 1994). CEQ promulgated guidance to assist federal agencies in identifying these populations. CEQ, *Environmental Justice: Guidance Under the National Environmental Policy Act* (Dec. 10, 1997).
[107] DEIS at 4-131; *see also* SELC Comments at 7.
[108] SELC Comments at 7.
[109] DEIS at 4-131. Impacts on air quality are more fully discussed in Section 4.11 of the DEIS.

result, the Southgate Project "would not have significant adverse air quality impacts on the low-income or minority populations in the Project area."[110]

SELC's comments do not pertain to the DEIS's identification and discussion of environmental justice populations. Rather, their comments take issue with the DEIS's conclusions with respect to the Lambert Compressor Station's impacts on air quality generally.[111] However, the DEIS thoroughly evaluated impacts (including cumulative impacts) to air quality resulting from construction and operation of the Lambert Compressor Station, concluding that impacts would not be significant.[112] With respect to its NEPA obligations to determine whether the Project will have a "disproportionately high and adverse impact on low-income and predominantly minority communities," the DEIS satisfies this standard.[113] By concluding that impacts to air quality from construction and operation of the Southgate Project would not be significant with respect to the general population, the DEIS appropriately concluded the Southgate Project would not have a "disproportionately high and adverse impact" on the two identified environmental justice populations.[114] The DEIS thus satisfies NEPA's goal of informed decisionmaking by recognizing and discussing the Southgate Project's impacts on environmental justice populations.

G. Commission Review of GHG Emissions for the Project Is Consistent with NEPA.

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[110] *Id.*

[111] SELC Comments at 7 (arguing that "existing evidence" indicates impacts surrounding compressor station "could be significant").

[112] *See* DEIS §§ 4.11, 4.13.2.9.

[113] *See Sierra Club*, 867 F.3d at 1368 (internal quotations and citation omitted).

[114] *Id.* at 1369 (noting that the Commission had concluded that the project at issue would not have a high and adverse impact on any population, "meaning, in the agency's view, that it could not have a *disproportionately* high and adverse impact on any population, marginalized or otherwise") (internal quotations and citation omitted). *See also id.* at 1370 (noting that EIS had "explained that the [compressor] station's noise and air-quality effects on these [environmental justice] locations were expected to remain within acceptable limits").

The DEIS properly provides an estimate of the GHG emissions associated with construction and operation of the Southgate Project, and concludes that impacts on air quality during construction and operation will not be significant.[115] Several commenters assert that the DEIS's analysis of GHG emissions is deficient because it does not address emissions associated with upstream production and downstream combustion of natural gas to be transported by the Southgate Project.[116] Commenters argue that the DEIS should include a quantitative estimate of both upstream and downstream GHG emissions associated with the Southgate Project.[117] For the reasons explained below, the DEIS's analysis of GHG emissions associated with construction and operation of the Southgate Project fully complies with NEPA.

CEQ regulations implementing NEPA require consideration of direct and indirect effects of a proposed project.[118] Indirect effects are "caused by the [project] and are later in time or farther removed in distance, but are still reasonably foreseeable."[119] Commenters assert that the DEIS failed to estimate potential indirect downstream GHG emissions associated with natural gas to be transported by the Southgate Project.[120] According to one

[115] DEIS at 4-193 – 4-195, tbls. 4.11-4 and 4.11-5.
[116] *See* AMA Comments at 11-12; Motion to Intervene on Behalf of Food and Water Watch and Comments in Opposition to DEIS, Docket No. CP19-14-000, at 4 (Sept. 16, 2019) ("Food and Water Watch Comments"); NCDEQ Comments at 5-6; Institute for Policy Integrity at New York University School of Law, Comments on Failure to Quantify and Monetize Greenhouse Gas Emissions in the Draft Environmental Impact Statement for the Southgate Project, Docket No. CP19-14-000, at 2, 4 (Sept. 16, 2019) ("NYU Law Comments").
[117] Some commenters further assert that the DEIS should also assess the significance of GHG emissions using available methodologies, including the Social Cost of Carbon. *See* AMA Comments at 18-23; NCDEQ Comments at 5; NYU Law Comments at 1-2. The DEIS properly explains (at 4-269) that there is not a "universally accepted methodology" "to determine the incremental impact of individual projects." Nothing more is required. *See Appalachian Voices*, No. 17-1271, 2019 WL 847199 at *2 (noting that Commission provided reasons for declining to use Social Cost of Carbon tool, and holding that nothing more "is required for NEPA purposes").
[118] 40 C.F.R. § 1502.16(b).
[119] *Id.* § 1508.8(b).
[120] *See* AMA Comments at 13-15; Food and Water Watch Comments at 1-2; NCDEQ Comments at 5-6; NYU Law Comments at 1.

commenter, the specific end-use of the gas is irrelevant, because the Commission can provide a "full-burn" estimate of GHG emissions.[121] Ignoring the fact that the Commission has repeatedly explained why the "full-burn" estimate of GHG emissions is not accurate,[122] the Commission has already done what commenters request—provided an "upper bound" estimate of emissions associated with the Mainline Facilities. In analyzing the environmental impacts of the Mainline Facilities, the Commission conservatively estimated the full combustion of the Mainline Facilities' total volume of natural gas transportation capacity.[123] As Mountain Valley explained in Resource Report 9 submitted with its Application,[124] and in its comments on the DEIS submitted on September 13, 2019, it is unnecessary for the Commission to provide an estimate of the upper-bound GHG emissions resulting from end-use combustion for the Southgate Project. This is because potential downstream emissions associated with the Southgate Project have already been accounted for in the Commission's upper-bound estimate for the Mainline Facilities.

To clarify further, Commission approval of the Southgate Project will not cause any incremental downstream GHG emissions. As reflected in its precedent agreement, DENC expects to source more than 80 percent of the natural gas to be transported on the Southgate Project from the Mainline Facilities, and the remaining amount from East Tennessee's existing pipeline system.[125] Accordingly, there is no incremental pipeline capacity, and therefore no additional gas use, attributable to the Project. Downstream GHG emissions were already considered as part of the Commission's evaluation and approval of

[121] AMA Comments at 14-15.
[122] *See, e.g.*, Certificate Order, 161 FERC ¶ 61,043 at P 293.
[123] *Id.*
[124] *Mountain Valley Pipeline, LLC*, Application, Resource Report 9 at 9-24 (Nov. 6, 2018).
[125] Resource Report 9 at 9-24 (noting that natural gas will be received "at either the Mountain Valley Pipeline interconnection near Chatham, Virginia or from East Tennessee at the LN 3600 Interconnect near Eden, North Carolina").

the Mainline Facilities. The Project simply represents different future utilization of the natural gas transported on the Mainline Facilities or East Tennessee.[126] Thus, a quantitative estimate of GHG emissions for the Southgate Project is not only unnecessary, but would result in an inaccurate double-counting of impacts. In short, commenters simply fail to explain how natural gas can be consumed twice.

Similarly, the Commission is not required to assess alleged impacts the Project could have on upstream natural gas production "induced by" the Southgate Project, as asserted by some commenters.[127] As explained above, the Southgate Project is not transporting additional volumes of natural gas. Rather, it is an extension of the MVP

[126] The expected deliveries of natural gas from East Tennessee into the Southgate Project do not require an expansion project on the East Tennessee system.
[127] *See* AMA Comments at 11-12; Food and Water Watch Comments at 1-2.

Mainline Facilities and cannot, therefore, be said to be "inducing" additional natural gas production.

IV.
CONCLUSION

Mountain Valley requests that the Commission accept this Answer to comments filed in this proceeding.

Respectfully submitted,

MOUNTAIN VALLEY PIPELINE, LLC

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Counsel for Mountain Valley Pipeline, LLC

Dated: October 21, 2019

EXHIBIT 1

CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.2010 (2019), I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C., this 21st day of October 2019.

/s/ *Claire M. Brennan*

Claire M. Brennan
Senior Paralegal Specialist
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MVP Southgate Project

Attachment 2

TABLE 4.6-2
Migratory Bird Species of Concern Potentially Present within the Southgate Project Area

October 2019

TABLE 4.6-2

Migratory Bird Species of Concern Potentially Present within the Southgate Project Area

Common Name	Source a/	Project County	Preferred Nesting Habitat b/	Primary Nesting Season
Acadian flycatcher	NCWAP	Rockingham; Alamance	Moist hardwood forests, usually near a creek or in bottomland forests.	Apr. 21 to Aug. 15
American kestrel	NCWAP	Rockingham; Alamance	Fields, pastures, open farmland.	Mar. 15 to Jul. 31
American woodcock	BCR 29 Plan; NCWAP; VADGIF	Pittsylvania; Rockingham; Alamance	Habitat consists of young forests and abandoned farmland mixed with forested land. Generally considered an edge species.	Apr. 1 to Aug. 31
bald eagle	BGEPA; BCC; NCWAP	Pittsylvania; Rockingham; Alamance	Nests in trees among forests adjacent to large water bodies.	Jan. 1 to Aug. 31
barn owl	NCWAP	Rockingham; Alamance	Open farmland, nests in manmade structures.	Feb. 1 to July 31
brown-headed nuthatch	BCC; BCR 29 Plan; NCWAP	Rockingham; Alamance	Mature and open longleaf pine stands; at least locally common in open loblolly, shortleaf, and pond pine stands, less so in Virginia pine. In the Piedmont, birds favor thinned or more open pine stands, such as in residential areas, golf courses, margins of lakes and ponds, and edges.	Apr 15 to Aug. 15
eastern whip-poor-will	BCC; BCR 29 Plan	Pittsylvania	Forests and woodlands; no nest built, eggs laid on flat ground.	May 1 to Aug. 15
grasshopper sparrow	BCR 29 Plan; NCNHP	Pittsylvania; Rockingham; Alamance	Fallow fields, pastures, hayfields, grasslands, and other areas dominated by graminoid vegetation.	May 15 to Aug. 15
Kentucky warbler	BCC; BCR 29 Plan; NCWAP	Pittsylvania; Rockingham; Alamance	Prefers deep shaded woods with dense, humid thickets, bottomlands near creeks and rivers, ravines in upland deciduous woods, and edges of swamps; nests on ground or within a few inches of it.	May 1 to Aug. 15
Louisiana waterthrush	NCWAP	Rockingham; Alamance	Streams and rivers associated with hardwood forests	Mar. 15 to Aug. 15
northern bobwhite	BCR 29 Plan; NCWAP	Pittsylvania; Rockingham; Alamance	Fallow fields, pastures, hayfields, grasslands, and other areas dominated by graminoid vegetation.	Apr. 15 to Aug. 31
prairie warbler	BCC; BCR 29 Plan; NCWAP	Pittsylvania; Rockingham; Alamance	Shrubby pastures, low pines; nest usually in a tree (such as pine, cedar, sweetgum, oak), 1-45' above the ground	May 1 to Jul. 31
prothonotary warbler	BCR 29 Plan; NCWAP	Rockingham; Alamance	Wooded swamps, wetlands, river bottom hardwoods; Nest site usually 5- 10' up (sometimes 3-30' up), above standing water in hole in tree or stump.	May 15 to Jul. 31
red-headed woodpecker	BCR 29 Plan; NCWAP	Rockingham; Alamance	Groves, farm country, orchards, shade trees in towns, large scattered trees; nests in tree cavities	May 10 to Sep. 10

TABLE 4.6-2

Migratory Bird Species of Concern Potentially Present within the Southgate Project Area

Common Name	Source a/	Project County	Preferred Nesting Habitat b/	Primary Nesting Season
willow flycatcher	NCNHP	Rockingham	Open country, mainly in wide valleys with streamside thickets and corridors of trees adjacent to fields; marshes with shrubs and small trees	June 1 to Aug. 15
wood thrush	BCC; BCR 29 Plan	Pittsylvania; Rockingham; Alamance	Mainly deciduous woodlands; nest placed in vertical fork of tree (usually deciduous) or saddled on horizontal branch, usually about 10-15' above the ground, sometimes lower, but rarely as high as 50'.	May 1 to Aug.31
yellow-throated warbler	NCWAP	Rockingham; Alamance	Mesic forests; swamps, bottomlands, streamside groves, and some pinelands	Mar. 15 to Jul. 15

a/ BCC =Included as 2008 Bird of Conservation Concern for Bird Conservation Region 29 (FWS, 2008); BCR29 Plan: Considered a priority species in the 2014 BCR 29 Implementation Plan (Watson, 2014). VAFWIS = Virginia Fish and Wildlife Information Service. NCNHP = North Carolina Natural Heritage Program's database; NCWAP = North Carolina Wildlife Action Plan (NCWRC, 2015); BGEPA = Bald and Golden Eagle Protection Act.

b/ acreages of habitat that would be affected by the Project are provided in tables 4.5-1 and 4.8-1.

MVP Southgate Project

Attachment 3

TABLE 4.7-2
State-Listed Fish, Plant, and Wildlife Species Occurring or Potentially Occurring in the Southgate Project Area

October 2019

TABLE 4.7-2

State-Listed Fish, Plant, and Wildlife Species Occurring or Potentially Occurring in the Southgate Project Area

Common Name	Scientific Name	Status	
		Virginia a/	North Carolina b/
Mammals			
Eastern red bat	*Lasiurus borealis*	W(IV)	
Eastern small-footed bat	*Myotis leibii*	W(I) c/	SC,SGCN c/
~~Northern yellow bat~~	~~*Lasiurus intermedius*~~		~~SC, SGCN c/~~
Hoary bat	*Lasiurus cinereus*	W(IV)	
Little brown bat	*Myotis lucifugus*	E c/	SR, SGCN
Northern Long-eared bat	*Myotis septentrionalis*	T	T, ~~SR~~, SGCN
Silver-haired bat	*Lasionycteris noctivagans*	W(IV)	
Tri-colored bat	*Perimyotis subflavus*	E	SR, SGCN
Fish			
Riverweed Darter	*Etheostoma podostemone*		SC
Roanoke logperch	*Percina rex*	E	E, SGCN
Amphibians			
Four-toed salamander	*Hemidactylium scutatum*		SC, SGCN
Mole salamander	*Ambystoma talpoideum*	W(II)	SC, SGCN
Mussels			
Atlantic pigtoe	*Fusconaia masoni*	T	E, SGCN c/
Eastern Creekshell	*Villosa delumbis*		SR,SGCN
Eastern Lampmussel	*Lampsilis radiata*		T, SGCN
Green Floater	*Lasmigona subviridis*	T	E, SGCN
James Spinymussel	*Parvaspina collina*	E c/	E, SGCN
Savannah lilliput	*Toxolasma pullus*		E, SGCN c/
Yellow Lampmussel	*Lampsilis cariosa*	W(II)	E, SGCN
Arthopods			
Carolina ladle crayfish	*Cambarus davidi*		SR
Greensboro burrowing crayfish	*Cambarus catagius*		SC, SGCN
Plants			
American Bluehearts	*Buchnera americana*	R	
Cliff Stonecrop	*Sedum glaucophyllum*		SR
Downy phlox	*Phlox pilosa*	R	
Piedmont Barbara's-button	*Marshallia obovate var. obovate*	R	
Small whorled pogonia	*Isotria medeoloides*	E c/	T
Smooth coneflower	*Echinacea laevigata*	T c/	E

Sources: Townsend, 2018; Roble, 2016; NCNHP, 2016; NCNHP, 2017; VADGIF, 2015; and NCWRC, 2015

TABLE 4.7-2

State-Listed Fish, Plant, and Wildlife Species Occurring or Potentially Occurring in the Southgate Project Area

		Status	
Common Name	**Scientific Name**	**Virginia a/**	**North Carolina b/**

a/ Virginia Status. E = Listed Endangered; T = Listed Threatened; R = Rare, including both Critically Imperiled and Imperiled state ranking; W (I) = Wildlife Action Plan, Tier I; W (II) = Wildlife Action Plan, Tier I; W (III) = Wildlife Action Plan, Tier III; W (IV) = Wildlife Action Plan, Tier IV

b/ North Carolina Status. E = Listed Endangered; T = Listed Threatened; SC = Species of Special Concern; SR = Significantly Rare; SGCN = Species of Greatest Conservation Need as listed in the Wildlife Action Plan

c/ Species not known to occur within the Project area (by State).

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October 21, 2019

Via Email

Mr. John Ellis
US Fish & Wildlife Service
Raleigh Ecological Services Field Office
P.O. Box 33726
Raleigh, NC 27636-3726

RE: Responses to Comments Received on the MVP Southgate Project

Dear Mr. Ellis:

In response to your comments on the Draft Environmental Impact Statement for the Southgate Project dated September 16, 2019, information is being provided in the enclosed attachment that addresses your comments.

Should you have any additional questions or require further information to complete your review of the Project, please do not hesitate to contact Megan Stahl at (412) 737-2587 or via email at mstahl@equitransmidstream.com or myself at (561) 691-7054 or via email at kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador
Senior Director, Environmental Services

cc: Vann Stancil, NCWRC
Amanda Mardiney, FERC
Allen Jacks, Cardno
William Lavarco, MVP Southgate
Megan Stahl, MVP Southgate

MVP Southgate Project

FERC Docket No. CP19-14-000

Responses to U.S. US Fish & Wildlife Service Comments Received on the MVP Southgate Project

Attachment

October 2019

USFWS

Request:

B.A.

1. Letter mentions that a BA is contained within the DEIS. At this time, there is not sufficient information to decide if formal consultation will be needed, but if it is, the BA as included in the DEIS would not be deemed complete due to the lack of the above referenced information.

Response Submitted October 21, 2019:

The Project will continue to confer with the USFWS to determine if a Biological Assessment (BA) is required following review of species survey reports. If a BA is required, the Project will provide all information that the Federal Energy Regulatory Commission (Commission) may need to complete the Section 7 consultation process.

USFWS

Request:

Species Surveys

2. Requests copies of the listed species surveys. The reports should contain information regarding what species were found including non-listed species, habitat conditions and survey dates. For aquatic species, streamflow and turbidity information should be included.

Response Submitted October 21, 2019:

Mountain Valley will submit reports outlining 2019 plant and aquatic species survey results during October 2019. These reports will include information regarding the listed and non-listed species identified, habitat conditions, and survey dates. Surveys adhered to the criteria outlined in the approved study plan. Streamflow was measured qualitatively and, per NCWRC request, water transparency was measured by Secchi disk.

USFWS

Request:

Stream Crossings

3. Based on the DEIS the methods of crossing streams along the route have not been decided upon and geotechnical surveys have not been completed. This information is needed by Service to evaluate FERC determination.

Response Submitted October 21, 2019:

The Project committed to constructing the pipeline via dry crossing methods only. Geotechnical surveys are completed for major road crossings and any waterbody crossings utilizing the horizontal directional drill (HDD) method. These reports will be included in the October Supplemental Filing to the FERC and the Project additionally commits to sending copies to USFWS for their review.

USFWS

Request:

E & SC

4. Requests copy of MVP Erosion and Sediment Control plan

Response Submitted October 21, 2019:

The Project will provide erosion and sediment control plans for streams with listed species along with additional information regarding the construction sequence for the Service to review. This is anticipated to occur in December 2019.

USFWS

Request:

E & SC

5. Include measures to protect streams with listed species as well as tributaries in close proximity of those streams.

Response Submitted October 21, 2019:

As a standard conservation practice during construction, the Project will establish a 50' riparian buffer around all streams where crossings will occur with erosion and sediment control devices (ECDs). The buffer will not be grubbed during the initial right-of-way clearing and grubbing sequence. These buffers will remain undisturbed (aside from hand felling trees) until the pipeline crossing is ready to be installed in the ephemeral, intermittent, or perennial streams. Pipeline installations in aquatic resources are completed by crews that specialize in stream and wetland crossings. Since they are separate from the main pipeline installation crews, they install the crossings in a single and complete manner (essentially not mobilizing from the crossing until it is complete and restored). Additionally, ECDs such as silt fence, compost filter sock, and super silt fence prevent sediment from entering the riparian buffer and further protect the stream. Per the erosion and sediment control plan's construction sequence, ECDs are to be installed around aquatic resources prior to upland disturbance and are to remain installed until right-of-way is stabilized. The erosion and sediment control plans will be reviewed by the Virginia Department of Environmental Quality and North Carolina Department of Environmental Quality.

USFWS

Request:

E & SC6

6. Address permanent and temporary construction roads and restoration of them in those areas.

Response Submitted October 21, 2019:

Both permanent and temporary access road construction and restoration will be addressed in the erosion and sediment control plans. Those plans will be reviewed by the Virginia Department of Environmental Quality and the North Carolina Department of Environmental Quality.

USFWS

Request:

E & SC

7. In similar projects the Service has recommended measures such as not grubbing within 50 ft of surface water containing listed species outside of growing season (April 15 - Nov 15).

Response Submitted October 21, 2019:

Additional information regarding the construction sequence for clearing and grubbing the right-of-way will be provided to the USFWS and NCWRC. As a standard conservation practice during construction, the Project will establish a 50' stream buffer, including those with potentially occurring federally listed species, with erosion and sediment control devices. The buffer will not be grubbed during the initial right-of-way clearing and grubbing sequence. These buffers will remain undisturbed (aside from hand felling trees) until the pipeline crossing is ready to be installed in the ephemeral, intermittent, or perennial streams. Since the disturbance within the riparian buffers and the stream will be of short duration and the Project will fully implement all aspects of the erosion and sediment control plans, Mountain Valley believes that grubbing timing restrictions will not be necessary, particularly in light of the probable absence of listed aquatic species found in the Project's surveys.

USFWS

Request:

E & SC

8. Recommend at the end of each workday unvegetated fill be stabilized with an acceptable erosion control cloth, blanket or matting until fill is permanently stable.

Response Submitted October 21, 2019:

All unvegetated fill within the project LOD will be protected by perimeter erosion and sediment control devices. The placement of these devices will be shown on the erosion and sediment control plans and therefore reviewed and approved by the North Carolina Department of Environmental Quality. The project will also adhere to the State's temporary stabilization requirements as required per the Virginia Department of Environmental Quality and the North Carolina Department of Environmental Quality. These include silt fence, compost filter sock, and/or super silt fence, which the state has determined to be protective of aquatic resources. Therefore, Mountain Valley believes that it is unnecessary to stabilize unvegetated fill with an erosion control cloth, blanket or matting at the end of each workday.

USFWS

Request:

Hydrostatic Testing / HDD

9. DEIS states that MVP intends to utilize municipal water sources for hydrostatic testing but then goes on to say that MVP is evaluating a variety of sources for water for hydrostatic testing, HDD, dust, etc. This is confusing and this makes it difficult to evaluate impacts.

Response Submitted October 21, 2019:

The project is currently evaluating freshwater withdrawal sources as well as municipal water sources. Mountain Valley will provide updated information about this when available.

USFWS

Request:

Hydrostatic Testing / HDD

10. Service recommends not to withdraw water from streams that contain listed species

Response Submitted October 21, 2019:

The project will continue to work with both the USFWS and the NC Wildlife Resources Commission to develop and establish withdrawal requirements if it is determined a freshwater withdrawal source is needed for the Project to ensure that any listed species in the withdrawal area are protected.

USFWS

Request:

MBTA

11-12. In regards to the Migratory Bird Treaty Act, it is the Service's understanding that MVP intends where practicable, to avoid vegetation clearing during the migratory bird nesting season (March 15- August 15 in VA and April 1 - August 31 in NC). We believe that this is in conjunction with the FERCs recommendation that MVP consult the Service if the removal of vegetation during nesting season, in conjunction with efforts to collocate along existing ROW should minimize impacts to migratory birds.

Response Submitted October 21, 2019:

When practicable, Mountain Valley will avoid clearing activities during the peak nesting season of Project-specific Migratory Bird Species of Concern. During a meeting with the USFWS on October 9, 2019, Mountain Valley confirmed the Project's intentions for further consultation if the Project is unable to avoid clearing during the peak nesting season. To the maximum extent practicable, the Project co-located with existing maintained easement, thereby minimizing impacts to interior forest nesting migratory birds.

2200 Energy Drive | Canonsburg, PA 15317
833-MV-SOUTH | mail@mvpsouthgate.com
www.mvpsouthgate.com

October 21, 2019

Ms. Bettina Rayfield
Commonwealth of Virginia
Department of Environmental Quality
1111 East Main Street, Suite 1400
Richmond, Virginia 23218

RE: Responses to Comments Received on the MVP Southgate Project

Dear Ms. Bettina Rayfield:

In response to your comments on the Draft Environmental Impact Statement for the Southgate Project (CEQ #20190911-5102) dated September 11, 2019, Mountain Valley Pipeline, LLC hereby provides the following information in the enclosed attachment that addresses your comments.

Should you have any additional questions or require further information to complete your review of the Project, please do not hesitate to contact Alex Miller at (713) 374-1599 or via email at alex.miller@nee.com or myself at (561) 691-7054 or via email at kathy.salvador@nexteraenergy.com. Thank you for your continued consideration.

Sincerely,
Mountain Valley Pipeline, LLC

Kathy Salvador

Kathy Salvador
Senior Director, Environmental Services

cc: Julia Wellman, VADEQ
Amanda Mardiney, FERC
Allen Jacks, Cardno
William Lavarco, MVP Southgate
Alex Miller, MVP Southgate

MVP Southgate Project

FERC Docket No. CP19-14-000

Responses to Virginia Department of Environmental Quality Comments Received on the MVP Southgate Project

Attachment

October 2019

Part I: Section 5.2 of the FEIS

1) New Recommendations

a) **VDEQ Recommendation:** Mountain Valley Pipeline, LLC (Mountain Valley, MVP or the applicant) should identify any public surface water supply intakes that are located within five miles of the project and coordinate as needed with any identified public water supply entity.

MVP Response: Per the FERC's Guidance Manual for Environmental Report Preparation (February 2017), the Project identified potable water intake sources within 3 miles downstream of any waterbody crossing locations.

b) **VDEQ Recommendation:** Should Mountain Valley choose to release hydrostatic test water to upland areas, the hydrostatic test water shall be released through energy dissipating dewatering devices. The energy dissipating dewatering devices must be sized to accommodate the rate and volume of release and be monitored and regulated to prevent erosion and over pumping of the energy dissipating dewatering devices. The upland discharge of hydrostatic test water shall be monitored in accordance with the Virginia Pollutant Discharge Elimination System (VPDES) General Permit. Mountain Valley shall record and track the daily volumes of water withdrawn for hydrostatic testing activities and make such records available during inspection or upon request by the DEQ. In the event of an inadvertent indirect discharge to surface waters, Mountain Valley shall be responsible for ensuring that such discharge complies with all requirements of the VPDES General Permit, including the requirement to notify DEQ within 14 days.

MVP Response: There currently are no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements. All discharges will be released to upland areas--outside of any aquatic or sensitive areas. Mountain Valley will also comply with the requirements of the VPDES Permit Regulation for Hydrostatic Tests.

c) **VDEQ Recommendation:** Mountain Valley should revise plans to dispose of brush and timber to be consistent with the Department of Forestry's (DOF) published Forestry Best Management Practices for Water Quality, which is available online at http://www.dof.virginia.gov/infopubs/BMP-Field-Guide_pub.pdf, and the FERC Upland Erosion Control, Revegetation, and Maintenance Plan, section III.E. See the DOF comments in Attachment B.

MVP Response: The Project has included a Brush and Timber Management Plan during construction in its October 2019 Supplemental Filing which took into consideration the DOF's Forestry Best Management Practices for Water Quality. This plan can be provided separately at the agency's request.

d) **VDEQ Recommendation:** Wetland and stream impacts should be avoided and minimized to the maximum extent practicable. Stream impacts should be minimized or avoided by narrowing the active right-of-way to the minimum necessary at each stream and wetland crossing. Where access is required across a wetland, removable mats should be used to reduce compaction and rutting. When excavation

for a structure is necessary in a wetland, excess spoil should not be disposed of in adjacent wetland areas unless authorized by a state or federal wetland permit. See the DEQ comments in Attachment B.

MVP Response: Where feasible, the Project works to avoid and minimize impacts to aquatic resources, including necking down the workspace to 75 feet. Mountain Valley will also comply with the requested construction methods while working in wetlands.

e) **VDEQ Recommendation:** Flag or clearly mark all non-impacted surface waters within the project or right-of-way limits that are within 50 feet of any clearing, grading, or filling activities for the life of the construction activity within that area. The project proponent should notify all contractors that these marked areas are surface waters where no activities are to occur. See the DEQ comments in Attachment B.

MVP Response: As shown in the Project's REVISED Appendix 2-A - Waterbodies Crossed by MVP Southgate Project in its October 2019 Supplemental Filing, crossing width is the intersection of the waterbody and the centerline of the pipeline or access road. If the crossing width is "0", the waterbody is not crossed by the centerline but is within the Project workspace (see footnote d).

f) **VDEQ Recommendation:** Any temporary impacts to surface waters associated with this project should require restoration to pre-existing conditions. Restore all temporarily disturbed wetland areas to pre-construction conditions and plant or seed with appropriate wetlands vegetation in accordance with the cover type (emergent, scrub-shrub, or forested). The applicant should take all appropriate measures to promote revegetation of these areas. Preserve the top 12 inches of trench material removed from wetlands for use as wetland seed and root-stock in the excavated area. Stabilization and restoration efforts should occur immediately after the temporary disturbance of each wetland area instead of waiting until the entire project has been completed. See the DEQ comments in Attachment B.

MVP Response: MVP will comply with the requested restoration and construction methods associated with temporary impacts to aquatic resources.

g) **VDEQ Recommendation:** Heavy equipment in temporarily impacted surface waters should be placed on mats, geotextile fabric, or other suitable material, to minimize soil disturbance to the maximum extent practicable. Equipment and materials should be removed immediately upon completion of work. See the DEQ comments in Attachment B.

MVP Response: The Project's implementation of its Upland Erosion Control, Revegetation, and Maintenance Plan ("Plan") and Wetland and Waterbody Construction and Mitigation Procedures ("Procedures") and the Project-specific Erosion and Sediment Control Plan ("E&SCP"), specifically with respect to construction time windows, erosion and sedimentation control, bank stabilization, and bank revegetation, will minimize short- and long-term impacts on the waterbodies crossed by the Project route.

h) **VDEQ Recommendation:** Prior to commencing construction, Mountain Valley shall file with the Commission and DEQ Water Permitting Division all outstanding surveys for impacts to surface waters in all disturbed areas of the project in Virginia, including both the construction and operational rights-

of-way, all access roads, stockpile and alternative work areas, and materials storage areas, to the extent that landowner access has been granted. See the DEQ comments in Attachment B.

- Identify any areas not surveyed in Virginia. Provide any estimates of surface water impacts in these areas and the sources used to make the estimate.
- Include all revisions to the wetland and waterbody crossing tables provided in Appendices B.5 and B.6 of the DEIS, including any revised milepost numbering.
- Include a copy of all federal jurisdictional determinations, including drawings and graphics, of surveyed surface waters in Virginia, including federal waters of the United States and any state-regulated isolated waters, springs, or open water.

MVP Response: Prior to commencing construction, the Project will file with the Commission and DEQ Water Permitting Division all outstanding surveys for impacts to surface waters in all disturbed areas of the project in Virginia, including both the construction and operational rights-of-way, all access roads, stockpile and alternative work areas, and materials storage areas, to the extent that landowner access has been granted.

i) **VDEQ Recommendation:** Prior to commencing construction, Mountain Valley shall file with the Commission and DEQ Water Permitting Division any proposed or final compensatory mitigation plans that are applicable to unavoidable, permanent surface water impacts in Virginia, and the status of the approval of such plans by the United States Army Corps of Engineers (Corps). Compensation for impacts to State Waters, if necessary, should be in accordance with all applicable state wetland regulations, including the compensation for permanent conversion of forested and scrub-shrub wetlands to emergent wetlands. Consider mitigating impacts to forested or converted wetlands by establishing new forested wetlands within the impacted watershed. See the DEQ comments in Attachment B.

MVP Response: Prior to commencing construction, the Project will file with the Commission and DEQ Water Permitting Division any proposed or final compensatory mitigation plans that are applicable to unavoidable, permanent surface water impacts in Virginia, and the status of the approval of such plans by the United States Army Corps of Engineers ("Corps"). Compensation for impacts to State Waters, if necessary, will be in accordance with all applicable state wetland regulations, including the compensation for permanent conversion of forested and scrub-shrub wetlands to emergent wetlands.

j) **VDEQ Recommendation:** Prior to construction, Mountain Valley shall file with the Commission and DEQ Water Permitting Division all revisions or updates to crossing methodologies for surface waters in Virginia. See the DEQ comments in Attachment B.

MVP Response: Prior to construction, the Project will file with the Commission and DEQ Water Permitting Division all revisions or updates to crossing methodologies for surface waters in Virginia.

k) **VDEQ Recommendation:** No activity may substantially disrupt the movement of aquatic life indigenous to the water body, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water. Culverts (if needed) placed in streams must be

installed to maintain low flow conditions. No activity may cause more than minimal adverse effect on navigation. The activity must not impede the passage of normal or expected high flows and the structure or discharge must withstand expected high flows. See the DEQ comments in Attachment B.

MVP Response: Mountain Valley does not anticipate substantially disrupting the movement of aquatic life indigenous to the waterbody, including those species, which normally migrate through the area, unless the primary purpose of the activity is to impound water (i.e. installing the pipeline with a dry crossing method). Culverts will be oriented with the natural stream flow and designed to allow fish passage. Installation methods will maintain low flow conditions and construction activities will not impede the passage of normal or expected high flows and will be designed to withstand expected high flows.

l) **VDEQ Recommendation:** Activities should be conducted in accordance with any time of-year restriction(s) as recommended by the United States Fish and Wildlife Service (FWS), Department of Game and Inland Fisheries (DGIF), Department of Conservation and Recreation (DCR), and Virginia Marine Resources Commission (VMRC). The permittee should retain a copy of the agency correspondence concerning the time-of-year restriction(s), or the lack thereof, for the duration of the construction phase of the project. See the DEQ comments in Attachment B.

MVP Response: Mountain Valley will adhere to all recommended time-of-year restrictions for in-water construction as determined by agency consultation or request work-window modifications, if needed. Any agency correspondence concerning work window restrictions, or lack thereof, will be retained for the duration of the Project's construction phase.

m) **VDEQ Recommendation:** Erosion and sedimentation controls should be designed in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. These controls should be placed prior to clearing and grading and maintained in good working order to minimize impacts to state waters. These controls should remain in place until the area is stabilized and should then be removed. Any exposed slopes and streambanks should be stabilized immediately upon completion of work in each permitted area. All denuded areas should be properly stabilized in accordance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992. See the DEQ comments in Attachment B.

MVP Response: MVP will comply with the design requirements of the VA E&S Handbook, Third Edition, 1992, for the creation of the state approved erosion and sedimentation control plans.

n) **VDEQ Recommendation:** All construction, construction access, and demolition activities associated with this project should be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a permit. Wet, excess, or waste concrete should be prohibited from entering surface waters. Employ measures to prevent spills of fuels or lubricants into state waters. See the DEQ comments in Attachment B.

MVP Response: The Project will implement its Plan and Procedures and the Project's Project-specific E&SCP to ensure construction, construction access, and demolition activities will be accomplished in a manner that minimizes construction materials or waste materials from entering surface waters, unless authorized by a permit. Wet, excess, or waste concrete will be prohibited

from entering surface waters. The Project will also implement its Spill, Prevention, Control, and Countermeasures Plan and Unanticipated Discovery of Contamination Plan**.**

o) **VDEQ Recommendation:** Herbicides used in or around any surface water should be approved for aquatic use by the United States Environmental Protection Agency (EPA) or the FWS. These herbicides should be applied according to label directions by a licensed herbicide applicator. A non-petroleum based surfactant should be used in or around any surface waters. See the DEQ comments in Attachment B.

MVP Response: As part of the Exotic and Invasive Plant Species Control Plan, the Project will monitor the right-of-way for increased cover of invasive plant species populations for two years following restoration of construction disturbance. Any significant increase in invasive cover associated with the Project will be treated with methods prescribed by the VDCR (or the NCNHP), with landowner preference taken into account, in each of their respective states. Each of these organizations provide species specific control methods, including guidance on herbicide use. If specified for use by federal or state agencies near streams or wetlands, the Project will utilize herbicide applications approved for aquatic use.

If herbicide treatment is necessary to control the spread of invasive species, the Project will employ a state-certified applicator to ensure compliance with applicable federal and state regulations

p) **VDEQ Recommendation:** In the event that the project does not qualify for a Nationwide Permit 12 (NWP12) from the Corps, then a Virginia Water Protection (VWP) permit may be necessary for project activities in Virginia. Also, should isolated waters be impacted, a VWP permit may be necessary unless otherwise excluded. See the DEQ comments in Attachment B.

MVP Response: Comment Noted.

q) **VDEQ Recommendation:** Removal of riparian buffers not directly associated with the Project's construction activities is prohibited. Disturbance and removal of riparian buffers from Project-related land disturbing activities that would occur within 50 feet of any perennial, intermittent, or ephemeral surface waters shall be avoided where possible, and minimized to the maximum extent practicable if 50 feet is not possible. DEQ shall be notified of any and all instances in which 50 feet is not possible and approval shall be granted by DEQ prior to continuing with an alternate width. Removal of riparian buffers not associated with crossings shall not be allowed where stream bank stability under normal flow conditions would be compromised. See the DEQ comments in Attachment B.

MVP Response: Comment Noted.

r) **VDEQ Recommendation:** The construction limit of disturbance (LOD) in upland areas approaching waterbody and wetland crossings shall be reduced to 75 feet wide and shall apply 50 feet from each side of the stream or wetland crossing to minimize the extent of riparian buffer disturbance. For any area approaching a waterbody or wetland crossing where this reduced LOD is not possible, notification of Commission approval (and Corps approval, if required) shall be provided to the DEQ prior to initiating land disturbing activity in that area. See the DEQ comments in Attachment B.

MVP Response: The Project has reduced the construction right-of-way width at wetland and waterbody crossings to 75 feet along the construction right-of-way, where feasible. Commission approval for areas where the construction right-of-way is not reduced to 75 feet at wetland and waterbody crossings will be available on the FERC eLibrary for the Project docket Number CP19-14-000 and provided to the VDEQ prior to initiating land disturbing activity in that area.

s) **VDEQ Recommendation:** No refueling, hazardous materials storage, equipment maintenance, or equipment parking shall take place within 100 feet of the waterbody or wetland crossing, except as allowed by any applicable and approved Annual Standards and Specifications. See the DEQ comments in Attachment B.

MVP Response: In accordance with FERC Procedures, fuel will not be stored within 100 feet of wetlands or other waterbodies during construction with the exception of pumps and HDD equipment. Liquids will be transferred and refueling will only occur in predesignated and preapproved locations that are at least 100 feet from all waterbodies and wetlands. Exceptions might be approved by the Environmental Inspector if no reasonable alternatives are available and secondary containment is used.

t) **VDEQ Recommendation:** Any surface water withdrawals for the purposes of hydrostatic testing shall not violate applicable Water Quality Standards and shall be managed so that no more than 10% of the instantaneous flow rate from the channel is removed, the intake screens shall be designed so that screen openings are not larger than 1 millimeter, and the screen face intake velocities are not greater than 0.25 feet per second. See the DEQ comments in Attachment B.

MVP Response: No surface water withdrawals are proposed for Project use in Virginia. Following completion of hydrostatic testing activities, portions of the hydrostatic test water will be reused for testing additional segments of the pipeline (where feasible). Hydrostatic test water will be released to upland areas through an energy-dissipating dewatering device in accordance with STD & SPEC 3.26 Dewatering Structure and Typical Construction Detail MVP-ES2 Pumped Water Filter Bag (See the Virginia Erosion and Sediment Control Handbook (1992)). The dewatering structures will be sized to accommodate the rate and volume of discharge. Discharges will be stopped when necessary to perform maintenance of the dewatering structures and ensure they remain in good working order. No hydrostatic test discharge will occur directly to waterbodies, wetlands, or other identified sensitive areas. Although coverage under Virginia General Permit No. VAG83 (Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests) is unnecessary because there will be no surface water discharge, the released hydrostatic test water is expected to meet the permit's discharge limitations, and MVP's sampling protocol is consistent with the requirements of the general permit. Since no surface water withdrawals or direct discharge to waterbodies will occur, no impacts to the average daily stream flow or aquatic resources are anticipated.

u) **VDEQ Recommendation:** Any surface water withdrawals for the purposes of horizontal directional drilling or dust control that do not exceed 10,000 gallons per day from non-tidal waters or two million gallons per day from tidal waters shall not violate applicable Water Quality Standards and shall be managed so that no more than 10% of the instantaneous flow rate from the channel is removed, the

intake screens shall be designed so that screen openings are not larger than 1 millimeter and the screen face intake velocities are not greater than 0.25 feet per second. See the DEQ comments in Attachment B.

MVP Response: There currently are no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

v) **VDEQ Recommendation:** Daily withdrawals for horizontal directional drilling or dust control activities that exceed 10,000 gallons per day from non-tidal waters and two million gallons per day from tidal waters must comply with the requirements of the Virginia Water Protection Permit Program Regulation. The daily volumes of water withdrawn for horizontal directional drilling or dust control activities shall be tracked and recorded and such records shall be made available during inspection or upon request by DEQ. See the DEQ comments in Attachment B.

MVP Response: There are currently no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

w) **VDEQ Recommendation:** Water quality monitoring, if required, shall be implemented in accordance with any applicable Upland Construction Water Quality Monitoring Plan. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

x) **VDEQ Recommendation:** The measures identified in the Spill Prevention, Control, and Countermeasure (SPCC) Plan shall be implemented, as well as any subsequent revisions or addenda to the same approved by the Commission. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

y) **VDEQ Recommendation:** All construction and installation associated with the Project shall be accomplished in such a manner that construction material or waste material shall not be placed into any perennial, intermittent, or ephemeral surface waters or karst features. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

z) **VDEQ Recommendation:** All measures intended to minimize the potential for discharges of soil or rock shall be implemented as detailed in any applicable General Blasting Plan and Landslide Mitigation Plan, as well as any subsequent revisions or addenda to the same approved by the Commission. If blasting or landslide activity results in unpermitted discharges of soil or rock to any perennial, intermittent, or ephemeral surface waters, DEQ shall be notified immediately, but no later than 24 hours after discovery. Potential impacts to karst features, if present, will be addressed in accordance with any

applicable Karst Hazard Assessment and Karst Mitigation Plan. See the DEQ comments in Attachment B.

MVP Response: MVP will adhere to the measures provided in the project's General Blasting Plan and Landslide Mitigation Plan to minimize the potential for discharges. If unpermitted discharges do occur, MVP will comply with all reporting and notification requirements. Based on the best available science, no karst features are expected to be present within the footprint of the project, however should karst be found, the plan's Karst Hazard Assessment and Karst Mitigation Plan will be utilized.

aa) **VDEQ Recommendation:** All measures intended to minimize the potential for impacts shall be followed as detailed in any applicable Acid Forming Materials Mitigation Plan, as well as any subsequent revisions or addenda to the same approved by the Commission. See the DEQ comments in Attachment B.

MVP Response: An acid soils risk assessment was performed for the Project area in 2018. There is no known metal mine (active or inactive) in close proximity to the proposed route. Overall, the report concluded that the likelihood of encountering problematic concentrations of acid-producing sulfides in the area of the proposed route is low.

bb) **VDEQ Recommendation:** The Project, including all relevant records, is subject to inspection at reasonable hours and intervals by DEQ or any authorized representative of DEQ. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

cc) **VDEQ Recommendation:** DEQ shall be notified in writing at least 10 business days prior to any planned Construction Spread pre-construction conferences or meetings. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

dd) **VDEQ Recommendation:** DEQ shall be notified in writing of any modification of this Project and shall demonstrate in a written statement that said modifications will not violate any license conditions and federal or state approvals. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

Part II: FEIS, Plans and Procedures

1) Proposed Route

a) Collocation and Other Route Alignments

i) **VDEQ Recommendation:** DGIF supports collocating the alignment within an existing utility easement to the greatest extent practicable to avoid and minimize clearing of land and vegetation for new right-of-way. See the DGIF comments in Attachment B.

MVP Response: Comment noted.

ii) **VDEQ Recommendation:** While DGIF prefers collocation within an existing utility right-of-way, DGIF supports efforts to minimize creation of new edge habitat and reduce forest fragmentation by locating some sections of the alignment adjacent to and adjoining existing utility easements, when necessary. According to information provided in a separate MVP Southgate Project DRAFT Resource Report 3 addressing fish, wildlife and vegetation, DGIF understands that linear segments of the project totaling 5.6 miles may not be collocated with existing utility easements. DGIF has insufficient information to evaluate what proportion of vegetation clearing along these 5.6 miles will take place within forested habitat, which would result in forest fragmentation and the creation of new edge habitat. Impacts resulting from such vegetation clearing are addressed on page 24 (3-17) of the Resource Report; the major project impact to forest-nesting birds is identified as habitat loss. DGIF submits as an additional consideration that the creation of open corridors within forested habitat exposes forest-nesting birds to increased nest predation pressure from both mammalian and avian predators (including jays, crows, and grackles) and to brood parasitism by brown-headed cowbirds. These in turn impact avian reproductive output, and could result in long-term impacts to avian populations within these newly-created corridors. See the DGIF comments in Attachment B.

MVP Response: The Project evaluated large tracts of forested land in the siting process to avoid fragmentation where practicable. As discussed in the Project's November 2018, Resource Report 3, Section 3.3.4, to minimize impacts from loss of forest cover and forest fragmentation, the Project is intentionally collocated with existing utility corridors and other disturbed lands.

iii) **VDEQ Recommendation:** Include a requirement that prior to the end of the FEIS period, Mountain Valley shall file with the Commission and DEQ Water Permitting Division all revisions or updates to Southgate Project maps as provided in Appendix B.1 of the DEIS. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

iv) **VDEQ Recommendation:** Include a requirement that prior to the end of the FEIS period, Mountain Valley shall file with FERC and DEQ Water Permitting Division a revised TABLE 2.1-2 *Summary of Pipeline Collocated with Existing Rights-of-Way for the Southgate Project*

a/ to show the collocation lengths in each category by state. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

2) Preconstruction Recommendations

a) Air Permitting and Modeling

i) VDEQ Recommendation: Update the FEIS to note that the modeling discussed in Section 5.1.11 used to demonstrate compliance with all air standards does not account for any nearby sources or background emissions. The DEQ Air Division confirms that an application for a minor new source review permit was submitted for the proposed project in November 2018 and an updated application was submitted in April 2019. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

b) Aviation

i) VDEQ Recommendation: Ensure that a Form 7460 is submitted to the Federal Aviation Administration for an airspace evaluation as required if any structure associated with this project would be located within 20,000 linear feet of a public use airport or would reach a height above ground of 200 feet or more. See the Department of Aviation (DoAV) comments in Attachment B for additional information.

MVP Response: The Project will not present any potential hazard to air navigation. As the Virginia Department of Aviation comment states, the nearest public-use airport to the Project route in Virginia is the Virginia Tech-Montgomery Executive Airport. At its closest point, the Project route is approximately 26,000 feet (approximately 4.9 miles) from the airport and approximately 30 feet lower in elevation. None of the above-ground structures cited in the Virginia Department of Aviation's comment (i.e., compressor stations, meter stations, valve stations) are planned to be constructed at or near that location. The Project does not meet the Federal Aviation Administration's criteria for requiring the submission of a Form 7460-1 notice because no construction or alteration (including access roads) near the airport will (1) be greater than 200 feet above ground level or (2) exceed any of the imaginary surfaces specified in 14 C.F.R. § 77.9(b). For similar reasons, because no construction activity will occur at or in the immediate vicinity of an airport, FAA Advisory Circular 150/5370-2F Operational Safety on Airports During Construction is not applicable.

c) Drinking Water Resources

i) VDEQ Recommendation: Follow recommendations from the Virginia Department of Health (VDH) to verify potential impacts to public water distribution systems or sanitary sewage collection systems with the local utility, implement best management practices (including erosion and sediment controls and spill prevention controls and countermeasures) on the project

site, and manage materials onsite and during transport to prevent impacts to nearby surface waters. See the VDH-identified public groundwater wells, surface water intakes and public surface water sources in Attachment B.

MVP Response: Mountain Valley will follow the recommendation form the VDH where applicable to protect public water supplies and manage materials onsite and during transport to prevent impacts to nearby surface waters.

Where requested by property owners, the Project has been re-routed to avoid impacts to onsite wells and sewage systems. Because the route generally avoids close proximity to occupied dwellings, impacts to septic systems are expected to be very rare. Any such systems that are encountered during construction will be addressed appropriately.

d) Floodplain Management

i) **VDEQ Recommendation:** The DCR Floodplain Management Program recommends that the FEIS include the requirement that Mountain Valley contact the local floodplain administrator for an official floodplain determination, and if the project is located in a Special Flood Hazard Area (SFHA), the project must comply with the community's floodplain ordinance. All development within a SFHA or floodplain, as shown on the locality's Flood Insurance Rate Map, must be permitted and comply with the requirements of the local floodplain ordinance. See the DCR comments in Attachment B for additional information.

MVP Response: The Project has contacted the local ordinances with floodplain administration and will continue to coordinate floodplain management as such.

e) Historic Resources

i) **VDEQ Recommendation:** Continue to coordinate with the Department of Historic Resources (DHR) pursuant to Section 106 of the National Historic Preservation Act, which requires federal agencies to consider the impact of their project on historic properties. See the DHR comments in Attachment B.

MVP Response: Comment noted.

f) Pollution Prevention

i) **VDEQ Recommendation:** Include additional information on reuse, recycling and pollution prevention as identified below by the DEQ Office of Pollution Prevention (see the DEQ comments in Attachment B).

- Consider the development of an effective Environmental Management System (EMS). An effective EMS will ensure that the proposed project is committed to complying with environmental regulations, reducing risk, minimizing environmental impacts, setting environmental goals, and achieving improvements in its environmental performance. DEQ

offers EMS development assistance and recognizes facilities with effective Environmental Management Systems through its Virginia Environmental Excellence Program (VEEP). VEEP provides recognition, annual permit fee discounts, and the possibility for alternative compliance methods.

- Consider reuse and recycling opportunities when evaluating waste handling, including asphalt recycling, mulching of brush and timber and water reuse opportunities.
- Consider contractors' commitment to the environment when choosing contractors. Specifications regarding raw materials and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable materials and practices for construction and design, including the use of native species and pollinators when re-establishing vegetation.
- Integrate pollution prevention techniques into maintenance and operation.
- Encourage supply chain partners to implement pollution prevention, sustainability, and environmental management systems.
- Coordinate with the DEQ Office of Pollution Prevention for additional information and technical assistance relating to pollution prevention techniques and EMS.

MVP Response: Mountain Valley will implement recycling of Project waste streams (where feasible) to minimize impacts related to disposal. This will include (at minimum):

(1) Mulching or reuse of brush following ROW clearing in accordance with DEQ STD & SPEC 3.06 Brush Barrier to help control sediment from leaving the Project limits. This BMP is included in the Project's AS&S and will be incorporated to the extent practicable in accordance with landowner conditions/agreements; and
(2) Reuse of hydrostatic test water from pipeline hydrostatic testing activities to the extent practicable. This will include reuse of test water from one test segment to the next test segment where feasible.

Mountain Valley will require all contractor employees, subcontractors, and agency representatives to attend the Project specific Worker Environmental Awareness Program (WEAP) training prior to conducting any activities on the Project. The WEAP training emphasizes the importance that Mountain Valley places on environmental compliance, identifies permit conditions and restrictions applicable to the Project, and identifies spill reporting procedures and emergency notification requirements. Mountain Valley will develop specific seed mixes to be used throughout the Project in both Virginia and North Carolina. Recommended seed mixes are being developed in coordination with USFWS, VADEQ, NCDEQ, and Mountain Valley's threatened and endangered species consultant. Seed mixes are designed to provide habitat for threatened and endangered species as well as to stabilize and revegetate the Project limits with pollinator-friendly species. Mountain Valley will integrate pollution prevention techniques into maintenance and operation activities in accordance with the SPCC Plan included in the Project AS&S. Mountain Valley will also encourage supply-chain partners to implement pollution prevention. Mountain Valley will coordinate with DEQ regarding additional guidance on pollution prevention techniques.

g) Rare, Threatened and Endangered Species

i) **VDEQ Recommendation:** Ensure that the analysis accurately addresses potential impacts to Piedmont barbara's-buttons (*Marshallia obovata* var. *obovata*, G4G5TNR/S1/NL/NL), Downy phlox (*Phlox pilosa*, G5/S2/NL/NL) and American bluehearts (*Buchnera americana*, G5/S1S2/NL/NL), which according to DCR have been historically documented in the project area. See the DCR comments in Attachment B.

MVP Response: A survey report for these species of concern identified by DCR will be provided for review in October 2019.

ii) **VDEQ Recommendation:** Submit survey results for Piedmont barbara's-buttons, Downy phlox and American bluehearts to DCR so DCR can more accurately evaluate potential impacts to natural heritage resources and offer specific protection recommendations for minimizing impacts to the documented resources. See the DCR comments in Attachment B.

MVP Response: A survey report for these species of concern identified by DCR will be provided for review in October 2019.

iii) **VDEQ Recommendation:** Submit copies to DCR Division of Natural Heritage of other completed rare, threatened and endangered species survey reports including the 2018 and 2019 portal bat survey reports as stated on page 4-89. See the DCR comments in Attachment B.

MVP Response: Updated survey reports will be filed with the Project's October Supplemental Filing to the FERC.

iv) **VDEQ Recommendation:** Coordinate results of surveys for state-listed threatened and endangered plant and insect species with DCR and the FWS. Upon review of the results, if it is determined these species are present, and there is a likelihood of a negative impact on the species, DCR will recommend coordination with the Virginia Department of Agriculture and Consumer Services to ensure compliance with Virginia's Endangered Plant and Insect Species Act. See the DCR comments in Attachment B.

MVP Response: Various measures are documented in Section 4 of the DEIS to address state-listed species that may be affected by the Project, including ongoing consultation, habitat assessments, and species surveys. Mountain Valley will continue to work with the agencies to mitigate for impacts where feasible.

h) Surface Waters and Water Withdrawals

i) **VDEQ Recommendation:** If surface water sources are used, then the FEIS should include a discussion of what steps will be taken by MVP and its contractors to ensure that the following requirements are met: withdrawing no more than 10% of the instantaneous flow rate from the channel; using the intake screens designed so that screen openings are not larger than 1 millimeter and; ensuring that screen face intake velocities are not greater than 0.25 feet per

second. The FEIS should provide the location of withdrawals and some assessment of river flows where withdrawals are proposed with a discussion of how the withdrawals will affect flows, particularly during low-flow or drought conditions. The assessment should explain if any downstream water users may be affected by these water withdrawals, particularly during low flow periods. The DEQ Office of Water Supply can provide information of nearby intakes once the location of the withdrawals is known. See the DEQ comments in Attachment B.

MVP Response: No surface water withdrawals are proposed for Project use in Virginia. Following completion of hydrostatic testing activities, portions of the hydrostatic test water will be reused for testing additional segments of the pipeline (where feasible). Hydrostatic test water will be released to upland areas through an energy-dissipating dewatering device in accordance with STD & SPEC 3.26 Dewatering Structure and Typical Construction Detail MVP-ES2 Pumped Water Filter Bag (See the Virginia Erosion and Sediment Control Handbook (1992)). The dewatering structures will be sized to accommodate the rate and volume of discharge. Discharges will be stopped when necessary to perform maintenance of the dewatering structures and ensure they remain in good working order. No hydrostatic test discharge will occur directly to waterbodies, wetlands, or other identified sensitive areas. Although coverage under Virginia General Permit No. VAG83 (Discharges from Petroleum Contaminated Sites, Groundwater Remediation, and Hydrostatic Tests) is unnecessary because there will be no surface water discharge, the released hydrostatic test water is expected to meet the permit's discharge limitations, and MVP's sampling protocol is consistent with the requirements of the general permit. Since no surface water withdrawals or direct discharge to waterbodies will occur, no impacts to the average daily stream flow or aquatic resources are anticipated.

ii) **VDEQ Recommendation:** Update Section 4.3.2.6 Surface Water Appropriations with information that identifies the specific municipal or surface water sources from which water for hydrostatic testing would be obtained. See the DEQ comments in Attachment B.

MVP Response: No freshwater withdrawals are currently proposed in the state of Virginia. An updated Table 2.3-7 provides estimated water volumes for hydrostatic testing will be included in the October Supplemental Filing to the FERC.

iii) **VDEQ Recommendation:** Update Section 4.3.2.6 Surface Water Appropriations with information that identifies the specific sources and estimated amounts of water needed for dust control. See the DEQ comments in Attachment B.

MVP Response: Currently, one municipal water source has been identified for use to facilitate with hydrostatic testing. No freshwater withdrawals are proposed in the state of Virginia. Dust suppressant will be used for aiding in controlling dust on access roads and the right-of-way.

iv) **VDEQ Recommendation:** Update Section 4.3.2.6 Surface Water Appropriations to include discussion of procedures to be taken by MVP and its contractors to minimize entrainment of aquatic species and maintain intake rates appropriate to local conditions if surface waters are

used. This section should also include a discussion of how the withdrawals might avoid impacts to downstream users during low-flow conditions. See the DEQ comments in Attachment B.

MVP Response: The Project will continue to work with VDEQ regarding mitigation measures for entrainment. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements. However, there currently are no surface water withdrawals proposed in the state of Virginia.

v) **VDEQ Recommendation:** Update Section 4.3.2.6 Surface Water Appropriations to state that the following criteria should be used for evaluating proposed water sources (see the DEQ comments in Attachment B):

- Withdrawing no more than 10% of the instantaneous flow rate from the channel.
- Using the intake screens designed so that screen openings are not larger than 1 millimeter and;
- Ensuring that screen face intake velocities are not greater than 0.25 feet per second.

MVP Response: There are currently no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

i) Transportation Conflicts

i) **VDEQ Recommendation:** The Virginia Department of Transportation (VDOT) recommends the monitoring for any potential work plan conflicts related to the Universal Project Code (UPC) T18123 Rural Rustic project on Route 621 that is close to the proposed pipeline. Construction work on UPC T18123 is proposed to begin on 10/04/2022 and conclude on 02/10/2023. See the VDOT comments in Attachment B.

MVP Response: The Project is currently anticipated to be complete prior to the start of work for UPC T18123 in October 2022. Should construction activities overlap, the contractor will work with the state and this VDOT project.

ii) **VDEQ Recommendation:** Continue to monitor the VDOT paving schedule website (https://vdot.maps.arcgis.com/apps/webappviewer/index.html?id=fbf86e85fdcb43e482432f41ddbb51c7) for updated information as there are a number of planned repaving and treatment jobs. The Pavement Status Map Application is updated with new paving projects annually. See the VDOT comments in Attachment B.

MVP Response: Comment noted.

iii) **VDEQ Recommendation:** VDOT recommends the development and implementation of an appropriate work zone to ensure the safe and efficient travel of vehicles during the construction

phase of the project. Based upon VDOT's review, the proposed project could pose significant traffic impacts to various roads throughout the service area during construction only. See the VDOT comments in Attachment B.

MVP Response: Mountain Valley will incorporate the recommendations from the Virginia Department of Transportation in the Traffic and Transportation Management Plan.

iv) **VDEQ Recommendation:** Coordinate with the VDOT Lynchburg District since a VDOT Land Use Permit will be required for any operations within the VDOT right-of-way. See the VDOT comments in Attachment B.

MVP Response: Comment noted.

j) Virginia Outdoors Foundation Easements

i) **VDEQ Recommendation:** The Virginia Outdoors Foundation (VOF) recommends that FERC revise its analysis to reflect that the VOF easement in Pittsylvania County (PIT-03215) may be intersected by a temporary access road if impacts are unavoidable. This temporary access road, at MP 14.1, is illustrated in Appendix B.1, page B.1-3, with details listed in Appendix B.4, page B.4-2. While specific reference to this intersection of the VOF open space easement is not mentioned within the DEIS, VOF staff recently spoke with MVP Southgate representatives who acknowledged this encroachment as a possibility. VOF has notified the developers of its conversion/diversion process if impacts are unavoidable but hope Mountain Valley will revise the alignment of the road to completely avoid this open-space easement. See the VOF comments in Attachment B.

MVP Response: Through coordination with the VOF, the Project will adjust TA-PI-035 to move off the conservation easement.

ii) **VDEQ Recommendation:** Coordinate directly with VOF regarding the proposed impact to the VOF easement if it is unavoidable or if other impacts are proposed in the future. See the VOF comments in Attachment B.

MVP Response: The alignment of the temporary access road will be adjusted to avoid the VOF easement.

k) Waste Sites in Close Proximity to the Project Site

i) **VDEQ Recommendation:** Evaluate the following waste sites to establish their exact location, nature and extent and their potential to impact the proposed project (see the DEQ comments in Attachment B):

- *Hazardous Waste/RCRA Facility*

- VAD003909629, Transcon Gas Pipeline Corp Station 165, 945 Transco Rd, Chatham, Virginia 24531

- *Solid Waste*
  - Permit # SWP571, Pittsylvania Co – Sanitary Landfill, 382 Rainbow Lane, Dryfork, Virginia 24549. Status: Active.
  - Permit # SWP152, Pittsylvania Co – Sanitary Landfill, 382 Rainbow Lane, Dryfork, Virginia 24549. Status: Closed.
- *Petroleum Releases*
  - PC# 20087015, Wall Property, 212 Sugarcane Rd, Danville, Virginia 24540
  - PC# 20112245, Raymond Batterman Residence, 556 Batterman Rd, Chatham, Virginia 24531 o PC#20122164, Richard Rust Residence, 5498 Whitmell School Rd Dry Fork, Virginia 24549

MVP Response: The Project provided a full list of Identified Sites of Potential Contamination Concern within 0.25 Mile of the Project's workspace e in Appendix 2-D of its November 2018 Resource Report 2 and subsequent filings.

ii) VDEQ Recommendation: DEQ recommends that all construction projects and facilities implement pollution prevention principles, including the reduction, reuse, and recycling of all solid wastes generated. All generation of hazardous wastes should be minimized and handled appropriately. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

iii) VDEQ Recommendation: Ensure that the FEIS and applicable procedures include requirements that all structures being demolished/renovated/removed should be checked for asbestos-containing materials (ACM) and lead-based paint (LBP) prior to demolition. If ACM or LBP are found, in addition to federal waste-related regulations, state regulations 9VAC 20-81-620 for ACM and 9VAC 20-60-261 for LBP, must be followed. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

iv) VDEQ Recommendation: Ensure that the following requirements are accurately reflected in the FEIS and applicable procedures (see the DEQ comments in Attachment B):

- Any soil, sediment or groundwater that is suspected of contamination or wastes that are generated must be tested and disposed of in accordance with applicable Federal, State, and local laws and regulations.
- Virginia Waste Management Act, Code of Virginia Section 10.1-1400 *et seq.*
- Virginia Hazardous Waste Management Regulations (VHWMR) (9VAC 20-60)
- Virginia Solid Waste Management Regulations (VSWMR) (9VAC 20-81);
- Virginia Regulations for the Transportation of Hazardous Materials (9VAC 20-110)
- Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Section 6901 *et seq.*

- Applicable regulations contained in Title 40 of the Code of Federal Regulations; and the U.S. Department of Transportation Rules for Transportation of Hazardous Materials, 49 CFR Part 107.

MVP Response: MVP will comply with the listed Virginia regulations as they apply to waste and hazardous materials. MVP will also comply with the reporting requirements associated with the regulations.

l) Wetlands and Water Quality

i) **VDEQ Recommendation:** Update the FEIS and applicable procedures with the following requirements (see the DEQ comments in Attachment B):
- State Water Control Law (Code of Virginia Chapter 3.1 (§ 62.1-44.2 *et seq*.)
- Virginia Acts of Assembly, Chapter 636, Senate Bill 950 [S 950], Approved March 30, 2018
- Virginia Administrative Code 9VAC25-210

MVP Response: Comment noted.

m) Wildlife Resources

i) **VDEQ Recommendation:** If bald eagle nests are discovered during the preconstruction winter nest surveys, DGIF recommends following measures adapted from the FWS National Bald Eagle Management Plan Guidelines (FWS, 2007) and the DGIF Bald Eagle Guidelines for Landowners (DGIF,
2012) between December 15 and July 15. The protective measures Mountain Valley would follow are described in the DEIS (page 207). See the DGIF comments in Attachment B.

MVP Response: Bald eagle surveys are scheduled to be conducted in early 2020. The Project will consult with USFWS, VDGIF and other agencies should bald eagles be found within the project area and apply appropriate mitigation measures.

ii) **Recommendation:** DCR DNH recommends coordination with the FWS and DGIF to minimize impacts to migratory birds, colonial nesting birds and eagles. See the DGIF comments in Attachment B.

MVP Response: On October 9, 2019, the Project met with the FWS to discuss minimization measures for migratory birds, colonial nesting birds, and eagles. The Project will continue to work with the agencies to adapt mitigation measures dependent on applicable surveys and construction activities.

3) Mitigation Measures for Construction and Maintenance Activities

a) Erosion and Sediment Control

i) VDEQ Recommendation: Ensure that the following requirements are accurately reflected in the FEIS (stormwater management and erosion and sediment control plans have been submitted to DEQ and are currently under review). See the DEQ comments in Attachment B.

- Natural gas transmission projects that result in regulated land disturbing activities equal to or greater than 10,000 square feet must obtain and comply with DEQ approved Annual Standards and Specifications for Stormwater Management (SWM) and Erosion and Sediment Control (ESC).
- In accordance with section 402(l)(2) of the Clean Water Act (CWA), discharges of stormwater runoff from the construction of oil and gas transmission pipelines are exempt from National Pollutant Discharge Elimination System (NPDES) and Virginia Pollutant Discharge Elimination
  System (VPDES) permitting. Therefore, the General VPDES Permit for Discharges of Stormwater from Construction Activities (9VAC25-880) is not applicable to this project.
- Annual Standards and Specifications must be prepared in accordance and consistent with the Virginia Stormwater Management Act (VSMA), the Virginia Stormwater Management Program (VSMP) regulation, the Virginia Erosion and Sediment Control Law, and the Virginia Erosion and Sediment Control regulations.
- Plans for erosion and sediment control and post-construction stormwater management must be developed and implemented for all regulated land disturbing activities in accordance with the DEQ-approved Annual Standards and Specifications prior to initiating land disturbance.
- To minimize runoff impacts following construction activities, the project must demonstrate compliance with the Virginia Stormwater Management Program post-construction requirements for both water quality and quantity.
- All specifications and practices used for erosion and sediment control and stormwater management must be in accordance with the DEQ-approved
  Annual Standards and Specifications, the Virginia Erosion and Sediment
  Control Handbook, and the Virginia Stormwater Best Management Practice Clearinghouse unless a deviation or exception is approved by DEQ.

MVP Response: The Project is working with the various VADEQ offices to ensure Mountain Valley has all required permits and authorizations prior to conducting land disturbing activities. Mountain Valley will comply with the requirements of the respective authorizations.

ii) VDEQ Recommendation: Use a DEQ-approved native pollinator plant mix for permanent vegetative stabilization. See the DEQ comments in Attachment B.

MVP Response: Mountain Valley is continuing to work with the various agencies to develop a seed mix that will incorporate both native and pollinator species as well as stabilize the right-of-way quickly and efficiently.

b) Horizontal Directional Drilling and Hydrostatic Testing

i) **VDEQ Recommendation:** DCR recommends conducting a soil analysis to determine suitability for the use of horizontal directional drill (HDD) and supports the development and implementation of a *Horizontal Directional Drill Contingency Plan* as stated on page 4-84 of the DEIS if drilling fluid is released into a waterbody. See the DCR comments in Attachment B.

MVP Response: Geotechnical borings were conducted at the proposed HDD locations to determine the suitability for the use of a horizontal directional drill. The Project also developed an HDD Contingency Plan which will be filed in the October Supplemental Filing with the FERC. These can be provided specifically to the agency upon request.

ii) **VDEQ Recommendation:** DCR supports preventing withdrawal of water for hydrostatic testing from exceptional value waters as those identified on pages 4-37 and 4-38 of the DEIS or waters containing rare, threatened or endangered species. See the DCR comments in Attachment B.

MVP Response: There currently are no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

iii) **VDEQ Recommendation:** If chlorinated water is used for hydrostatic testing, HDD or conventional bore or drilling fluid additives are used, DCR recommends this water not be released into surrounding water bodies to avoid potential impacts to aquatic resources. See the DCR comments in Attachment B.

MVP Response: If chlorinated water is used it will be tested, and treated as necessary, prior to discharge to ensure that it does not pose harm to aquatic resources.

c) Forest Resources

i) **VDEQ Recommendation:** DCR and DOF recommend that Mountain Valley follow the recommendations of the Virginia Forest Conservation Partnership that were submitted to the FERC docket on August 9, 2019 under the name: MVP_SouthgateExtension_ForestMitigation_03_2019.pdf.

See the DCR comments in Attachment B for additional information.

MVP Response: Comment noted.

ii) **VDEQ Recommendation:** DOF recommends that the Virginia Forest Conservation Partnership calculations with regard to forested acre impacts take precedence over the ones developed by FERC.

MVP Response: Comment noted.

iii) **VDEQ Recommendation:** Update the forest fragmentation analysis to reflect findings from DCR that edge habitats would not serve as replacement for the interior forested habitats lost and degraded, would provide little benefit in general to interior forest species habitats surrounding the impact, and these new edge habitats would serve as permanent conduits for invasive species and non-interior forest species competition, having a permanent effect on the surrounding forests. See the DCR comments in Attachment B for additional information.

MVP Response: Comment noted.

d) Open Burning and Fugitive Dust

i) **VDEQ Recommendation:** Include requirements that open burning is allowed only in accordance with 9VAC20-81-95 of the Virginia Solid Waste Management Regulations (VSWMR) and localities should be consulted since they may have additional open burning restrictions. See the DEQ comments in Attachment B.

MVP Response: This recommendation is addressed in the DEIS, which states that open burning will be conducted "in accordance with applicable state and local regulations and Mountain Valley's Fire Prevention and Suppression Plan." DEIS at 2-38; see also DEIS § 4.11.1.3. In addition, Mountain Valley's Fire Prevention and Suppression Plan (Submittal 20160119-5076) provides that each construction spread will have a Field Safety Officer who is responsible for, among other things, ensuring that site-specific burning and smoke management plans and activities conform to all state and local requirements.

ii) **VDEQ Recommendation:** Include requirements that construction activities associated with the MVP are subject to the Air Pollution Control Regulations regarding open burning (9VAC5-130 *et seq*.) and fugitive dust (9VAC -50-60 *et seq*.). See the DEQ comments in Attachment B.

MVP Response: Please see previous response to the comment regarding open burning. The Commonwealth's comment that the Project conform to state regulations on fugitive dust (9 VAC 5-50-60 et seq.) is addressed in the DEIS.

e) Right-of-Way Maintenance

i) **VDEQ Recommendation:** DCR recommends the development and implementation of an invasive species plan to be included as part of the maintenance practices for the right-of-way or invasive species as identified within the footprint of the project on page 4-56, Section 4.5.3.

See Item 4a below for additional recommendations and the DCR comments in Attachment B for additional information.

MVP Response: The Project will monitor for invasive species for two years following construction and maintain the restored area so invasive are at or below adjacent ground. The Project will file an Invasive Species Management Plan once surveys are complete.

ii) **VDEQ Recommendation:** DCR recommends the right-of-way restoration and maintenance practices include appropriate revegetation using native species in a mix of grasses and forbs, robust monitoring and the development of adaptive management plan to provide guidance if initial revegetation efforts are unsuccessful or if invasive species outbreaks occur. See the DCR comments in Attachment B.

MVP Response: Mountain Valley is continuing to work with the various agencies to develop a seed mix that will incorporate both native and pollinator species as well as stabilize the right-of-way quickly and efficiently.

iii) **VDEQ Recommendation:** DCR recommends the use of a native seed mix for revegetating disturbed areas as stated on page 4-62 in the DEIS and best management practices on page 4-63 for preventing the spread of invasive species. See the DCR comments in Attachment B.

MVP Response: Mountain Valley is continuing to work with the various agencies to develop a seed mix that will incorporate both native and pollinator species as well as stabilize the right-of-way quickly and efficiently.

iv) **Recommendation:** DCR recommends the invasive species plan be implemented for the lifespan of the project as part of the right-of-way maintenance since invasive species outbreaks can occur any time during construction or post construction. See the DCR comments in Attachment B.

MVP Response: The Project will monitor for invasive species for two years following construction and maintain the restored area so invasive are at or below adjacent ground. The Project will file an Invasive Species Management Plan once surveys are complete.

v) **Recommendation:** DCR recommends maintenance of vegetation using annual mowing in the non-growing season between 15 October and April 1 and minimal to no use of chemicals and especially in sensitive areas with documented natural heritage resources. See the DCR comments in Attachment B.

MVP Response: Mountain Valley's revegetation plans will address right-of-way maintenance.

f) Stream Crossings

i) VDEQ Recommendation: Incorporate the following VMRC recommendations, which are standard instream permit conditions, for jurisdictional stream crossings (VMRC states that it will exert jurisdiction over eight of the project's 81 stream crossings based on drainage areas currently identified in the DEIS and/or previously provided by the applicant. See the VMRC letter in Attachment B.):

- 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.

  MVP Response: Mountain Valley will comply with VMRC's standard instream permit conditions for stream crossings subject to VMRC jurisdiction.

- In an effort to minimize adverse impacts to threatened and endangered fish and mussel species, instream surveys and species relocations may be required. No instream construction shall be conducted during any recommended time-of-year restrictions of any year unless waived by DGIF in writing.

  MVP Response: Mountain Valley will comply with VDGIF's warm water fisheries time-of-year restriction for applicable crossing unless explicitly waived in writing.

- The instream construction activities shall be accomplished during low flow periods utilizing darn 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.

  MVP Response: Construction methods for waterbody crossings is provided in the Project's November 2018 Resource Report 1, Section 1.4.1.1 Standard Construction and Restoration Techniques. These methods include dry-ditch waterbody crossing methods include dam and pump, flume, and trenchless crossing methods such as conventional bore and horizontal directional drill ("HDD").

- Erosion and sediment control measures shall be in conformance with the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992, and shall be employed throughout construction.

  MVP Response: The project is designing E&S plans that will meet the requirements of the E&S Handbook, Third Edition, 1992. The plans will go through review and approval prior to earth disturbance activities.

- If it is determined that blasting is necessary at any of the crossings, DGIF shall be notified a minimum of 48 hours in advance of the blasting.

  MVP Response: If it is determined that blasting is necessary at any of the crossings, Mountain Valley will comply with VDGIF's blasting notification.

- The DCR shall be contacted for any stream crossings where karst landscape features are encountered during installation.

  MVP Response: No karst landscapes have been identified along the currently proposed route. The DCR will be contacted if this changes.

- DGIF shall be contacted for any work in trout waters to avoid conflicts with trout stocking activities.

  MVP Response: No trout waters have been determined based on the Project's current alignment. Should the Project identify trout waters in the future, the VDGIF will be contacted to avoid conflicts.

ii) **VDEQ Recommendation:** Include a table in the FEIS that cites recommendations to protect freshwater aquatic resources provided by DGIF at each of the VMRC jurisdictional stream crossings and the applicant's intention of following those recommendations. See the VMRC comments in Attachment B.

  MVP Response: Table 6-1 (Attachment 1) identifies the 8 streams under VMRC jurisdiction and the associated instream restrictions. If Mountain Valley cannot adhere to these instream restrictions, coordination with VDGIF will be completed for the appropriate stream waivers. Final erosion and sediment control plans are under development in conjunction with DEQ. Following review, MVP will consult with DEQ on comments provided and where appropriate will implement agreed upon changes to BMPs related to stream crossings, including VMRC-regulated crossings.

iii) **VDEQ Recommendation:** DGIF recommends conducting any in-stream activities during low or no-flow conditions, using non-erodible cofferdams to isolate the construction area, and removal of all fish and mussels prior to dewatering the cofferdams. DGIF recommends to the extent practicable, 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, re-vegetating barren areas with native vegetation, and implementing strict erosion and sediment control measures.
See the DGIF comments in Attachment B.

  MVP Response: Comment noted.

iv) **VDEQ Recommendation:** DGIF recommends minimizing impacts on fisheries by relocating fishes and mussels from the construction areas. DGIF recommends that all fish and freshwater mussel relocations be supervised by qualified, professional biologists in possession of pertinent federal and/or state permits. See the DGIF comments in Attachment B.

MVP Response: All fish and freshwater mussel relocations will be supervised by qualified, professional biologists in possession of pertinent federal and/or state permits.

g) Surface Waters and Water Withdrawals

i) **VDEQ Recommendation:** Update Section 4.3.2.7 General Impacts and Mitigation on Surface Water to include the following to explain how potential impacts to beneficial uses may be avoided (see the DEQ comments in Attachment B):

In the event that withdrawals occur from surface water sources, then MVP should avoid an adverse effect or impairment to surface water by:

- Withdrawing no more than 10% of the instantaneous flow rate from the channel.
- Using the intake screens designed so that screen openings are not larger than 1 millimeter and;
- Ensuring that screen face intake velocities are not greater than 0.25 feet per second.

If surface water sources are used, then the EIS should include a discussion of what steps will be taken by MVP and its contractors to ensure that the requirements above are met. The EIS should provide the location of withdrawals and some assessment of river flows where withdrawals are proposed with a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions. The assessment should explain if any downstream water users may be affected by these water withdrawals, particularly during low flow periods. The DEQ Office of Water Supply can provide information of nearby intakes once the location of the withdrawals is known.

MVP Response: There currently are no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

ii) **VDEQ Recommendation:** Updated Section 4.3.2.8: Surface Water Conclusions with the following information (see the DEQ comments in Attachment B):

In the event that withdrawals occur from surface water sources, then MVP should avoid an adverse effect or impairment to surface water by:

- Withdrawing no more than 10% of the instantaneous flow rate from the channel.
- Using the intake screens designed so that screen openings are not larger than 1 millimeter and;
- Ensuring that screen face intake velocities are not greater than 0.25 feet per second.

If surface water sources are used, then the FEIS should include a discussion of what steps will be taken by MVP and its contractors to ensure that the requirements above are met. The FEIS should provide the location of withdrawals and some assessment of river flows where withdrawals are proposed with a discussion of how the withdrawals will affect flows, particularly during low flow or drought conditions. The assessment should explain if any downstream water users may be affected by these water withdrawals, particularly during low flow periods. The DEQ Office of Water Supply can provide information of nearby intakes once the location of the withdrawals is known.

MVP Response: There currently are no surface water withdrawals proposed in the state of Virginia. Should the project need to conduct surface water withdrawals to facilitate construction activities, Mountain Valley will comply with these requirements.

h) Wildlife Resources

i) **VDEQ Recommendation:** DGIF recommends clearing of trees and vegetation during winter months outside bird nesting periods as proposed. See the time of year restrictions for general guidance at https://www.dgif.virginia.gov/wp-content/uploads/VDGIF-Time-of-Year-Restrictions-Table.pdf".

If tree removal becomes necessary, DGIF also recommends adherence to its standard tree removal for bat guidance "https://www.dgif.virginia.gov/environmentalprograms/environmental-services-section/" to protect threatened and endangered bats known from the region. See DGIF comments in Attachment B.

MVP Response: Comment noted. When feasible, Mountain Valley will attempt to avoid clearing activities during the peak nesting season of Project-specific Migratory Bird Species of Concern.

ii) **VDEQ Recommendation:** DGIF recommends that the project follow protective measures as described in the DEIS (pages 4-67 to 4-68). DGIF supports the protective measures described, including wildlife escape ramps at regular intervals along the excavated trench. See the DGIF comments in Attachment B.

MVP Response: Comment noted. Mountain Valley will adhere to the protective measures specified in DEIS Section 4.6.1.1 Terrestrial Wildlife Impacts and Mitigation (pages 4-67 to 4-68).

iii) **VDEQ Recommendation:** DGIF recommends strict adherence to erosion and sediment controls, use of native plants, creation of a scrub-shrub transition zone between the forest edge and maintained herbaceous right-of-way as described in the DEIS (page 4-70). See the DGIF comments in Attachment B.

MVP Response: The project is submitting erosion and sedimentation plans for review by the Virginia Department of Environmental Quality (DEQ). Those plans provide detailed

information on the type and location of the erosion control devices proposed, construction sequence, and restoration efforts planned for the project. Seed mixes that contain as many native plant species as possible while also ensuring the fast and efficient stabilization of the right-of-way will be proposed. The project will consult with DGIF to prepare a seed mixes that is acceptable to the DEQ and satisfies the restoration and stabilization requirements of the general construction permit.

iv) **VDEQ Recommendation:** Update Section 4.6.5.3: General Fisheries and Aquatic Resources Impacts and Mitigation to include a discussion of procedures to be taken by MVP and its contractors to ensure that appropriate requirements are met. It should also include a discussion of how the withdrawals might avoid impacts to downstream users during low-flow conditions. See the DEQ comments in Attachment B.

MVP Response: The Project is not intending to withdraw water from Virginia waterbodies at this time.

4) Recommendations for Specific Plans

a) ***Exotic and Invasive Species Control Plan***

i) **VDEQ Recommendation:** Include all species on the DCR Invasive Species list (https://www.dcr.virginia.gov/natural-heritage/document/nh-invasive-plant-list-2014.pdf) in the Exotic and Invasive Plant Species Control Plan (January 24, 2019 supplemental filing-Session Number 20190124-5165), not only moderately and highly invasive species as mentioned on page 2 of the plan. See the DCR comments in Attachment B.

MVP Response: MVP will comply. Species categorized as low ranking non-native invasive plants have been included in the revised Exotic and Invasive Plant Species Control Plan, in addition to species ranked as medium, high, and severe.

ii) **VDEQ Recommendation:** Include an invasive species inventory in the invasive species plan for the project area including species and methods for treating invasive species based on the current DCR Invasive Species List. See the DCR comments in Attachment B.

MVP Response: MVP will comply. An inventory of non-native invasive species identified along the Project ROW, or with potential to occur along the Project ROW, is included within the report as Table 1. Herbicide treatment types will be determined based on the species requiring control using methods prescribed by the VADCR or the NCNHP, in each respective state; however, actual treatment methods are not included in the revised report, as recent current events regarding herbicide use will likely lead to significant changes in treatment recommendations, should herbicide use become necessary.

5) Errors in the EIS

a) VDEQ Recommendation: On pages 2-25 and 4-8 the term "silt rock" was used in error. Replace with "silt sock" if that term meets the intention. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

b) VDEQ Recommendation: Revise text on page 2-25 so that silt fence and silt sock practices are used as sediment barriers not diversion structures. See the DEQ comments in Attachment B.

MVP Response: Comment noted.

MVP Southgate Project

FERC Docket No. CP19-14-000

Attachment 1

Table 6-1
Proposed State-Owned Subaqueous Crossings

October 2019

Table 6-1

Proposed State-Owned Subaqueous Crossings

Milepost	Impact ID	Waterbody Name	Drainage Area (square miles) a/	Estimated Average Stream Flow (cubic feet per second) b/	Pipeline Crossing Length (feet)	Linear Feet of Resource in Workspace	Crossing Method c/	Sensitive Species d/	Time of Year Restrictions e/
0.4	S-F18-65	Little Cherrystone Creek	5.11	>5	10	21	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
1.7	S-D18-18	Cherrystone Creek	37.24	1 to 5	30	89	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
4.9	S-E18-3	Banister River	68.58	1 to 5	48	84	Conventional, Dam and pump, Flume	Green floater	Dec 1 – July 15
5	S-D18-2	White Oak Creek	15.87	1 to 5	33	93	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
5.1	S-D18-2-2	White Oak Creek	15.87	1 to 5	23	77	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
12.8	S-D18-21	Sandy Creek	4.52	>5	15	81	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
17.7	S-E18-44	Sandy River	102.47	>5	85	77	Conventional, Dam and pump, Flume	-	Dec 1 – July 15
23.2	S-F18-40	Trotters Creek	5.02	>5	22	78	Conventional, Dam and pump, Flume	-	Dec 1 – July 15

a/ drainage area determined using USGS StreamStats for the point where the pipeline centerline crosses the resource.
b/ stream flow estimated by the Project during field delineations between May 2018 and September 2018
c/ The appropriate crossing method will be selected by the Construction Manager based upon the actual conditions encountered at the time of construction, as described in Section 2.4.2.3.
d/ No federal or state listed species have been identified to date based on consultations with the USFWS and VDGIF.
e/ Timeframe when in-stream work is not allowed. Combines the VDGIF and FERC Procedures time of year restrictions, pending further consultation.

MVP Southgate
October 9, 2019
Agenda
Attendees: John Ellis (USFWS), Vann Stancil (NCWRC), Cory Chalmers (MVP), Megan Stahl (MVP)

- USFWS Comment Letter

At this time, there is not sufficient information to decide if formal consultation will be needed, but if it is, the BA as included in the DEIS would not be deemed complete due to the lack of the above referenced information.

MVP: What will determine the need for a BA?

USFWS: Submit the survey reports and E&S information (described below) and FWS will determine whether they have sufficient information to decide whether a BA/BO is needed.

MVP: Do you need approved E&S plans to have sufficient information?

USFWS: Only need to submit to FWS E&S plans for the areas that drain to waterbodies with potential for listed/sensitive species. Also include a description of examples of E&S controls/modifications implemented on the mainline and whether they would be used for Southgate. Explain the stream crossing construction sequence/maintenance of the riparian buffer until the contractor is ready to cross the stream, use of separate crews for crossings, protection for travel lanes across streams, timber mat use/protection from sedimentation.

In regards to Migratory Bird Treaty Act, it is the service's understanding that MVP intends where practicable, to avoid vegetation clearing during the migratory bird nesting season (March 15- August 15 in VA and April 1 - August 31 in NC). We believe that this is in conjunction with the FERC's recommendation that MVP consult the Service if the removal of vegetation during nesting season, in conjunction with efforts to collocate along existing ROW should minimize impacts to migratory birds.

MVP paraphrased the following taken from Resource Report 3: On March 30, 2011, the USFWS and FERC entered into a voluntary Memorandum of Understanding ("MOU") that focuses on avoiding or minimizing adverse effects on migratory birds and strengthening migratory bird conservation through enhanced collaboration between the two federal agencies. The MOU does not authorize the take of migratory birds or waive legal requirements under MBTA, BGEPA, the federal Endangered Species Act ("ESA") of 1973, or any other statutes. However, on December 22, 2017, the Department of the Interior issued a MOU (M- 37050) analyzing whether the MBTA prohibits the accidental or incidental take of migratory birds. In the 2017 MOU (M- 37050), the Department of the Interior clarified their position stating that the MBTA does not prohibit incidental take.

MVP: Based on this information can the Service confirm that the project will not have tree clearing restrictions related to MBTA?

USFWS: FWS cannot require a restriction and cannot require mitigation. If the current language remains in FERC's Order and MVP needs to clear during the nesting window then FWS could help make recommendations for minimizing impacts.

- FERC Environmental Information Request 4 [Issued October 3, 2019]

21. Provide updated agency consultation regarding whether timing restrictions for tree trimming (e.g., along access roads) will be necessary to protect sensitive or protected species.

MVP: MVP does not think this is necessary.

USFWS: FWS and NCWRC agree that no timing restrictions are needed for tree trimming.

- NCWRC Comment Letter

Page 2-15. 2.4.1.2. Clearing and Grading. NCWRC recommends the use of biodegradable and wildlife-friendly sediment and erosion control devices. Silt fencing, fiber rolls, and/or other products should have loose-weave netting that is made of natural fiber materials with movable joints between the vertical and horizontal twines. Silt fencing or similar materials that have been reinforced with plastic or metal mesh should be avoided as they impede the movement of terrestrial wildlife species. Studies have shown the likelihood of many species, particularly birds, amphibians, and reptiles, to become entrapped in these devices and die due to their inability to escape.

MVP: Use of no metal mesh somewhat contradicts DEQ recommendations. Metal mesh may be needed in specific locations but MVP will try to limit use in favor of closer spaced metal T posts. Are there particular locations and/or habitat types that are of particular concern?

NCWRC: Not necessarily, primary concern is habitat movement.

Page 4-32. 4.3.2.2. Surface Water Crossings. Mussel surveys are not yet complete, therefore NCWRC cannot recommend where time of year restrictions (TOYR) are appropriate. In general, NCWRC recommends more stringent measures to control sedimentation and erosion in watersheds that drain to waterbodies with sensitive species. Such measures include installing sediment control fencing and stabilizing unvegetated fill. Unvegetated fill should be stabilized at the end of each work day with an acceptable erosion control cloth, blanket, or matting until the fill is ready to be permanently stabilized. In addition, no grubbing should occur with 50' of surface waters with sensitive species outside of the growing season (TOYR from Nov. 15 – April 1) to protect mussels from sedimentation impacts.

MVP: Mussel surveys are complete as of 10/7/19. What is the particular concern?

NCWRC: The concerns are leaving riparian buffers disturbed for long periods of time and if crossings are completed outside of the growing season then revegetation would be slower.

MVP: Grubbing Nov. 15 – April 1 is problematic due to winter construction concerns, including inability to achieve growth after the crossing is completed. Grubbing within 50' will not occur until the crossing occurs and the crossing will be expedited. In regards to the grubbing restriction, MVP explained that a 50' stream buffer is established and that general clearing/grubbing does occur within the stream buffers. Since all stream crossings would be completed uninterrupted once started (including disturbance to the stream buffers), those areas would be unstabilized for a very short duration.

NCWRC: NCWRC asked for details on the construction sequence and applicable construction details. Based on that information, the grubbing restriction should not be a concern.

MVP: Unvegetated fill will be stabilized with seed/mulch and runoff will be prevented with sediment barriers. MVP explained that ECB is generally used for final reclamation on steep slopes, not stockpiles along the ROW. It could be an option for large stockpiles at facilities. However, stockpiles along the ROW are temporarily stabilized with seed and mulch and protected by perimeter controls (usually immediately but required within 7 days).

NCWRC: NCWRC will clarify whether the recommendation still applies now that he understands the stabilization process better.

page 4-33. 4.3.2.2. Surface Water Crossings. NCWRC may request additional HDD or conventional bore crossings if rare aquatic species are detected during surveys.
Page 4-68. 4.6.1.1. Pipeline Facilities. The DEIS states that direct handling of any state or federally listed species will be prohibited unless approved by the applicable regulatory agencies. NCWRC can have further discussions with MVP regarding conditions and procedures for handling state listed species.

MVP: What is the particular concern? Can you provide specific handling procedures?

NCWRC: NCWRC wanted to clarify that if qualified biologists are conducting surveys/relocations then they would be qualified to handle species (as long as they have a permit). Once MVP submits aquatic survey results FWS and NCWRC will determine specific streams where mussel relocations and/or aquatic species removals will be recommended. Relocations are not anticipated to be necessary at streams where no mussels were found during the initial survey.

MVP: MVP welcomes feedback so that we can have an established process prior to starting construction.