

APPALACHIAN POWER COMPANY
BEFORE THE
VIRGINIA STATE CORPORATION COMMISSION
CASE NO. PUR-2021 -00001

APPLICATION FOR APPROVAL AND CERTIFICATION OF
ELECTRICAL TRANSMISSION LINE

Central Virginia Transmission
Reliability Project

VOLUME 3 OF 4

DEQ Supplements

January 2021

**AMHERST – REUSENS 69 kV REBUILD
VDEQ SUPPLEMENT**

VDEQ SUPPLEMENT

Central Virginia Transmission Reliability Project

Component 4:

Amherst – Reusens 69-kV Transmission Line Rebuild

Amherst County and City of Lynchburg, Virginia

Prepared For:

Appalachian Power Company

Prepared by:

POWER Engineers, Inc.

December 2020

Based on consultations with the Virginia Department of Environmental Quality (VDEQ), POWER Engineers, Inc. (POWER) on behalf of Appalachian Power Company (Appalachian Power or the Company) has developed this VDEQ Supplement to facilitate review and analysis of the Amherst – Reusens 69-kilovolt (kV) Transmission Line Rebuild Component of the Central Virginia Transmission Reliability Project (CVTRP) by the VDEQ and other relevant agencies.

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1. PROJECT DESCRIPTION

Appalachian Power Company (Appalachian Power or the Company) is planning to upgrade the local electric transmission grid in five central Virginia counties: Amherst, Appomattox, Albemarle, Campbell and Nelson (“the Central Virginia Transmission Reliability Project” or “CVTRP”). The CVTRP provides a new electrical source for the region, increases reliability to customers and supports the retirement of aging equipment. The Company’s application to the Virginia State Corporation Commission (SCC), describes the overall need and necessity for the CVTRP.

The CVTRP has been broken into four components. This Virginia Department of Environmental Quality (VDEQ) supplement will focus on Component 4 or the Amherst – Reusens 69-kV Transmission Line Rebuild Component, which involves rebuilding 12.2 miles of transmission line between the existing Amherst, Monroe, and Reusens substations. The Amherst – Reusens 69-kV Transmission Line is located primarily in Amherst County (12.1 miles) and includes a short span over the James River and into the City of Lynchburg (approximately 1,000 feet) to reach the Reusens Substation. In addition, the Company’s existing Monroe and Amherst substations will be expanded to accommodate future electrical upgrades associated with the CVTRP. As a result of expanding the Amherst Substation, the Company needs to relocate and extend certain transmission tie-in lines. The Company plans to construct approximately 500 feet of a new 138-kV double-circuit transmission line (Amherst Extension 138-kV transmission line) to connect the existing Boxwood – Riverville 138-kV circuit to the substation. The construction of the proposed Amherst Extension 138-kV transmission line results in rebuilding approximately 1,000 feet of the Boxwood – Riverville 138-kV and 500 feet of the Amherst – Riverville 138-kV transmission lines. Lastly, the Company plans to expand the Monroe Substation to accommodate a new switch pole to be relocated in the substation.

A siting effort was undertaken to determine the alignment to rebuild the Company’s existing Amherst – Reusens 69-kV Transmission Line. The proposed route begins at the Amherst Substation, off U.S. Route 60, and is located about 50 feet north of the existing ROW to avoid the Amherst Substation expansion area. The proposed route continues on centerline for about 3.6 miles and crosses U.S. Route 29 in the existing location. A slight northern shift was incorporated to avoid residences along Burks Road and between Structures 429-66 and 68. The proposed route continues generally southwest and remains in existing ROW for about two miles. Between Structures 429-47 and 51, the proposed route diverts north of the existing centerline (about 150 feet) to avoid a residential area and then continues in existing ROW to the Monroe Substation, located off U.S. Route 29. The proposed route continues in existing ROW to the James River crossing. At the James River crossing, Alternative Routes A and B were reviewed as off-centerline options to avoid a hydroelectric dam facility building in the existing ROW. Alternative Route B was selected as it avoids the hydroelectric dam facilities and residential development. Across the James River a double circuit transmission line with the Reusens – Scottsville – Brems Bluff 138-kV circuit and the Amherst – Reusens 69 kV circuit will be built on new ROW. Alternative Route B crosses the river to reach the Reusens Substation, off Old Trents Ferry Road in the City of Lynchburg.

The existing ROW of the Amherst – Reusens 69-kV Transmission Line varies in width and is generally 60-foot- to 100-foot-wide. As a conservative approach and for the purposes of this VDEQ Supplement, a 100-foot-wide ROW was used to assess potential impacts. Based on preliminary

engineering, the Company expects that the ROW of the rebuilt line will be 80-foot-wide and will be within or near existing ROW for most of its length.

2. ENVIRONMENTAL ANALYSIS

On behalf of the Company, POWER Engineers, Inc. (POWER) solicited input from a number of state and federal environmental agencies regarding the CVTRP. Responses to the CVTRP were received from 17 representatives of various federal, state, and local agencies, and are included in the *Amherst – Reusens Rebuild Siting Study* in Volume 2 of the Application. POWER also obtained relevant environmental data from field verification, online databases, and other publicly available sources.

A. Air Quality

The CVTRP does not involve the construction or expansion of any thermal emission generating sources and therefore no direct operational emissions from the Project are anticipated. During construction, emissions from heavy equipment and dust would occur, but kept at a minimum. No permanent impacts on air quality are anticipated, and temporary impacts will only last the duration of the construction phase. The Company does not expect to burn cleared material but, if burning becomes necessary, the Company will coordinate with the responsible locality to obtain permits and will comply with conditions imposed by the locality. The Company's tree-clearing methods can be found in Section II.A.7 of the SCC Response to Guidelines in Volume 1 of the Application.

B. Water Source

The Amherst – Reusens 69-kV Transmission Line Rebuild Component crosses five sub-watersheds: Buffalo River – Rocky Creek (Hydrologic Unit Code [HUC]12 020802030604); Rutledge Creek (HUC12 020802030603); James River – Stonewall Creek (HUC12 020802030402); Harris Creek (HUC12 020802030302); and James River-Judith Creek (HUC12 020802030301). Component 4 is located in the Middle James – Buffalo sub-basin (HUC8 02080203). No water source is required for either the transmission line or substation operation. The Company requested comments on all components for the CVTRP from the Virginia Department of Health's Office of Drinking Water in a letter dated January 30, 2020. The Office of Drinking Water did not respond to this request for the potential location of public groundwater wells or surface water intakes. Additionally, no response was received from the VDEQ Office of Wetland and Stream Protection. The Project Team submitted a project review request to the Virginia Department of Conservation (VDCR), Virginia Natural Heritage Program on January 30, 2020 and a response was received on March 6, 2020. The VDCR did not indicate any concerns or potential impacts for the Amherst – Reusens 69-kV Transmission Line Rebuild Component, including potential impacts to the aquatic natural community.

The Virginia Marine Resources Commission (VMRC) noted in a letter dated February 24, 2020, that pursuant to Section 28.2-1200 et seq. of the Code of Virginia, they have jurisdiction over any encroachments in, on, or over the beds of the bays, ocean, rivers, streams, or creeks which are the property of the Commonwealth. Any jurisdictional impacts will be reviewed by VMRC during the Joint Permit Application process, as required. In a letter dated March 3, 2020, the VDEQ Blue Ridge Regional Office did not indicate any water resource concerns for any component of the CVTRP. Responses from the VDCR, VMRC, and VDEQ in regard to water sources is included in the *Amherst – Reusens Rebuild Siting Study* in Volume 2 of the Application.

C. Discharge of Cooling Waters

No discharge of cooling waters is associated with the Project.

D. Tidal Wetlands

No tidal wetlands are associated with the Project.

E. Non-tidal Wetlands Impact Consultation

A desktop wetland and stream delineation report were prepared in October 2020 and identified potential wetlands and streams for Component 4 of the CVTRP. The desktop features were identified within the proposed route for the Amherst – Reusens 69-kV Transmission Line and the two alternative routes considered to cross the James River (Attachment 2.E.1). Field wetland delineations were completed for the Amherst and Monroe substation expansion areas in April and June 2020, respectively. No wetlands or streams were identified onsite at the Monroe or Amherst substation expansion areas. The desktop wetland and stream delineation report for the Amherst – Reusens 69-kV Transmission Line Rebuild Component is included as Attachment 2.E.1 of this supplement. For methodologies used to delineate wetlands and streams from a desktop perspective, please see as Attachment 2.E.1. The results are briefly summarized below.

The tables below show the criteria used to determine the wetland and stream probability within 100-foot-wide ROWs of the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The current potential streams and wetlands were assigned a probability of low potential, moderate potential, or high potential of being a regulated resource.

WETLAND PROBABILITY	ASSESSMENT CRITERIA
High	<ul style="list-style-type: none"> Aerial imagery (color and CIR) and/or topography combined with two other indicators such as NWI wetlands, NHD streams, or hydric soils.
Moderate	<ul style="list-style-type: none"> Aerial imagery (color and CIR) and/or topography combined with one other indicator such as NWI wetlands, NHD streams, or hydric soils.
Low	<ul style="list-style-type: none"> Presence of only hydric soils with no topographic or aerial imagery indicator. Areas identified as wetland with topography and/or aerial photography only. Presence of only floodplains with no topographic or aerial imagery indicator.

STREAM PROBABILITY	ASSESSMENT CRITERIA
High	<ul style="list-style-type: none"> Streams identified with NHD and aerial imagery (color and CIR).
Moderate	<ul style="list-style-type: none"> Streams identified with aerial imagery (color and CIR) and/or topography combined with one other indicator such as NWI wetlands or hydric soils.

STREAM PROBABILITY	ASSESSMENT CRITERIA
Low	<ul style="list-style-type: none"> Areas identified as streams with topography or aerial photography only.

Rebuild Route (in or near existing ROW)

The Rebuild Route rebuilds the Amherst – Reusens 69-kV Transmission Line in or near the existing ROW from the Amherst Substation to a proposed double-circuit 138-kV structure east of the James River crossing for approximately 12.1 miles. Within a 100-foot-wide ROW, the desktop wetland and stream delineation identified 14 potential wetlands (4.70 acres total) and 16 potential streams (approximately 1,814 linear feet). The results of the desktop wetland and stream delineations for the Rebuild Route in or near existing ROW is summarized in the table below.

REBUILD ROUTE: DESKTOP WETLAND AND STREAM DELINEATION RESULTS			
PROBABILITY LEVEL	WATER OF THE UNITED STATES TYPE	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW
High			
	PUB	1	0.07 ac.
	PEM/PFO	1	0.06 ac.
	PEM/PUB	1	0.23 ac.
	Streams	16	1,813.55 feet
Moderate			
	PEM/PSS	2	1.30 ac.
	PEM/PFO	2	0.34 ac.
Low			
	PEM	1	0.18 ac.
	PFO	3	1.06 ac.
	PSS	1	0.28 ac.
	PEM/PSS	2	0.93 ac.
Wetland Total		14	4.70 ac.
Stream Total		16	1,813.55 feet

Alternative Route A

Alternative Route A extends for approximately 0.7 miles as a northern double circuit alternative across the James River in Amherst County and the City of Lynchburg. Within a 100-foot-wide ROW, the desktop wetland and stream delineation identified three potential wetlands (0.92 acres total) and one stream (100 linear feet), the James River. The results of the desktop wetland and stream delineations for Alternative Route A is summarized in the table below.

ALTERNATIVE ROUTE A: DESKTOP WETLAND AND STREAM DELINEATION RESULTS			
PROBABILITY LEVEL	WATER OF THE UNITED STATES TYPE	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW
High			
	PEM/PFO	1	0.45 ac.
	Streams	1	100 feet
Moderate			
	PFO	1	0.06 ac.
	PUB	0	0.00 ac.
Low			
	PFO	1	0.41 ac.
Wetland Total		3	0.92 ac.
Stream Total		1	100 feet

Alternative Route B (Proposed Route)

Alternative Route B, the Proposed Route, extends for approximately 0.8 miles as a southern double circuit alternative across the James River in Amherst County and the City of Lynchburg. Within a 100-foot-wide ROW, the desktop wetland and stream delineation identified three potential wetlands (1.07 acres total) and one stream (100 linear feet), the James River. The results of the desktop wetland and stream delineations for Alternative Route B, the Proposed Route, is presented in the table below.

ALTERNATIVE ROUTE B (PROPOSED ROUTE): DESKTOP WETLAND AND STREAM DELINEATION RESULTS			
PROBABILITY LEVEL	WATER OF THE UNITED STATES TYPE	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW
High			
	PEM/PFO	1	0.06 ac.
	Streams	1	100 feet
Moderate			
	None identified		
Low			
	PFO	2	1.01 ac.
Wetland Total		3	1.07 ac.
Stream Total		1	100 feet

Based on a review of the information generated by the desktop delineation, Alternative Route B would generally have reduced impact on wetlands relative to Alternative Route A in terms of both quantity and type of wetlands. The ROWs of Alternative Route A and Alternative Route B (Proposed Route), cross the similar acreages of wetland types; however, all wetlands crossed by Alternative B are low probability wetlands at the James River crossing. Alternative Route A crosses a high probability PEM/PFO wetland and a moderate probability PFO wetland type, whereas Alternative Route B does not cross wetland types with high or moderate probabilities at the James River crossing. Both Alternative Routes cross the same high probability stream (the James River). The Proposed Route, a combination of the Rebuild Route and Alternative Route B, will be rebuilt in or near existing ROW, so any wetland features that are crossed can likely be spanned or avoided during construction.

F. Solid and Hazardous Waste

A database search was conducted to identify solid and hazardous waste sites in the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The database search included the USEPA’s National Priority List (NPL); the USEPA’s Superfund Enterprise Management System; the USEPA’s Resource Conservation and Recovery Act Information System (RCRA); the USEPA’s Toxics Release Inventory (TRI); the VDEQ’s Solid Waste Management Facilities; and the VDEQ’s Voluntary Remediation Program (VRP). Results from the solid and hazardous waste database search are included in Attachment 2.F.1 to this supplement.

The USEPA’s Superfund NPL online mapper identified no NPL sites in proximity to Amherst – Reusens 69-kV Transmission Line Rebuild Component in addition to the Superfund Enterprise Management System database (database last updated November 2019). The RCRA database (database last updated October 2020 for the City of Lynchburg) includes information on facilities that generate, transport, store, treat, and/or dispose of hazardous waste as defined by RCRA. Facilities are classified as large quantity generators, small quantity generators, or conditionally exempt small quantity generators depending on the amount of waste they handle. The USEPA’s RCRA database identified one active RCRA facility in the City of Lynchburg and one in Amherst County. Neither active RCRA facility is in close proximity (within 0.5 mile) of the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The TRI database (database last updated in 2018) includes information about toxic chemical releases and pollution prevention activities reported by industrial and federal facilities. The TRI database identified a total of 15 TRI sites within a 15 mile-radius of the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The TRI site identified in closest proximity to the rebuild is located about 1.5 miles away and also the same RCRA facility identified in Amherst County. In addition, no facilities registered in the VRP database (last updated in November 2019) are in proximity to the Amherst – Reusens 69-kV Transmission Line Rebuild Component.

There are six convenience centers and collection sites operated and located in Amherst County. The Coolwell Convenience Center is a waste disposal and recycling site located about 1.5 miles from the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The City of Lynchburg is a member of the Region 2000 Services Authority, which serves one collections center in the county. The Concord Turnpike Convenience Center is located more than two miles from the Amherst – Reusens 69-kV Transmission Line Rebuild Component.

Care will be taken to operate and maintain construction equipment to prevent any fuel or oil spills. Any waste created by the construction crews will be disposed of in a proper manner and recycled where appropriate and will be further detailed in the Company's stormwater pollution prevention plan, a component of the Virginia Stormwater Management Program, which will be submitted to the VDEQ. The Amherst – Reusens 69-kV Transmission Line Rebuild Component crosses through predominantly pasturelands and residential areas and will be rebuilt in or near the existing ROW. The Company will monitor soil and groundwater quality in areas of soil disturbance locations, which will be outlined in the stormwater pollution prevention plan.

G. Natural Heritage, Threatened and Endangered Species

A USFWS Information for Planning and Consultation (IPaC) report was generated to verify potential habitat occurrences of threatened and endangered species. One USFWS-listed species (Northern long-eared bat, listed as threatened) was identified to potentially occur within two miles of the Amherst – Reusens 69-kV Transmission Line Rebuild Component area. The IPaC is included as Attachment D to the *Amherst – Reusens Rebuild Siting Study*, located in Volume 2 of the Application.

As mentioned in Section B, the VDCR did not indicate any concerns or potential impacts to Amherst – Reusens 69-kV Transmission Line Rebuild Component in their response received on March 6, 2020. Additionally, no ecological cores as identified in the Virginia Natural Landscape Assessment by the VDCR were noted. The VDCR did not list specific species for the Company, but recommends following the Project's maintenance practices as preventative measures to protect potential habitats of USFWS-listed species:

- Invasive species plan including invasive species inventory for the Project based on the current VDCR Invasive Species List from VDCR's website; methods for treating the invasive species.
- ROW restoration and revegetation including native species in a mix of grasses and forbs; monitoring and adaptive management plan for unsuccessful restoration efforts.

The Project Team submitted a project review request to the Virginia Department of Wildlife Resources (VDWR) [previously the Virginia Department of Game and Inland Fisheries (VDGIF)]. The Company did not receive comments from the VDWR. A review of the VDWR's online mapper was used to view sensitive species and resulted in a five-mile radius from the center of the Amherst – Reusens rebuild. Two USFWS-listed species (Northern long-eared bat, James spinymussel, and [USFWS-proposed listed] yellow lance) were identified by the VDWR. The Amherst – Reusens 69-kV Transmission Line Rebuild Component area is not located in proximity to any potential Northern long-eared bat, little brown bat, or tri-colored bat habitat and roost tree locations according to the information obtained in VDWR's online mappers (various survey dates). One bald eagle nest documented by The Center for Conservation Biology's (CCB) Eagle Nest Locator was located about 0.5 mile north of the Reusens Substation (verified in 2011). The USFWS eagle guidance recommends that a 660-foot buffer between project activities and eagle nests be maintained. No other eagle nest locations were identified in close proximity to the Amherst – Reusens 69-kV Transmission Line Rebuild Component.

A total of seven state-listed species could occur in the Amherst – Reusens 69-kV Transmission Line Rebuild Component based on the VDWR list. The full list can be found in Attachment 2.G.1 and in the below table.

VDWR-Listed Species within 10 miles of Component 4	
SPECIES NAME	STATE STATUS
Little brown bat	Endangered
Tri-colored bat	Endangered
Peregrine falcon	Threatened
Loggerhead shrike	Threatened
Migrant loggerhead shrike	Threatened
Atlantic pigote	Threatened
Green floater	Threatened

The Company will coordinate with the VDWR, the USFWS, and the VDCR as appropriate to minimize impacts on these resources during the environmental permitting phase of the CVTRP.

H. Erosion and Sediment Control

The Company’s General Erosion and Sediment Control Specifications for the Construction and Maintenance of Electric Utility Lines are submitted annually to the VDEQ for all upcoming projects. The approved General Erosion and Sediment Control Specifications will be implemented for all transmission facility construction related to the proposed CVTRP, including the Amherst – Reusens 69-kV Transmission Line Rebuild Component, which will require transmission line construction, ROW clearing, structure erection, and use of existing access roads, when practicable. In addition, a site-specific erosion and sediment control plan will be prepared for the CVTRP as required by the VDEQ.

I. Archaeological, Historic, Scenic, Cultural or Architectural Resources

Per the Guidelines for Assessing Impacts of Proposed Electric Transmission Lines and Associated Facilities on Historic Resources in the Commonwealth of Virginia (2008) or simply Guidelines, issued by the Virginia Department of Historic Resources (VDHR), POWER, who contracted Dutton + Associates, completed a Pre-Application Analysis (see Attachment 2.I.1). The below table summarizes these results. The Company will continue to work with the VDHR to minimize impacts to cultural resources as the CVTRP progresses.

CONSIDERED RESOURCES WITHIN TIERED STUDY AREAS				
Radial Buffer From Component 4 (Miles)	Considered Resources	Proposed Route (in or near existing ROW)	Alternative Route A	Alternative Route B (Proposed Route)
0.0 to 1.5	National Historic Landmarks	None	None	None
0.0 to 1.0	NRHP (listed) (e.g., Historic Landscapes, Battlefields, Rural Historic District)	Oak Lawn (VDHR# 005-5029) Hanshill (VDHR# 005-5329) Bowling Eldridge House (VDHR# 009-5283) Virginia Episcopal School (VDHR# 118-0224) Presbyterian Orphans Home (VDHR# 118-5240)	Bowling Eldridge House (VDHR# 009-5283) Virginia Episcopal School (VDHR# 118-0224) Presbyterian Orphans Home (VDHR# 118-5240)	Bowling Eldridge House (VDHR# 009-5283) Virginia Episcopal School (VDHR# 118-0224) Presbyterian Orphans Home (VDHR# 118-5240)
0.0 to 0.5	NRHP-eligible (determined by VDHR)	Bibbie House (VDHR# 005-0223) Lavino Furnace (VDHR# 118-0138) Reusens Dam (VDHR# 118-0218)	Lavino Furnace (VDHR# 118-0138) Reusens Dam (VDHR# 118-0218)	Lavino Furnace (VDHR# 118-0138) Reusens Dam (VDHR# 118-0218)
0.00 (within ROW)	Archaeological sites	None	None	None

There are five NRHP-listed architectural sites located within one mile of the Rebuild Route and three of the NRHP-listed sites are located within one mile of Alternative Routes A and B (Proposed Route). Both the Oak Lawn and Hanshill properties are located in Amherst County and within 0.2 mile of the Rebuild Route, but the historic homes are located about 0.3 mile from the centerline. Surrounding the Hanshill property is forested areas and a residential development. Surrounding the Oak Lawn property is also forested areas, some scattered residential homes on rural lands, and the Norfolk Southern Railroad corridor. The Bowling Edridge House, Virginia Episcopal School, and Presbyterian Orphans Home properties are located in the City of Lynchburg. The Bowling Edridge House is located approximately 0.9 mile north of the Reusens Substation and the existing transmission line and substation are not visible from the resource given the sloped terrain and dense vegetative cover. The Virginia Episcopal School and Presbyterian Orphans Home campuses are located approximately 0.6 to 0.8 mile south of the Reusens Substation. Both campuses are oriented to the south, away from the Proposed Route, and not visible from the intervening vegetation and topography. Based on

the Pre-Application Analysis, the five NRHP-listed architectural sites will not be visible from the Proposed Route, including the Rebuild Route and Alternative Route B, given the intervening topography and vegetative cover.

There are three NRHP-eligible sites located within 0.5 mile of Component 4. The Bibbie House is located adjacent and east of Route 29 in Amherst County and approximately 0.3 mile from the Rebuild Route. The Lavino Furnace property is located 0.48 mile south of Component 4 near the Reusens Substation in the City of Lynchburg; the property is adjacent to a railroad corridor and industrial development. The Reusens Dam is located immediately adjacent to the Proposed Route at the James River crossing, east of the Reusens Substation, and is avoided by Alternative Routes A and B. Alternative Routes A and B will not introduce any substantial change of viewshed or setting for the property as the surrounding land use has been altered by residential development and a railroad corridor. Based on the Pre-Application Analysis, the transmission line rebuild will have no more than a minimal impact on the three NRHP-eligible resources given the intervening vegetation and topography or adjoining developed land uses.

J. Chesapeake Bay Preservation Areas

Construction, installation, operation, and maintenance of electric transmission lines are conditionally exempt from the Chesapeake Bay Act as stated in the exemption for public utilities, railroads, public roads, and facilities in 9 VAC 10-20-150. The Company will meet applicable conditions.

K. Wildlife Resources

As noted in Section 2.G, one federally-listed species may be found within one mile of the component area, according to the IPaC. Consultation with the USFWS, the VDWR, and the VDCR will be on-going as the CVTRP progresses. The Amherst – Reusens 69-kV Transmission Line Rebuild Component will be rebuilt in or near its existing ROW thus minimizing any new habitat fragmentation and tree clearing. As required, the Company will perform the appropriate surveys to determine if protected species are present and to coordinate with the USFWS and the VDWR as appropriate to minimize impacts on these species and their habitat.

L. Recreation, Agricultural, and Forest Resources

The Amherst – Reusens 69-kV Transmission Line will be rebuilt in or near existing ROW and therefore, new impacts to recreation, agricultural, and forest resources are minimal.

Approximately 83 acres of farmland of statewide importance¹ and approximately 31 acres of prime and unique farmland soil² is crossed by the proposed route in or near existing ROW and primarily in existing locations. Alternative Routes A and B cross the James River and there are no farmlands. These designations are established by the United States Department of Agriculture's Natural Resources Conservation Service based on soil characteristics. Nevertheless, impacts on agricultural

¹ Prime farmland is land that has the best combination of physical and chemical characteristics for producing crops.

² Soils that do not meet the prime farmland category but are still recognized for their productivity by states may qualify as soils of statewide importance.

land from the Project are expected to be minimal. The permanent loss of soils or farmable land would be generally limited to the structure foundation locations. Further, the minimum ground-to-conductor clearance is sufficient to accommodate typical farming equipment, so agricultural activities can continue within the ROW and are not anticipated to be impacted.

As part of the routing evaluations, the Siting Team considered the extent to which the Project would have impacts on forest resources in the Commonwealth of Virginia. The Company requested comments on the Project from the Virginia Department of Forestry (VDOF) in a letter dated January 30, 2020. The VDOF did not respond with any current or proposed easements located in the Amherst – Reusens 69-kV Transmission Line Rebuild Component area. Additionally, the Amherst – Reusens 69-kV Transmission Line Rebuild Component area has been altered for agricultural and pastoral land uses and residential land uses. There are some pockets of forested cover, but the transmission line will largely be rebuilt in existing ROW and is anticipated to have minimal new impacts to forested resources. Component 4 does not cross and local or state parks; however, the proposed route ROW crosses, in its current location, north of the Izaak Walton Park, located west of U.S. Route 29. Impacts to the local park are anticipated to be minimal given the ROW crossing is unchanged. There are no other local or state conservation lands or easements, parks, designated wilderness areas, or game lands located in the Study Area or in proximity to any route. The Company anticipates that less than 20 acres of tree clearing (based on digitizing aerial photography) will be required for the proposed route, including the minor deviations from centerline and the new ROW over the James River. The Company's tree clearing methods use the Virginia Department of Forestry (DOF)'s BMPs for water quality. Specific sections of the BMPs that are pertinent to transmission line clearing operations include:

- Equipment Maintenance and Litter
- Harvest Closure (rehabilitation of the ROW after construction)
- Revegetation of Disturbed Areas

The Company will utilize the above BMPs for the Project. Further discussion of ROW clearing, rehabilitation and maintenance can be found in Section II.A.7 of the SCC Response to Guidelines in Volume 1 of the Application.

M. Use of Pesticides and Herbicides

When herbicides are used to maintain the Company's transmission ROW, they are registered with the USEPA and with the Virginia Department of Agriculture and Consumer Services. All herbicides will be used in accordance with label and manufacturer directions. Regarding herbicide applications (additionally, see Section II.A.7 of the SCC Response to Guidelines in Volume 1 of the Application):

- Herbicides will not be applied when rainfall is imminent, during rainfall, or within one day of large rain events (usually greater than one centimeter) that result in soil moisture capacity occurring above field capacity.
- Buffer zones will be maintained around streams, ponds, karst features, springs, wetlands, and water supply wells in accordance and compliance with herbicide label and manufacturer directions.

- In karst features and channelized drainage ways (perennial or intermittent) draining to a karst feature, wetland-approved herbicides shall be used in accordance with label and manufacturer directions.

ATTACHMENTS

**ATTACHMENT 2.E.1:
DESKTOP WETLAND AND STREAM DELINEATION REPORT**

December 14, 2020

APPALACHIAN POWER COMPANY

Central Virginia Transmission Reliability Project: Component 4 Amherst – Reusens 69-kV Transmission Line Rebuild Amherst County and City of Lynchburg, Virginia

VDEQ Desktop Wetland and Stream Delineation Report

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161702, 161705

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ACRONYMS AND ABBREVIATIONS

CIR	Color Infrared
Company	Appalachian Power Company
CPCN	Certificate of Public Convenience and Necessity
CVTRP	Central Virginia Transmission Reliability Project
GIS	Geographic Information System
kV	kilovolt
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetland Inventory
PEM	Palustrine Emergent Wetlands
PFO	Palustrine Forested Wetlands
POWER	POWER Engineers, Inc.
PSS	Palustrine Scrub-Shrub Wetlands
PUB	Palustrine Unconsolidated Bottom Wetlands
ROW(s)	Right(s)-of-way
SCC	State Corporation Commission
USACE	United States Army Corps of Engineers
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
VDEQ	Virginia Department of Environmental Quality

1.0 INTRODUCTION

Appalachian Power Company (Appalachian Power or the Company) is planning to upgrade the local electric transmission grid in five central Virginia counties: Amherst, Appomattox, Albemarle, Campbell and Nelson (“the Central Virginia Transmission Reliability Project” or “CVTRP”. The CVTRP provides a new electrical source for the region, increases reliability to customers and supports the retirement of aging equipment. The Company’s application to the Virginia State Corporation Commission (SCC), describes the overall need and necessity for the CVTRP.

The CVTRP has been broken into four components. This Virginia Department of Environmental Quality (VDEQ) desktop delineation will focus on Component 4 or the Amherst – Reusens 69-kV Transmission Line Rebuild Component, which involves rebuilding 12.2 miles of transmission line between the existing Amherst, Monroe, and Reusens substations. The Amherst – Reusens 69-kV Transmission Line is located primarily in Amherst County (12.1 miles) and includes a short span over the James River and into the City of Lynchburg (approximately 1,000 feet) to reach the Reusens Substation. In addition, the Company’s existing Monroe and Amherst substations will be expanded to accommodate future electrical upgrades associated with the CVTRP. As a result of expanding the Amherst Substation, the Company needs to relocate and extend certain transmission tie-in lines. The Company plans to construct approximately 500 feet of a new 138-kV double-circuit transmission line (Amherst Extension 138-kV transmission line) to connect the existing Boxwood – Riverville 138-kV circuit to the substation. The construction of the proposed Amherst Extension 138-kV transmission line results in relocating approximately 1,000 feet of the Boxwood – Riverville 138-kV and 500 feet of the Amherst – Riverville 138-kV transmission lines. Lastly, the Company plans to expand the Monroe Substation to accommodate a new switch pole to be relocated in the substation.

The Company contracted POWER Engineers, Inc. (POWER) to prepare this desktop wetland and stream delineation report that will support the Company’s VDEQ Supplement for Component 4 of the CVTRP. One VDEQ Supplement for each of the CVTRP Components will be included in the Application for a Certificate of Public Convenience and Necessity (CPCN) to be filed with the SCC, which approves or denies such applications.

The existing ROW of the Amherst – Reusens 69-kV Transmission Line varies in width and is generally 60-feet- to 100-feet-wide. Based on preliminary engineering, the Company expects that the ROW of the rebuilt line will be 80-feet-wide and will follow the centerline of the existing ROW for most of its length. For the purposes of this desktop delineation report, a 100-foot-wide ROW was used to identify and compare potential for regulated waters (waters of the United States and waters of the State). Field wetland delineations were completed for the Amherst and Monroe substations in April and June 2020, respectively. No wetlands or streams were identified or onsite at the Monroe or Amherst substation expansion areas.

2.0 METHODS

2.1 Data Sources and Background Information

POWER reviewed various mapping sources and Geographic Information System (GIS) data in order to identify areas where wetlands or streams could potentially be located within the proposed ROWs of the Amherst – Reusens 69-kV Transmission Line Rebuild Component. The GIS data and mapping sources are included in the following:

- United States Geological Survey (USGS) topographic mapping (USGS 2019).
- Esri Basemap color aerial photography (Esri 2020).
- Color Infrared (CIR) aerial imagery and orthophotography (Virginia Base Mapping Program 2018).
- Google Earth color aerial photography, including historical aerial data (Google Earth, Imagery dates vary by location).
- National Hydrography Dataset (NHD) stream and river data (USGS 2020).
- United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) mapping (USFWS 2020).
- Natural Resources Conservation Service (NRCS) Gridded Soil Survey of Amherst County, Virginia (NRCS 2009).
- NRCS Soil Survey of Campbell County and City of Lynchburg, Virginia (NRCS 1977).
- Federal Emergency Management Agency (FEMA) Riverine Mapping and Floodplain Boundaries Guidance (FEMA 2019)

2.2 Wetland Definitions

Federal regulations define wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation, typically adapted for life in saturated soil conditions” (Clean Water Act Section 404, United States Environmental Protection Agency [USEPA] 2020).

Under normal circumstances, three parameters must be present for an area to be considered a wetland: hydrophytic vegetation, wetland hydrology, and hydric soils. Applicable technical guidance that defines these parameters and provides criteria for the evaluation of associated data and field indicators is provided in the *1987 Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the*

United States Army Corps of Engineers (USACE) Wetland Delineation Manual, Eastern Mountains and Piedmont Region (USACE 2012).

Using the data sources outlined above, POWER identified areas that could potentially meet the three parameters required to meet the definition of a wetland provided by the USACE. Following identification, aerial imagery was used to determine potential cover type and all wetlands were classified according to the naming convention found in Classification of Wetlands and Deepwater Habitats of the United States (Cowardin et al. 1979). The Cowardin classification is a taxonomic system that divides wetlands and deepwater habitats into five systems based on hydrologic factors. Those systems are further broken down into additional taxonomic groups based on vegetation and substrate. Cowardin wetland types encountered along the proposed and alternate ROWs fall into the following four classifications:

Palustrine Emergent (PEM) Wetlands

Emergent wetlands are typically characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is usually present for most of the growing season in most years.

Palustrine Scrub-Shrub (PSS) Wetlands

Scrub-shrub wetlands are typically characterized by woody vegetation less than 20 feet tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions.

Palustrine Forested (PFO) Wetlands

Forested wetlands are usually characterized by woody vegetation that is 20 feet tall or taller. These wetlands typically possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer.

Palustrine Unconsolidated Bottom (PUB) Wetlands

Unconsolidated bottom wetlands include all wetland and deepwater habitats with at least 25 percent cover of particles smaller than stones and a vegetative cover less than 30 percent.

2.3 Wetland and Stream Data Interpretation

2.3.1 Aerial Imagery and Topographic Mapping

The CIR aerial imagery (Virginia Base Mapping Program 2018), current and historical aerial photography (Esri 2020; Google Earth, various dates), and USGS topographic data (USGS 2019) were used to help determine the location, size, and cover type of potential wetland and stream resources within the proposed and alternate ROWs. The USGS topographic contour lines are useful in helping to identify potential drainage areas from small headwater streams to larger river valleys. The contour lines are also useful in determining areas of flat or depressed terrain where water is more likely to pool for sufficient duration that allows development of the three required wetland parameters. Therefore, as a general guideline, wetlands are more commonly found in flatter areas versus steeper terrain and ridgelines. The CIR aerial imagery can be helpful in identifying areas of open water and saturated areas, because areas of land without vegetative cover will register as black or dark blue on the CIR imagery as these areas do not reflect much light in the infrared spectrum (Minnesota IT Services 2018). CIR aerial imagery can be used to identify areas of potential wetlands and streams within the ROW. Additionally, actively photosynthesizing vegetation has a high reflectance and results in actively growing vegetation to appear bright red in CIR imagery. Non-photosynthesizing plants appear a lighter pink to magenta. The color differentiation allows for the identification of potential wetlands as plants being located in a wetter hydrologic regime would provide a deeper red signature on the imagery due to a more active level of photosynthesis.

2.3.2 National Wetland Inventory Dataset

As part of this analysis, POWER reviewed NWI mapping to identify areas previously mapped as potential wetlands. The NWI is an index of locations identified by the USFWS as areas that exhibit potential wetland characteristics on aerial photography. The NWI data is prepared from the analysis of high-altitude imagery and therefore, it reflects conditions during the specific year and season the data was acquired. As a result, wetlands present in an area may not be readily identified (USFWS 2020). The wetland areas have not been field verified; however, they can be useful for indicating areas where wetlands could occur, especially when used in conjunction with soil mapping and analysis of USGS topographic mapping. NWI wetlands are classified according to the Cowardin classification system (Cowardin et al. 1979).

2.3.3 National Hydrography Dataset

The USGS NHD (USGS 2020) was consulted to identify known streams on site. The USGS NHD is a comprehensive set of digital spatial data representing surface waters, including common features such as lakes, ponds, streams, rivers, canals, and oceans (Simley and

Carswell 2009). Although not field verified, the USGS NHD shows the locations of streams, rivers, and open waters, and provides insight into the general location of waters (USGS 2020).

2.3.4 Federal Emergency Management Agency (FEMA) Floodplain Dataset

The FEMA floodplain dataset was reviewed to identify known floodplains on site. The FEMA Riverine Mapping and Floodplain Boundaries Guidance (FEMA 2019) provides digital spatial data representing floodplains associated with recorded streams (see Section 2.3.3 on USGS NHD streams) as well as riverine mapping. Floodplain boundaries are divided into flood insurance rate zones that are rated between 100-year and 500-year floodplains. Both 100-year and 500-year are considered areas of moderate flood hazard. All remaining areas fall under the terms of minimal flood hazard (FEMA 2019).

2.3.5 Soil Survey Mapping

NRCS digital soil survey data for Amherst County and the City of Lynchburg were used to locate areas of hydric soils, which are typically found in wetlands (NRCS 2018 and 1977). The NRCS soil survey groups soil map units into three categories; non-hydric soil units, soil units with hydric soil inclusions, and units that contained all hydric soils. Areas that contain hydric or hydric inclusion map units have a greater probability of supporting wetlands relative to those mapped as non-hydric soil units. Hydric inclusion soils are identified on the map sheets included in Attachment A of this desktop report. There is one hydric inclusion soil unit mapped within the Amherst – Reusens 69-kV Transmission Line ROW, adjacent to the James River and part of a substation associated with the hydro dam facility.

2.4 Wetland and Stream Data Evaluation

Tables 1 and 2 show the criteria used to determine the wetland and stream probability within the proposed ROWs of the Amherst – Reusens 69-kV Transmission Line Rebuild Component. Potential streams and wetlands were assigned a probability of low potential, moderate potential, or high potential of being a regulated resource.

TABLE 1 WETLAND EVALUATION CRITERIA

WETLAND PROBABILITY	ASSESSMENT CRITERIA
High	<ul style="list-style-type: none"> • Aerial imagery (color and CIR) and/or topography combined with two other indicators such as NWI wetlands, NHD streams, or hydric soils.
Moderate	<ul style="list-style-type: none"> • Aerial imagery (color and CIR) and/or topography combined with one other indicator such as NWI wetlands, NHD streams, or hydric soils.

WETLAND PROBABILITY	ASSESSMENT CRITERIA
Low	<ul style="list-style-type: none"> • Presence of only hydric soils with no topographic or aerial imagery indicator. • Areas identified as wetland with topography and/or aerial photography only. • Presence of only floodplains with no topographic or aerial imagery indicator.

TABLE 2 STREAM EVALUATION CRITERIA

STREAM PROBABILITY	ASSESSMENT CRITERIA
High	<ul style="list-style-type: none"> • Streams identified with NHD and aerial imagery (color and CIR).
Moderate	<ul style="list-style-type: none"> • Streams identified with aerial imagery (color and CIR) and/or topography combined with one other indicator such as NWI wetlands or hydric soils.
Low	<ul style="list-style-type: none"> • Areas identified as streams with topography or aerial photography only.

3.0 RESULTS AND DISCUSSION

The results of the desktop wetland and stream delineations for Component 4 is presented in Tables 3 and 4. Figures showing the location of desktop delineated wetlands and streams can be found in Attachment A of this desktop report. No desktop delineated wetlands and streams were identified in the ROWs of the relocated transmission lines near the Amherst Substation (Map Tiles 22 and 23, Attachment A). The desktop delineation assumed a 100-foot-wide ROW to assess potential impacts; however, the ROW may be reduced after final engineering is complete.

TABLE 3 DESKTOP WETLAND DELINEATION RESULTS FOR COMPONENT 4

WETLAND TYPE	ALTERNATIVE ROUTE A		ALTERNATIVE ROUTE B (PROPOSED ROUTE)		REBUILD ROUTE (IN OR NEAR EXISTING ROW)	
	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW
High						
PEM	0	0	0	0	0	0
PFO	0	0	0	0	0	0
PUB	0	0	0	0	1	0.07
PSS	0	0	0	0	0	0
PEM/PSS	0	0	0	0	0	0
PEM/PFO	1	0.45	1	0.06	1	0.06
PEM/PUB	0	0	0	0	1	0.23
High Wetlands Total	1	0.45	1	0.06	3	0.36
Moderate						
PEM	0	0	0	0	0	0
PFO	1	0.06	0	0	0	0
PUB	0	0	0	0	0	0
PSS	0	0	0	0	0	0
PEM/PSS	0	0	0	0	2	1.30
PEM/PFO	0	0	0	0	2	0.34
PEM/PUB	0	0	0	0	0	0
Moderate Wetlands Total	1	0.06	0	0	4	1.64
Low						

WETLAND TYPE	ALTERNATIVE ROUTE A		ALTERNATIVE ROUTE B (PROPOSED ROUTE)		REBUILD ROUTE (IN OR NEAR EXISTING ROW)	
	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW	NUMBER OF WETLAND OCCURRENCES	ACREAGE WITHIN ROW
PEM	0	0	0	0	1	0.18
PFO	1	0.41	2	1.01	3	1.06
PUB	0	0	0	0	0	0
PSS	0	0	0	0	1	0.28
PEM/PSS	0	0	0	0	2	0.93
PEM/PFO	0	0	0	0	0	0
PEM/PUB	0	0	0	0	0	0
Low Wetlands Total	1	0.41	2	1.01	7	2.45

TABLE 4 TABLE 4 DESKTOP STREAM DELINEATION RESULTS FOR COMPONENT 4

STREAM TYPE	ALTERNATIVE ROUTE A		ALTERNATIVE ROUTE B (PROPOSED ROUTE)		REBUILD ROUTE (IN OR NEAR EXISTING ROW)	
	NUMBER OF STREAM OCCURRENCES	LINEAR FOOTAGE WITHIN ROW	NUMBER OF STREAM OCCURRENCES	LINEAR FOOTAGE WITHIN ROW	NUMBER OF STREAM OCCURRENCES	LINEAR FOOTAGE WITHIN ROW
High Streams Total	1	100	1	100	16	1,813.55
Moderate Streams Total	0	0	0	0	0	0
Low Streams Total	0	0	0	0	0	0

3.1 Alternative Route A

Alternative Route A is a northern off-centerline option that crosses the James River to reach the Reusens Substation and avoid the hydroelectric dam facility. Alternative Route A is a double-circuit transmission line crossing carrying the Company's existing Amherst – Reusens 69-kV circuit and Clifford – Reusens 138 kV circuit (proposed Reusens-Boxwood 138kV circuit) to reach the Reusens Substation. Alternative Route A is 0.7 mile long and is located in Amherst County and the City of Lynchburg (Map Tile 1, Attachment A).

High Probability

One high probability 0.45-acre PEM/PFO wetland was identified on the eastern riverbank. Due to terrain at the river crossing, it is not likely that trees would need to be cleared within the PFO along the riverbank. No other high probability wetlands were identified within the ROW of Alternative Route A. One high probability stream crossing, the James River, is within the ROW.

Moderate Probability

One moderate probability 0.06-acre PFO wetland was identified within the ROW of Alternative Route A near the western riverbank. No other moderate probability wetlands or streams were identified within the ROW.

Low Probability

One low probability 0.41-acre PFO wetland was identified within the ROW of Alternative Route A on the east side of the river. No other low probability wetlands or streams were identified within the ROW of Alternative Route A.

3.2 Alternative Route B (Proposed Route)

Alternative Route B is a southern off-centerline option that crosses the James River to reach the Reusens Substation and avoid the hydro facility. Alternative Route A is a double-circuit transmission line crossing carrying the Company's existing Amherst – Reusens 69-kV circuit and Clifford – Reusens 138 kV circuit (proposed Reusens-Boxwood 138kV circuit) to reach the Reusens Substation. Alternative Route B is 0.8 mile long and is located in Amherst County and the City of Lynchburg (Map Tile 1, Attachment A).

High Probability

One high probability 0.06-acre PEM/PFO wetland was identified within the ROW of Alternative Route B, and located on the eastern bank of the James River. One high probability stream crossing, the James River, was identified within the ROW.

Moderate Probability

No moderate probability wetlands or streams were identified within the ROW of Alternative Route B.

Low Probability

Two low probability PFO wetlands were identified within the ROW of Alternative Route B (totaling 1.01 acres). Due to terrain at the river crossing, it is not likely that trees would need to be cleared within the PFO along the riverbank. No other low probability wetlands or streams were identified within the ROW.

3.3 Rebuild Route (In or Near Existing ROW)

The Rebuild Route considers largely rebuilding the Amherst – Reusens 69-kV Transmission Line in or near the existing ROW for from the Amherst Substation to a proposed double-circuit structure east of the James River crossing (Attachment A). The Rebuild Route begins at the Amherst Substation, off U.S. Route 60, and is located about 50 feet north of the existing ROW to avoid the Amherst Substation expansion area. The Rebuild Route continues on centerline for about 3.6 miles and crosses U.S. Route 29 in the existing location. Residences along Burks Road and between Structures 429-66 and 68 are avoided by a slight northern shift of the existing ROW. The Rebuild Route continues generally southwest and remains in existing ROW for about 1.8 miles. Between Structures 429-47 and 51, the Rebuild Route diverts north of the existing centerline (about 150 feet) to avoid a residential area and then continues in existing ROW to the Monroe Substation, located off U.S. Route 29. The Rebuild Route continues in existing ROW to the James River crossing. The Rebuild Route is located in Amherst County.

High Probability

Three high probability wetlands (totaling 0.36 acre) were identified within the ROW of the Rebuild Route. One, 0.07-acre PUB wetland (Map Tile 21), one, 0.23-acre PEM/PUB wetland (Map Tile 2), and one, 0.06-acre, PEM/PFO wetland (Map Tile 8) were identified in the desktop delineation. No other high probability wetland types were identified within the ROW. A total of 16 high probability streams were identified (approximately 1,814 linear feet) within the ROW of the Rebuild Route. It is likely all streams can be spanned by the transmission line and avoid impacts.

Moderate Probability

Four moderate probability wetlands (totaling 1.64 acres) were identified within the ROW of the Rebuild Route (Map Tile 5). Two PEM/PSS wetlands totaling 1.30 acres (Map Tiles 5 and 6) and two PEM/PFO wetlands totaling 0.34 acres (Map Tiles 8 and 14) were identified within the ROW. No moderate streams were identified for the Rebuild Route.

Low Probability

Seven low probability wetland types (totaling 2.45 acres) were identified within the ROW of the Rebuild Route. One, 0.18-acre PEM wetland, one, 0.28-acre PSS wetland, three PFO wetlands (totaling 1.06 acres), and two PEM/PSS wetlands (totaling 0.93 acre) were identified. No other low probability wetlands were identified within the ROW and no low probability stream crossings were identified.

4.0 CONCLUSION

A summary of the desktop wetland and stream resources identified for the Amherst – Reusens 69-kV Transmission Line Rebuild Component is provided below in Table 5. The ROWs of Alternative Route A and Alternative Route B (Proposed Route), both cross three desktop wetlands, but Alternative Route B crosses a greater number of low probability wetlands. The ROWs of Alternative Routes A and B cross the James River for 100 feet. A 100-foot-wide ROW of the Rebuild Route (and associated relocated transmission lines near the Amherst Substation) includes 14 wetlands, with a total combined area of approximately 4.7 acres, and crosses 16 streams with a total combined linear footage of 1,813.55 feet.

TABLE 5 SUMMARY OF DESKTOP WETLAND AND STREAM DELINEATIONS FOR COMPONENT 4

STREAM TYPE	ALTERNATIVE ROUTE A		PROPOSED ROUTE (ALTERNATIVE ROUTE B)		REBUILD ROUTE	
	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW	NUMBER OF OCCURRENCES	ACREAGE/LINEAR FOOTAGE WITHIN ROW
Wetland Total	3	0.92 acres	3	1.07 acre	14	4.70 acres
Stream Total	1	100 feet	1	100 feet	16	1,813.55 feet

Based on a review of the information generated by the desktop delineation, Alternative Route B would generally have reduced impact on wetlands relative to Alternative Route A in terms of both quantity and type of wetlands. The ROWs of Alternative Route A and Alternative Route B (Proposed Route), cross the similar acreages of wetland types; however, all wetlands crossed by Alternative B are low probability wetlands at the James River crossing. Alternative Route A crosses a high probability PEM/PFO wetland and a moderate probability PFO wetland type, whereas a low probability wetland at the James River crossing is crossed by Alternative Route B. Both Alternative Routes cross the same high probability stream, the James River. The Proposed Route will be rebuilt in or near existing ROW, so any wetland features that are crossed can likely be spanned or avoided during construction.

In general, temporary and permanent impacts to wetlands and streams during construction of transmission lines can be avoided through strategic placement of transmission structures/foundations to minimize impacts to regulated resources. In most cases, wetlands and streams can be spanned entirely by a transmission line. Where avoidance is not possible, impacts to wetlands and streams are generally minimal due to the relatively small footprint of transmission line structure foundations.

Typically, impacts to wetlands from access roads, which are required to construct the transmission lines, can be minimized through the use of timber mats to reduce disturbance of the ground surface within wetland areas. In some cases, timber mat bridges can also be used to span stream channels. Impacts from access roads are often temporary in nature, as access roads are often restored to pre-construction conditions at the end of construction.

The results of this desktop wetland and stream delineation are intended solely for use as an indication of probable wetlands and streams within the ROWs associated with the Amherst – Reusens 69-kV Transmission Line Rebuild Component of the CVTRP. This analysis is designed for planning purposes only and does not represent the results of an on-the-ground, wetland and stream field delineation. Accurate determination of regulated resource boundaries is only possible through field delineations of wetlands and streams utilizing the USACE wetland delineation manual (Environmental Laboratory 1987), the applicable regional supplement (USACE 2012), and other appropriate regulatory guidance.

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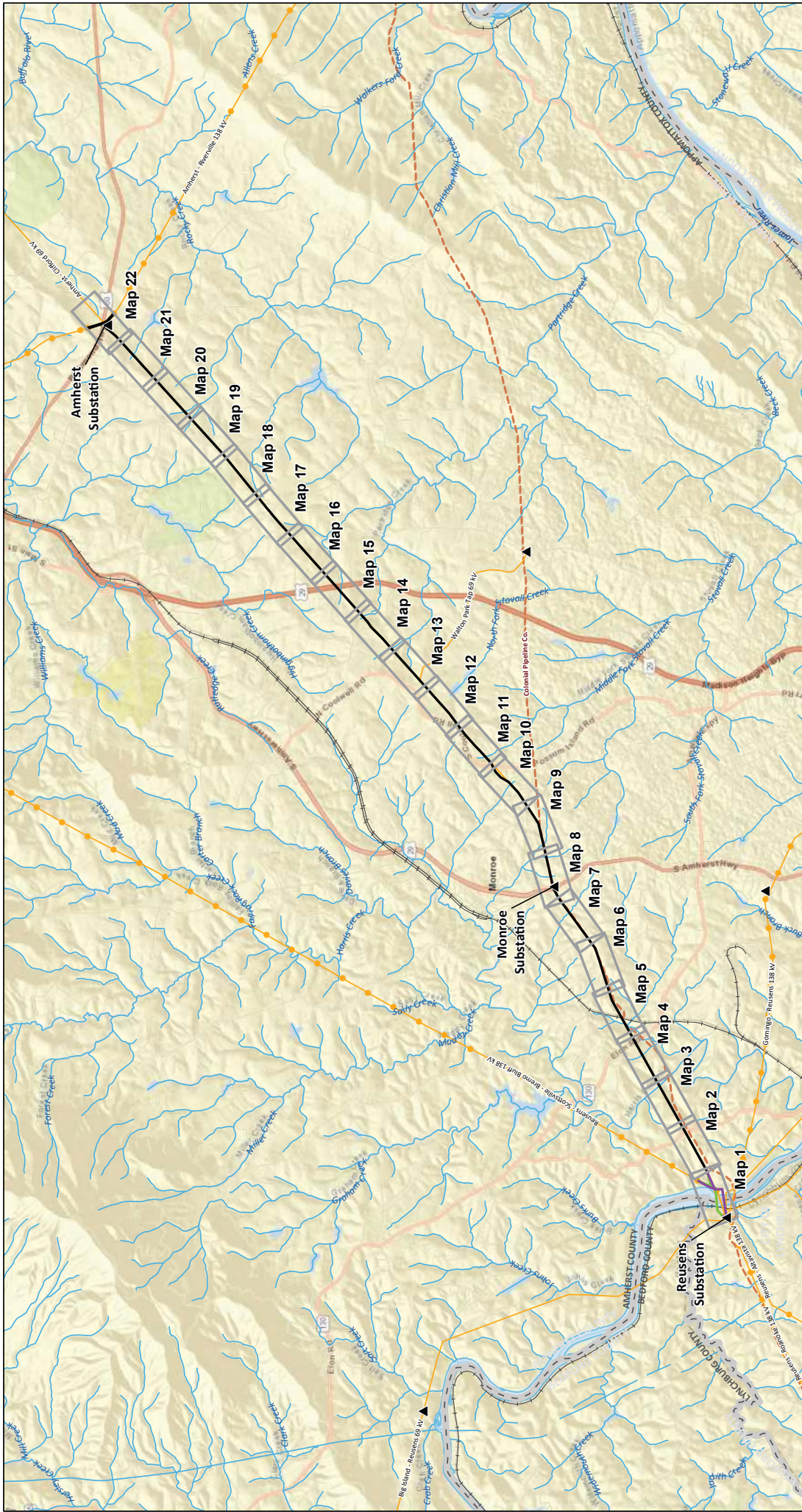
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ATTACHMENT A: DESKTOP DELINEATED FEATURES, ROW ROUTE MAPPING



Desktop Wetland and Stream Delineation


Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild



APPALACHIAN POWER
 #REUSENSES ENERGY


Property Layer Credit: VRS
 Metadata Layer Credit: INCREMENT P. NGA, USGS

Date: 11/02/2020
 Project: 19B27



MAD 1983 StatePlane Virginia South EPS 5002 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia



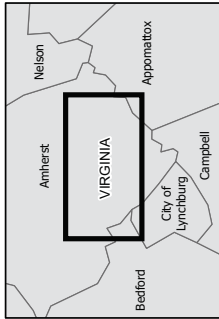
1" = 1 mile

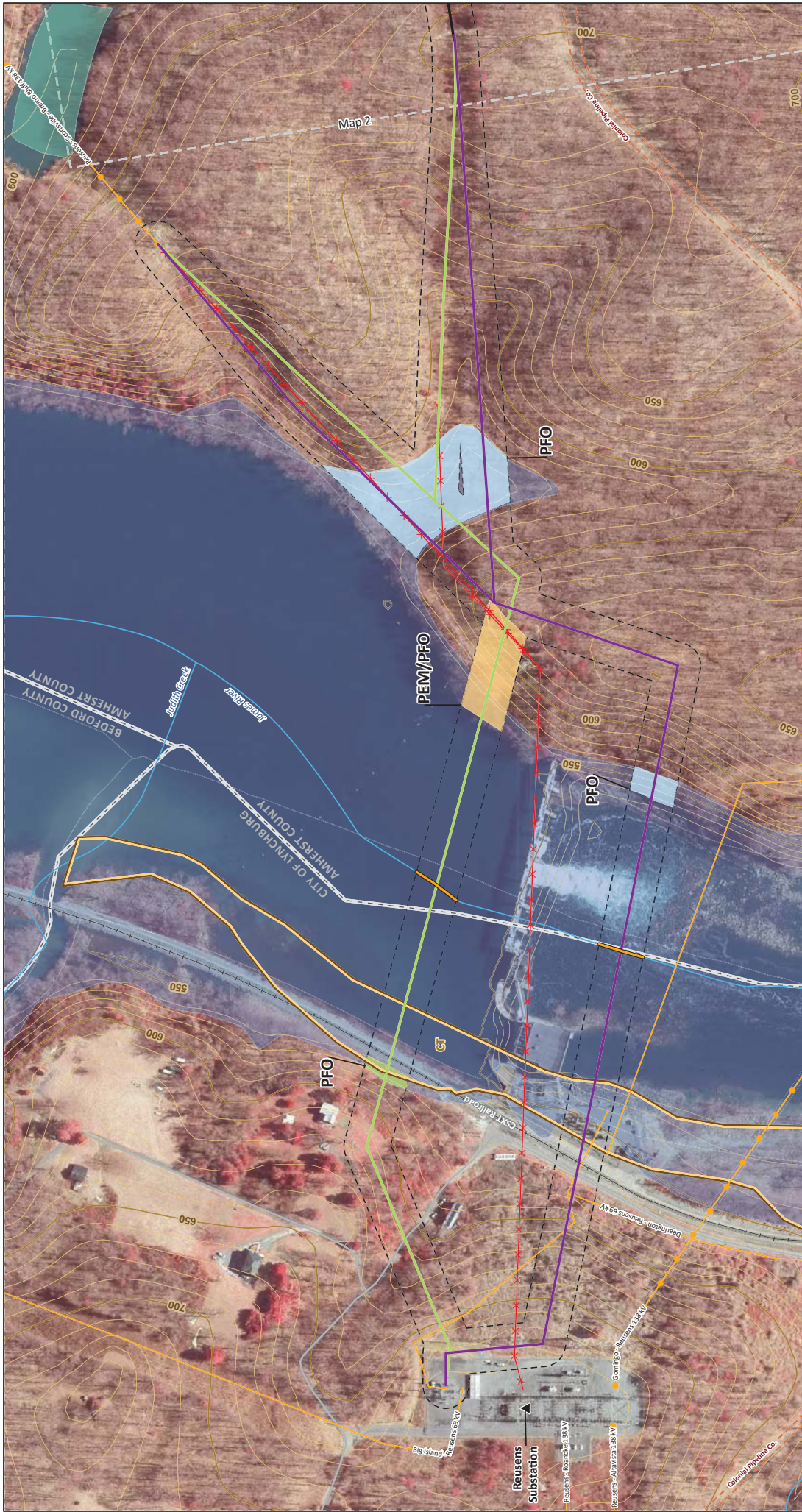
INDEX

Map Tile

- Existing AEP Substation
- Proposed Rebuild Route & 138 kV Line Relocations
- Alternative Route A
- Alternative Route B (Proposed)
- Existing AEP Transmission Line (69 kV or lower)
- Existing AEP Transmission Line (115-230 kV)

- Stream (NHD)
- Railroad
- Natural Gas Pipeline
- River (NHD)
- City/County Boundary





Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

Date: 1/17/2020;
 Project: 19027

APPALACHIAN POWER
 A DIVISION OF CONSOLIDATED ENERGY

Heavy Use Code:
 VMAP 2013 Enhanced

MD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

0 100 200 400
Feet

1" = 200'

Map 1 of 22

<ul style="list-style-type: none"> Existing AEP Substation Proposed Rebuild Route Alternative Route A Alternative Route B (Proposed) Existing AEP Transmission Line (To Be Retired) Existing AEP Transmission Line (69 kV or lower) Existing AEP Transmission Line (115-230 kV) Wetland Probability - HIGH 	<ul style="list-style-type: none"> Wetland Probability - MOD Wetland Probability - LOW High Probability Stream Road/Highway Railroad Natural Gas Pipeline Stream (NHD) Wetland Probability - HIGH 	<ul style="list-style-type: none"> Hydric Inclusion Soils Wetlands (NWI) 100-year Floodplain Map Title Right-of-Way (100') City/County Boundary Index Contour Intermediate Contour
--	---	--



Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

Date: 1/17/2020
 Project: 19027

APPALACHIAN POWER
 AEP
 #DIVERSIFIED ENERGY

Heavy Use Overlay
 VMAP 2013 Shaded

Map 3

Map 1

Map 2 of 22

1" = 200'

0 100 200 400 Feet

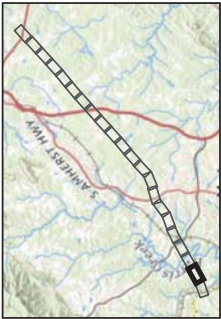
City of Lynchburg and Amherst County, Virginia

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

Legend

- Proposed Rebuild Route
- Alternative Route A
- Alternative Route B (Proposed)
- Existing AEP Transmission Line (115-230 kV)
- Wetland Probability - HIGH
- Road/Highway
- Natural Gas Pipeline
- Stream (NHD)
- Wetlands (NWI)
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour

Map Title





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 A DIVISION OF CONSOLIDATED ENERGY

Date: 1/17/2020
 Project: 19027

Map 3 of 22

North Arrow

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

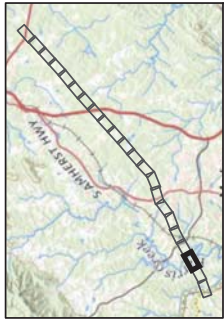
City of Lynchburg and Amherst County, Virginia

0 100 200 400
 Feet

1" = 200'

Legend

- Proposed Rebuild Route
- Wetland Probability - LOW
- High Probability Stream
- Road/Highway
- Natural Gas Pipeline
- Stream (NHD)
- 100-year Floodplain
- Map Tile
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APALACHIAN POWER
 A SCANA COMPANY

Date: 1/17/2020
 Project: 19027

Map 4 of 22

North Arrow

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

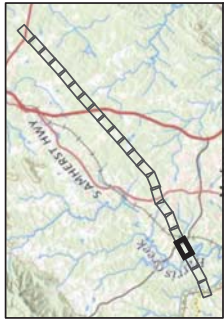
City of Lynchburg and Amherst County, Virginia

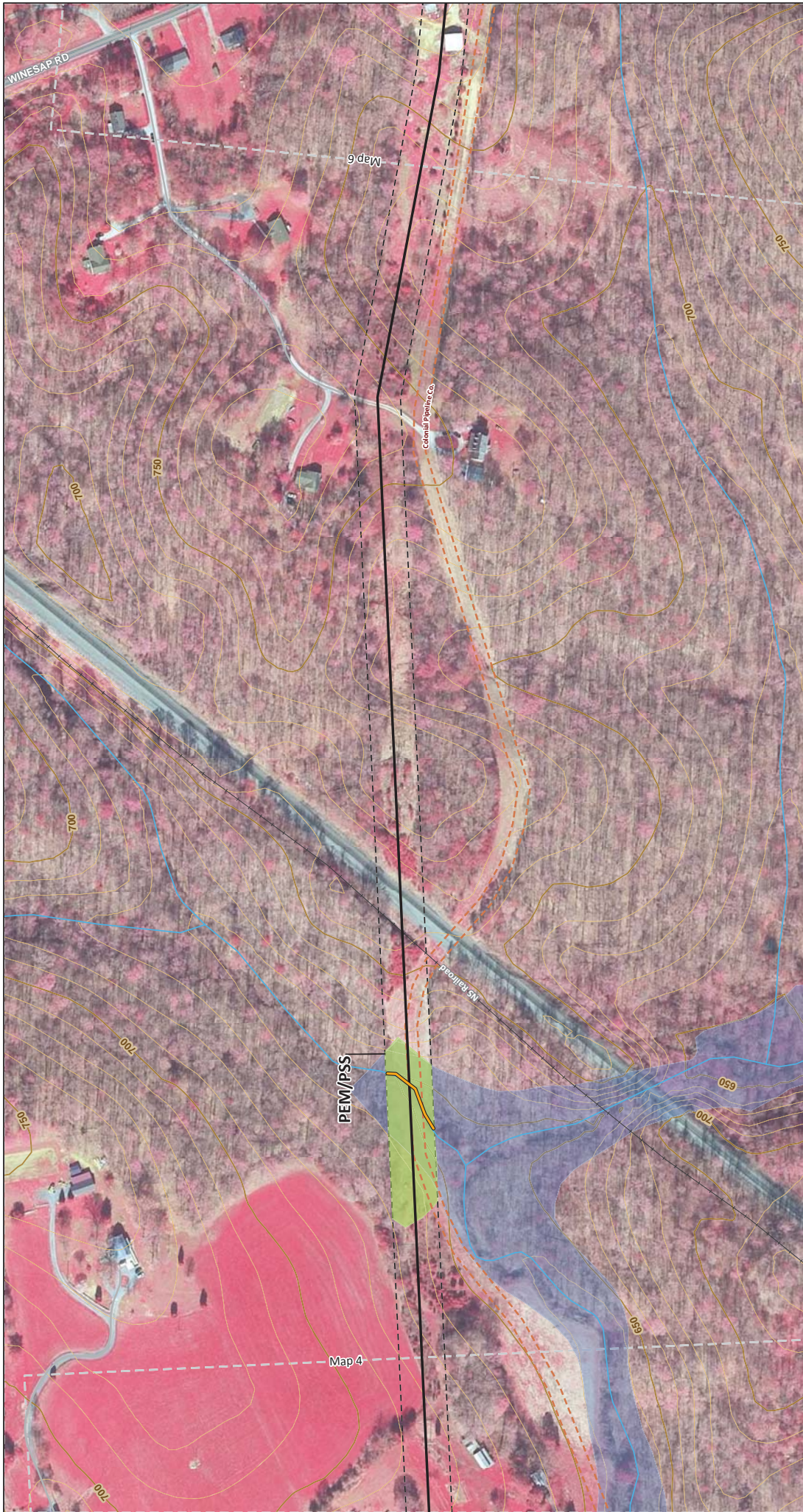
Scale: 1" = 200'

0 100 200 400 Feet

Legend

- Proposed Rebuild Route
- Stream (NHD)
- High Probability Stream
- Road/Highway
- Natural Gas Pipeline
- City/County Boundary
- 100-year Floodplain
- Map Tile
- Index Contour
- Intermediate Contour
- Right-of-Way (100')





Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

Date: 1/17/2020;
 Project: 19027
 Map 5 of 22

APPALACHIAN POWER
 A DIVISION OF DOMINION ENERGY

Heavy Use Overlay
 VMP 2013 Rebuild

Map 5 of 22

1" = 200'

0 100 200 400 Feet

City of Lynchburg and Amherst County, Virginia

Map 5 of 22

Map Title

Right-of-Way (100')

City/County Boundary

Index Contour

Intermediate Contour

Proposed Rebuild Route

Railroad

Natural Gas Pipeline

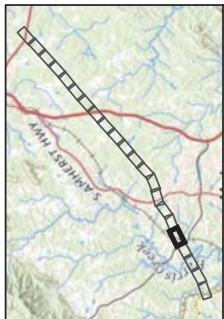
Stream (NHD)

100-year Floodplain

Wetland Probability - MOD

High Probability Stream

Road/Highway





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 A SCANA COMPANY

Date: 1/17/2020
 Project: 19027
 Project: 19027

North Arrow

Map 6 of 22

Scale: 1" = 200'

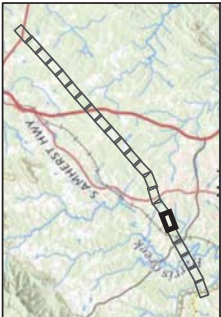
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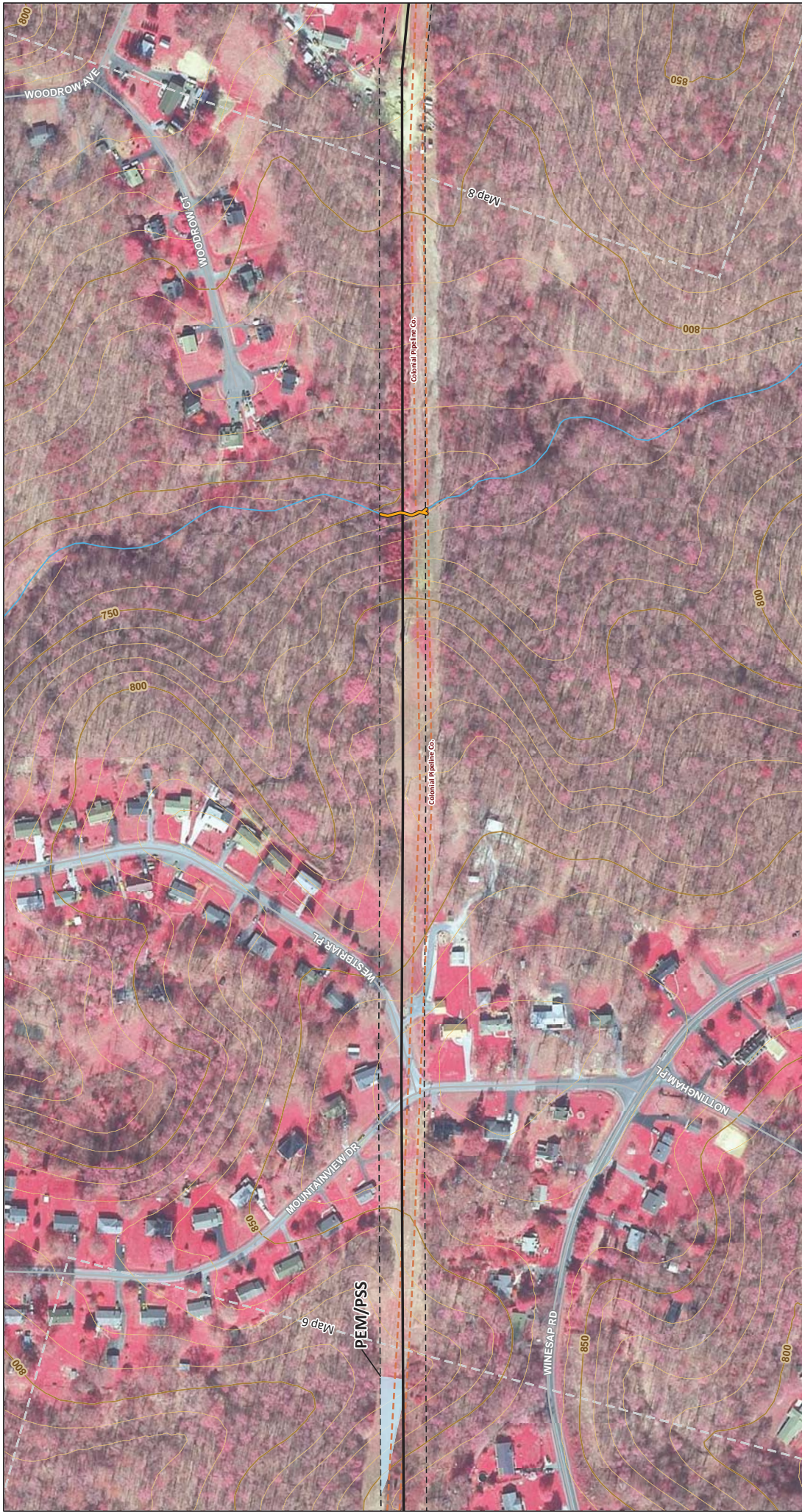
City of Lynchburg and Amherst County, Virginia

WAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

Legend

- Proposed Rebuild Route
- Wetland Probability - MOD
- Wetland Probability - LOW
- Road/Highway
- Natural Gas Pipeline
- Stream (NHD)
- Map Title
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour





Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

Date: 1/17/2020
 Project: 19027
 Map 7 of 22

APPALACHIAN POWER
 AEP
 AMERICAN ENERGY

Map 8

Map 6

PEM/PSS

City/County Boundary

Natural Gas Pipeline

Stream (NHD)

Map Tile

Right-of-Way (100')

Wetland Probability - LOW

High Probability Stream

Road/Highway

Index Contour

Intermediate Contour

Scale: 1" = 200'

0 100 200 400 Feet

Map 7 of 22

Map 7 of 22

1" = 200'

0 100 200 400 Feet

City of Lynchburg and Amherst County, Virginia

North American 1983

Lambert Conformal Conic

South Virginia State Plane 1983

4502 Feet

PIP

Map 7 of 22

1" = 200'

0 100 200 400 Feet

City of Lynchburg and Amherst County, Virginia

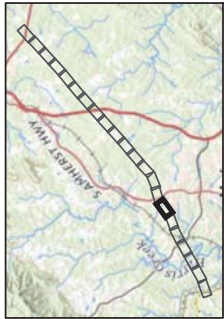
North American 1983

Lambert Conformal Conic

South Virginia State Plane 1983

4502 Feet

PIP





Desktop Wetland and Stream Delineation

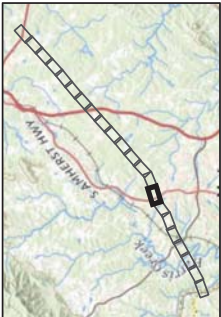
Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

City of Lynchburg and Amherst County, Virginia
 Date: 1/17/2020
 Project: 19027
 Map 8 of 22

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

0 100 200 400
 Feet
 1" = 200'

Legend:
 Existing AEP Substation: Solid black line
 Proposed Rebuild Route: Dashed black line
 Wetland Probability - HIGH: Yellow shaded area
 Wetland Probability - LOW: Light blue shaded area
 High Probability Stream: Yellow line
 Road/Highway: Solid grey line
 Natural Gas Pipeline: Dashed orange line
 Stream (NHD): Blue line
 Map Title: Dashed box
 Right-of-Way (100'): Dashed black line
 City/County Boundary: Solid black line
 Index Contour: Yellow line
 Intermediate Contour: Yellow line





Desktop Wetland and Stream Delineation


Component 4: Amherst – Reusens 69 kV
Transmission Line Rebuild



APPALACHIAN POWER
AMERICAN ELECTRICITY

Date: 1/17/2020
 Project: 19027
 Map 9 of 22

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983












City of Lynchburg and Amherst County, Virginia

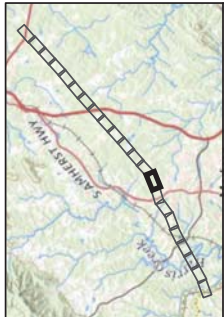




0 100 200 400
Feet

1" = 200'

<ul style="list-style-type: none">  Proposed Rebuild Route  Wetland Probability - LOW  High Probability Stream  Road/Highway 	<ul style="list-style-type: none">  Natural Gas Pipeline  Stream (NHD)  Map Tile  Right-of-Way (100') 	<ul style="list-style-type: none">  City/County Boundary  Index Contour  Intermediate Contour 	
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Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 A DIVISION OF AMERICAN ENERGY

Date: 11/17/2020
 Project: 19027

Map 10 of 22

North Arrow

City of Lynchburg and Amherst County, Virginia

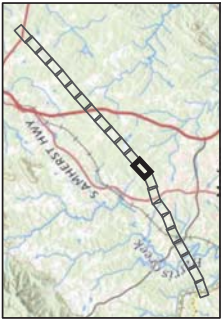
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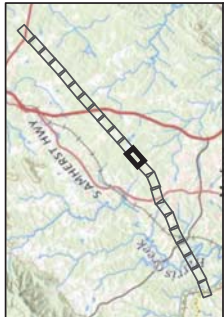
0 100 200 400 Feet

Map 10 of 22

Legend

- Proposed Rebuild Route
- Existing AEP Transmission Line (To Be Retired)
- High Probability Stream
- Road/Highway
- Natural Gas Pipeline
- Stream (NHD)
- Wetlands (NWI)
- Map Title
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour





- Proposed Rebuild Route
- Existing AEP Transmission Line (To Be Retired)
- Right-of-Way (100')
- City/County Boundary
- High Probability Stream
- Road/Highway
- Index Contour
- Intermediate Contour
- Stream (NHD)

Map Title

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
Lambert Conformal Conic
North American 1983

City of Lynchburg and Amherst County, Virginia

0 100 200 400
Feet

1" = 200'

Map 11 of 22

Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

APPALACHIAN POWER

DATE: 1/07/2020
PROJECT: 19027

ISSUED BY: [Name]
DATE: 1/07/2020
PROJECT: 19027



Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 A SCANA COMPANY

Date: 1/17/2020
 Project: 18027

Map 12 of 22

North Arrow

City of Lynchburg and Amherst County, Virginia

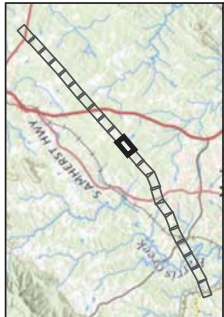
Scale: 1" = 200'

0 100 200 400 Feet

Map 12 of 22

Legend

- Proposed Rebuild Route
- Road/Highway
- Stream (NHD)
- Wetlands (NWI)
- Map Tile
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

APPALACHIAN POWER
 A subsidiary of Duke Energy

Date: 11/17/2020
 Project: 19027
 History File Code: VMAP 2013 Shared

North Arrow

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

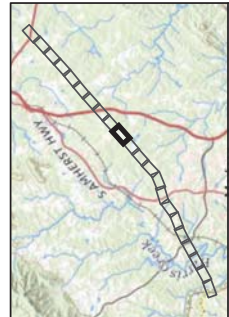
City of Lynchburg and Amherst County, Virginia

0 100 200 400 Feet

1" = 200'

Map 13 of 22

Wetlands (NWI)	Map Title
Existing AEP Transmission Line (69 kV or lower)	Right-of-Way (100')
High Probability Stream	City/County Boundary
Road/Highway	Index Contour
Stream (NHD)	Intermediate Contour
Proposed Rebuild Route	





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

Date: 1/17/2020;
 Project: 19027

APPALACHIAN POWER
 AEP
 #DIVERSIFIED ENERGY

Wetland Code:
 VMAP 2013 Enhanced

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

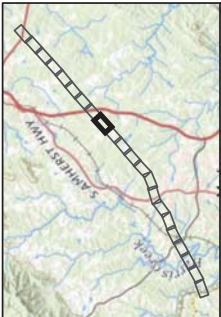
0 100 200 400
 Feet

1" = 200'

Map 14 of 22

Proposed Rebuild Route
 Existing AEP Transmission Line (To Be Retired)
 Wetland Probability - MOD
 High Probability Stream
 Road/Highway
 Stream (NHD)

Wetlands (NWI)
 Map Title
 Right-of-Way (100')
 City/County Boundary
 Index Contour
 Intermediate Contour





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 AEP
 #DIVERSIFIED ENERGY

Date: 1/17/2020;
 Project: 19027

History File Code:
 VMAP 2013 Shared

North Arrow

WAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

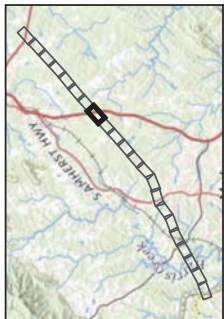
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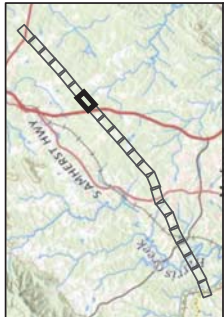
1" = 200'

Map 15 of 22

Legend

- Proposed Rebuild Route
- Existing AEP Transmission Line (To Be Retired)
- Wetland Probability - LOW
- High Probability Stream
- Road/Highway
- Stream (NHD)
- Map Tile
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour





- Proposed Rebuild Route
- Road/Highway
- Stream (NHD)
- Map Title
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour



NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia



1" = 200'

Map 16 of 22

Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV
Transmission Line Rebuild

APPALACHIAN POWER
UNIVERSITY ENERGY

Date: 11/01/2020;
 Drawing Code: VMAP 2013-04-02
 Project: 19027



Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

APPALACHIAN POWER
 UNCLE MOUNTAIN ENERGY

Date: 1/17/2020
 Project: 19027

Map 17 of 22

North Arrow

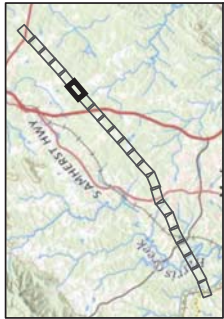
NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

Scale: 1" = 200'

Map 17 of 22

	Proposed Rebuild Route		Wetlands (NWI)		City/County Boundary
	Road/Highway		Map Tile		Index Contour
	Stream (NHD)		Right-of-Way (100')		Intermediate Contour





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 EDWARDS ENERGY

Date: 1/17/2020
 Project: 19027

Map 18 of 22

Map 19

Map 17

Map 18 of 22

City of Lynchburg and Amherst County, Virginia

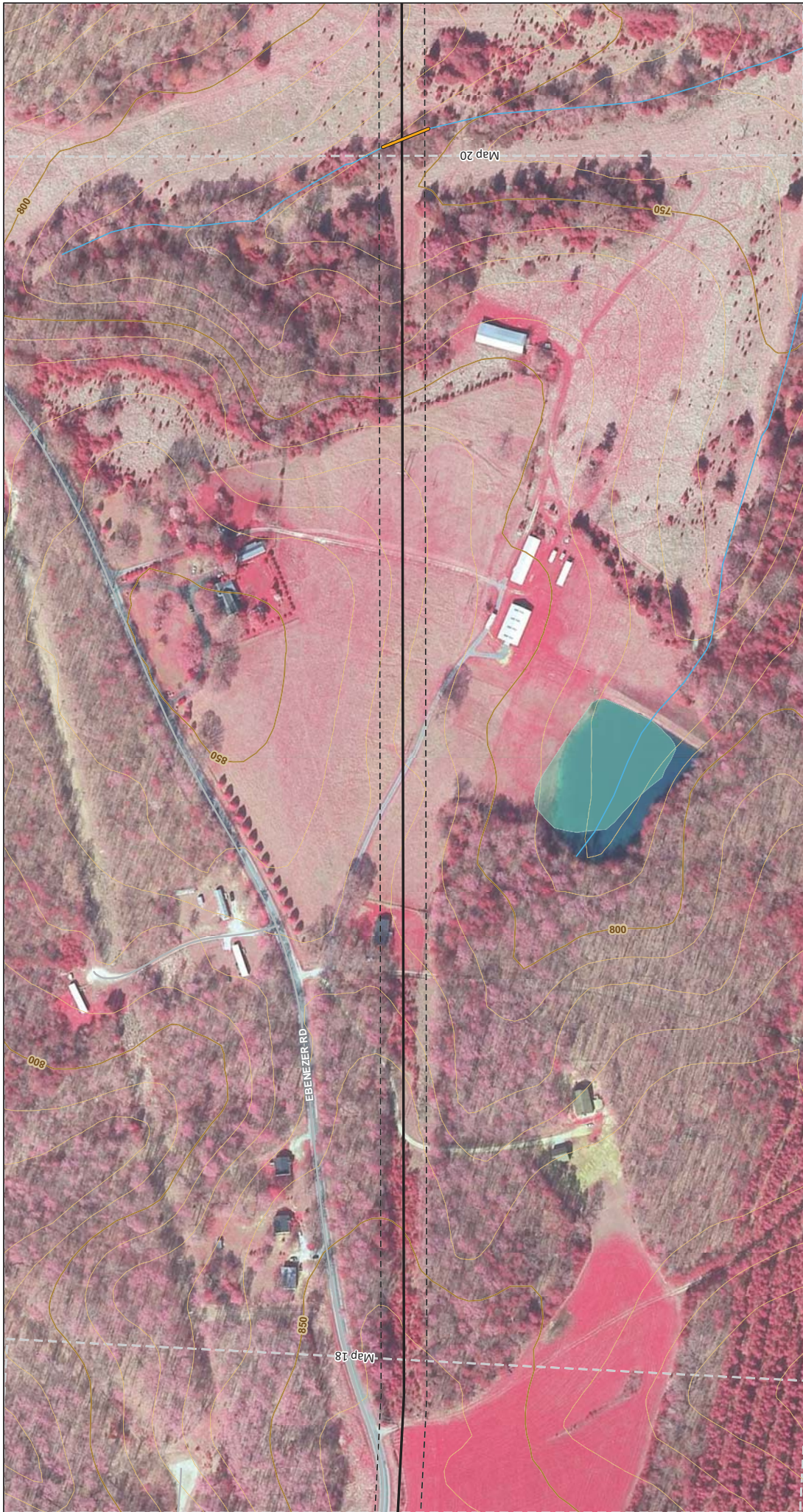
1" = 200'

0 100 200 400 Feet

Map 18 of 22

Legend:

- Proposed Rebuild Route
- Road/Highway
- Stream (NHD)
- Map Title
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour



Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

APPALACHIAN POWER
 A SCANA COMPANY

Date: 1/17/2020
 Project: 19027
 Map 19 of 22

North Arrow

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

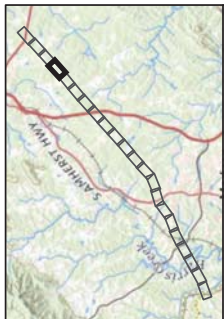
City of Lynchburg and Amherst County, Virginia

0 100 200 400 Feet

1" = 200'

Map 19 of 22

	Proposed Rebuild Route		Wetlands (NWI)		Index Contour
	High Probability Stream		Map Title		Intermediate Contour
	Road/Highway		Right-of-Way (100')		
	Stream (NHD)		City/County Boundary		





Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 EDWARDS ENERGY

Date: 1/17/2020
 Project: 19027

Map 21

North Arrow

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

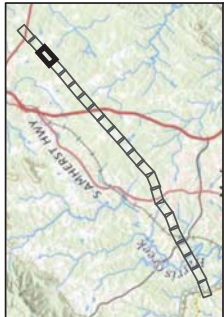
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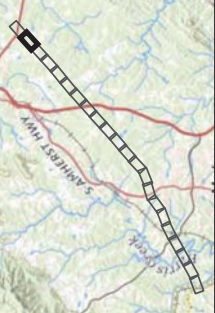
1" = 200'

Map 20 of 22

Legend

- Proposed Rebuild Route
- Stream (NHD)
- City/County Boundary
- High Probability Stream
- Map Title
- Index Contour
- Road/Highway
- Right-of-Way (100')
- Intermediate Contour





- Proposed Rebuild Route
- Wetland Probability - HIGH
- High Probability Stream
- Road/Highway
- Stream (NHD)
- Map Title
- Right-of-Way (100')
- City/County Boundary
- Index Contour
- Intermediate Contour



NAD 1983 StatePlane Virginia South FIPS 4502 Feet
Lambert Conformal Conic
North American 1983

City of Lynchburg and Amherst County, Virginia

0 100 200 400 Feet

1" = 200'

Desktop Wetland and Stream Delineation

Component 4: Amherst – Reusens 69 kV Transmission Line Rebuild

Date: 1/31/2020; Hours: 2:56; User: VMAP; 2013; 10/27/2019; Project: 190227



Desktop Wetland and Stream Delineation
 Component 4: Amherst – Reusens 69 kV
 Transmission Line Rebuild

APPALACHIAN POWER
 AEP
 AEP ENERGY SERVICES

Date: 1/17/2020
 Project: 19027

Heavy Use Overlay
 VMAP 2013 Enhanced

Map Title
 Right-of-Way (100')
 City/County Boundary
 Substation Expansion Area
 Index Contour
 Intermediate Contour

Existing AEP Substation
 Proposed Rebuild Route
 Existing AEP Transmission Line (To Be Retired)
 Existing AEP Transmission Line (115-230 kV)
 Road/Highway
 Stream (NHD)

NAD 1983 StatePlane Virginia South FIPS 4502 Feet
 Lambert Conformal Conic
 North American 1983

City of Lynchburg and Amherst County, Virginia

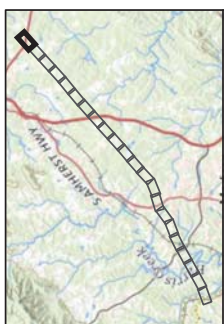
0 100 200 400
 Feet

1" = 200'

Map 22 of 22

Map Title
 Right-of-Way (100')
 City/County Boundary
 Substation Expansion Area
 Index Contour
 Intermediate Contour

Existing AEP Substation
 Proposed Rebuild Route
 Existing AEP Transmission Line (To Be Retired)
 Existing AEP Transmission Line (115-230 kV)
 Road/Highway
 Stream (NHD)



**ATTACHMENT 2.F.1:
HAZARDOUS WASTE INFORMATION**

Superfund National Priorities List (NPL) Where You Live Web Map



<https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=33cebcdfdd1b4c3a8b51d416956c41f1>

Accessed 10/15/2020



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[Other Datasets](#)



SEMS



Consolidated facility information (from multiple EPA systems) was searched to select facilities

[<< Return](#)

Search Parameters: County Name: Amherst
State Abbreviation: Virginia

Results are based on data extracted on NOV-25-2019

No Results found.



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SEMS



Consolidated facility information (from multiple EPA systems) was searched to select facilities

[<< Return](#)

Search Parameters: City Name: Lynchburg
State Abbreviation: Virginia

Results are based on data extracted on NOV-25-2019

No Results found.





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RCRAInfo Links

 RCRAInfo

 **Only RCRAInfo facility information was searched to select facilities**

[<< Return](#)

Search Parameters: County Name: Amherst
State Abbreviation: VA
Sites: 1Only Active

Results are based on data extracted on OCT-05-2020



- **You are here:** [EPA Home](#)
- [Envirofacts](#)
- [RCRAInfo](#)
- Search Results

Search Results

- Home
- Multisystem Search
- Topic Searches
- System Data Searches
- About the Data
- Data Downloads
- Widgets
- Services
- Mobile
- Other Datasets



 RCRAInfo



Only RCRAInfo facility information was searched to select facilities

[<< Return](#)

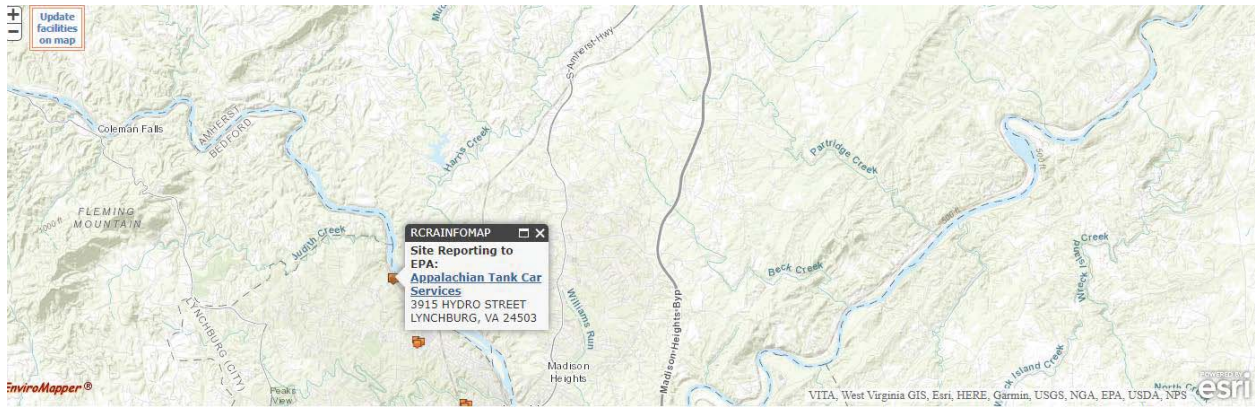
Search Parameters: County Name: Lynchburg City

State Abbreviation: VA

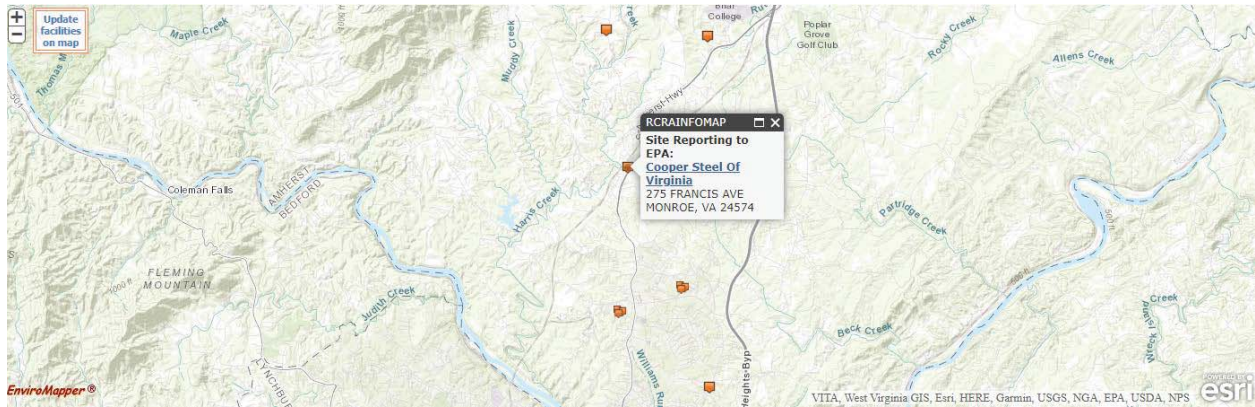
Sites: 1 Only Active

Results are based on data extracted on OCT-05-2020

City of Lynchburg



Amherst County

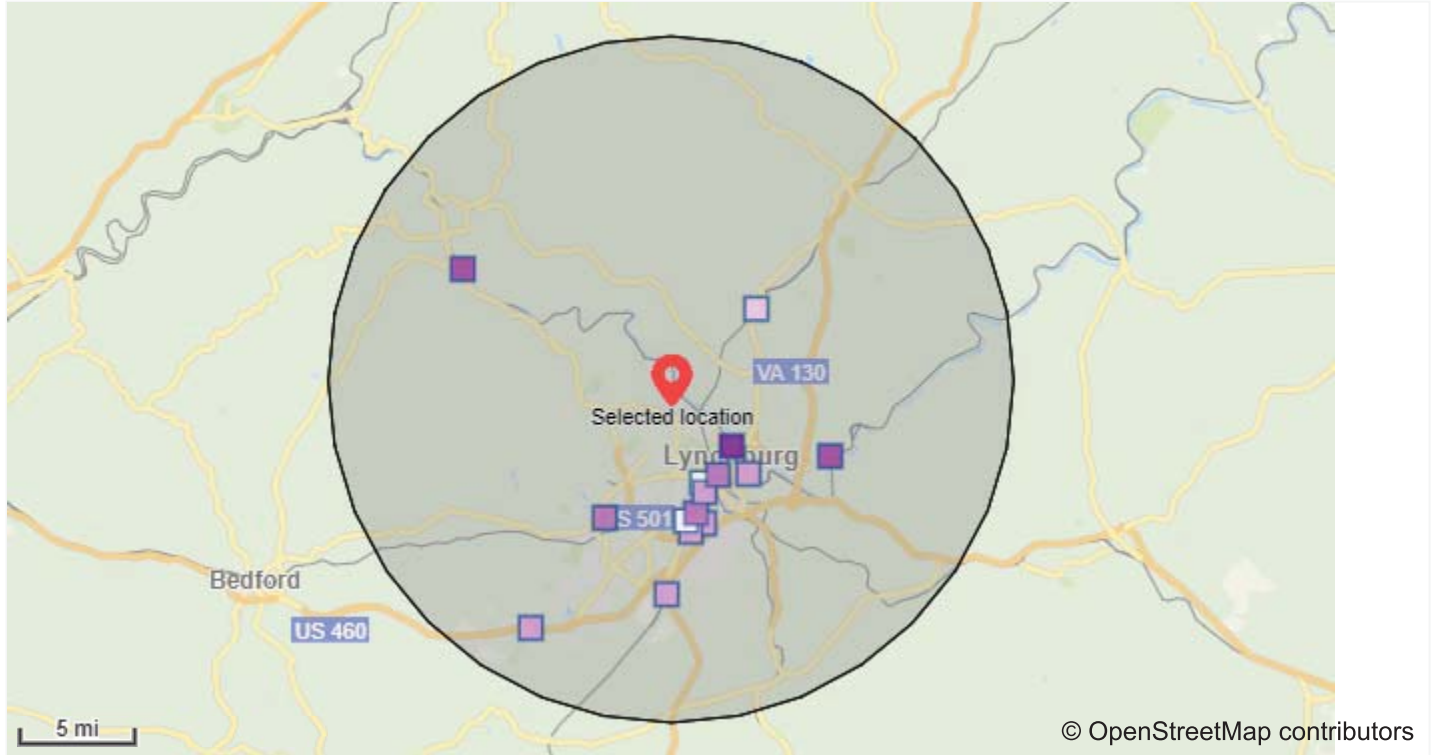


<https://enviro.epa.gov/facts/rcrainfo/search.html>

Accessed on 10/15/2020.

Summary of 15 TRI facilities within 15 miles of Y:37.462714 X:-79.189408

The map shows the location of TRI facilities for Reporting Year 2018 based on your search criteria. Use the menu options on the left to learn more about these facilities.



Total Releases by Facility in 2018

- 0 lbs
- >0 - 100 lbs
- 101 - 10,000 lbs
- 10,001 - 100,000 lbs
- 100,001 - 1,000,000 lbs
- >1,000,000 lbs

Map Options

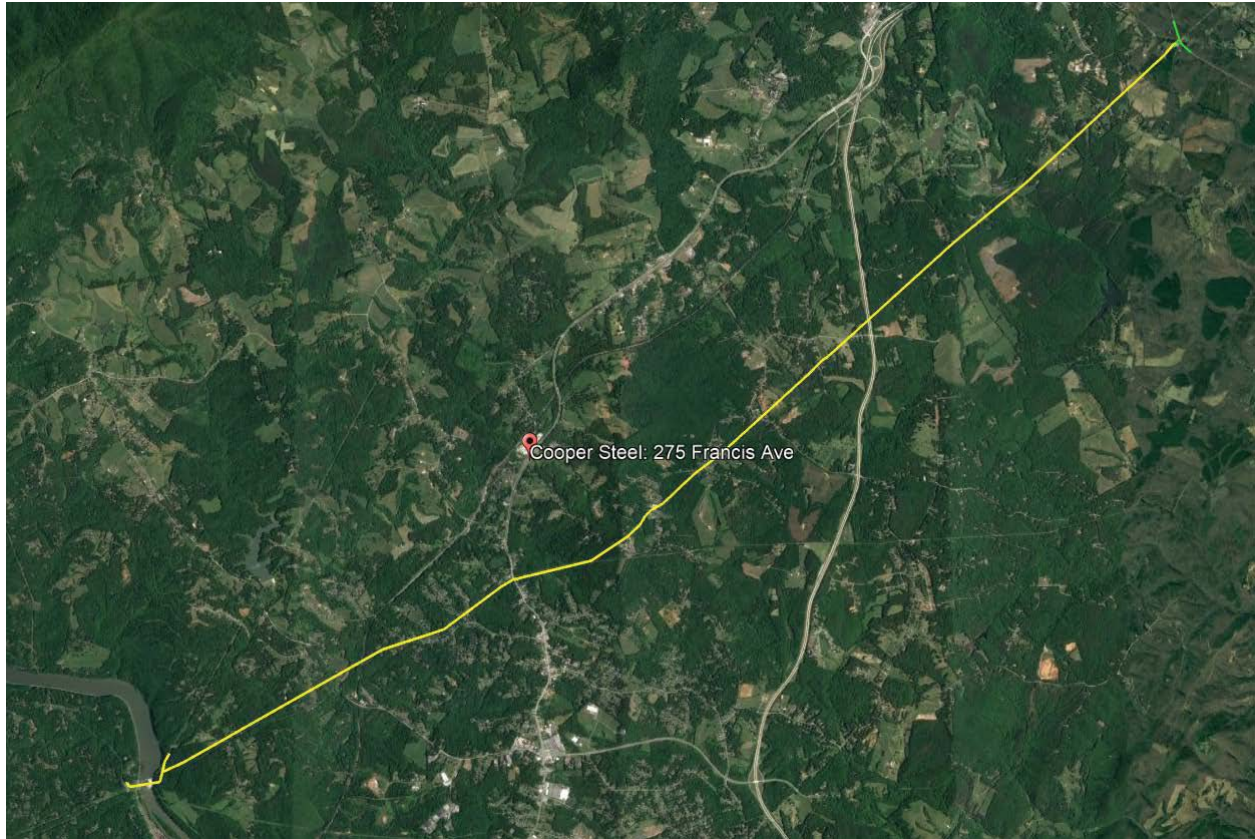
Add non-TRI facilities to map

Enter a value between 1 and 100 miles in the box below to find facilities within that distance of the location you selected.

Miles:

EPA Toxic Release Inventory (TRI)

TRI Facility in closest proximity to Amherst – Reusens



<https://www.epa.gov/toxics-release-inventory-tri-program>

Accessed on 10/15/2020.

**ATTACHMENT 2.G.1:
VDWR RESOURCES**



Virginia Department of Game and Inland Fisheries

[Home](#) » [By Coordinates](#) » VaFWIS GeographicSelect Options

Fish and Wildlife Information Service

Visitor Options

Species Information

[By Name](#)

[By Land Management](#)

[References](#)

Geographic Search

[By Map](#)

[By Coordinates](#)

[By Place Name](#)

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VaFWIS Search Report Compiled on 10/16/2020, 9:22:55 PM

Observations reported or potential habitat occurs within a **5 mile radius around point 37,30,13.3 -79,05,37.2** in **009 Amherst County, VA**

[View Map of Site Location](#)

519 Known or Likely Species ordered by Status Concern for Conservation (displaying first 26) (26 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name
060017	FESE	Ia	Spinymussel, James	Parvaspina collina
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis
060029	FTST	Ila	Lance, yellow	Elliptio lanceolata
050020	SE	Ia	Bat, little brown	Myotis lucifugus
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus
040096	ST	Ia	Falcon, peregrine	Falco peregrinus
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus
060173	FPST	Ia	Pigtoe, Atlantic	Fusconaia masoni
060081	ST	Ila	Floater, green	Lasmigona subviridis
040292	ST		Shrike, migrant loggerhead	Lanius ludovicianus migrans
030012	CC	IVa	Rattlesnake, timber	Crotalus horridus
010077		Ia	Shiner, bridle	Notropis bifrenatus
040040		Ia	Ibis, glossy	Plegadis falcinellus
040306		Ia	Warbler, golden-winged	Vermivora chrysoptera
080214		Ia	Stonefly, Beartown perlodid	Isoperla major
100248		Ia	Fritillary, regal	Speyeria idalia idalia
040213		Ic	Owl, northern saw-whet	Aegolius acadicus
020023		Ila	Salamander, mole	Ambystoma talpoideum
040052		Ila	Duck, American black	Anas rubripes
040320		Ila	Warbler, cerulean	Setophaga cerulea
040140		Ila	Woodcock, American	Scolopax minor
040203		Ilb	Cuckoo, black-billed	Coccyzus erythrophthalmus
040105		Ilb	Rail, king	Rallus elegans
040304		Ilc	Warbler, Swainson's	Limnithlypis swainsonii
080336		Ilc	Beetle, Gammon's stenelmis riffle	Stenelmis gammoni
100154		Ilc	Butterfly, Persius duskywing	Erynnis persius persius

To view **All 519 species** [View 519](#)

*FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FP=Federal Proposed; FC=Federal Candidate; CC=Collection Concern

**I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need; III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Virginia Wildlife Action Plan Conservation Opportunity Ranking;
 a - On the ground management strategies/actions exist and can be feasibly implemented.; b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.; c - No on the ground

Anadromous Fish Use Streams

N/A

Impediments to Fish Passage (6 records)

[View Map of All Fish Impediments](#)

ID	Name	River	View Map
963	EARLEY DAM	ROCKY CREEK	Yes
965	GRAHAM CREEK RES. DAM #1	GRAHAM CREEK	Yes
964	I ZAAK WALTON DAM	PARTRIDGE CREEK	Yes
979	SWEET BRIAR COLLEGE - LOWER DAM	TR-WILLIAMS CREEK	Yes
980	SWEET BRIAR COLLEGE - UPPER DAM	TR-WILLIAMS CREEK	Yes
970	WENNINGS DAM	TR-PARTRIDGE CREEK	Yes

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (1 Reach)

[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Tier Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Harris Creek (20802031)	ST	060081	ST	Ila	Floater_green	Lasmigona subviridis	Yes
Harris Creek (20802031)	ST	060081	ST	Ila	Floater_green	Lasmigona subviridis	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks (7 records)

[View Map of All Query Results Virginia Breeding Bird Atlas Blocks](#)

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
38093	Amherst_CW	71		III	Yes
38096	Amherst_SE	51		III	Yes
38081	Kelly_NW	2			Yes
37084	Lynchburg_CE	57		III	Yes
37082	Lynchburg_NE	74		II	Yes
39081	Stonewall_NW	1			Yes
37096	Tobacco Row Mtn._SE	65		III	Yes

Public Holdings:

N/A

Summary of BOVA Species Associated with Cities and Counties of the Commonwealth of Virginia:

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
009	Amherst	394	FESE	I

USGS 7.5' Quadrangles:

Lynchburg
Tobacco Row Mtn.

Kelly
 Amherst
 Stonewall
 Buffalo Ridge

USGS NRCS Watersheds in Virginia:

N/A

USGS National 6th Order Watersheds Summary of Wildlife Action Plan Tier I, II, III, and IV Species:

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
JM07	James River-Judith Creek	65	FESE	I
JM08	Harris Creek	51	ST	I
JM11	James River-Opossum Creek	55	FTST	I
JM13	James River-Beck Creek	53	FTST	I
JM14	James River-Stonewall Creek	57	FTST	I
JM30	Rutledge Creek	49	ST	I
JM31	Buffalo River-Rocky Creek	59	ST	I

Compiled on 10/16/2020, 9:22:56 PM V1057921.0 report=V searchType=R dist= 8045 poi= 37.30,13.3 -79.05,37.2

| 10/16/2020, 9:22:56 PM | [DGIF](#) | [Credits](#) | [Disclaimer](#) | Please view our [privacy policy](#) |
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