

DRAFT Environmental Assessment

Tazewell County Public Service Authority Capital Improvements Plan - Phase 2 Tazewell County, Virginia

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**Prepared for
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Environmental, Engineering and Educational Solutions

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Acronyms

BMPs	Best Management Practices
CWA	Clean Water Act
DCR	Virginia Department of Conservation and Recreation
DEQ	Virginia Department of Environmental Quality
DHR	Virginia Department of Historic Resources
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
IPaC	Information for Planning and Consultation System
NAAQS	National Ambient Air Quality Standards
NHD	National Hydrography Dataset
NHDE	Natural Heritage Data Explorer
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
TCPSA	Tazewell County Public Service Authority
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VAC	Virginia Administrative Code
VaFWIS	Virginia Fish and Wildlife Information System
VDGIF	Virginia Department of Game and Inland Fisheries
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
WOUS	Waters of the United States

1.0 INTRODUCTION

1.1. Environmental Review Requirement

The Tazewell County Public Service Authority (TCPSA) has performed an environmental review pursuant to the National Environmental Policy Act. This Environmental Assessment (EA) addresses potential environmental and socioeconomic impacts (both beneficial and adverse) specifically associated with improvements to TCPSA's existing water system (upgrades to eight existing pump stations, replacement of approximately 4,400 linear feet of water line, the installation of water transmitters in approximately 1,785 existing water service meter settings, and the installation of leak detection equipment), which are being proposed under Phase 2 of TCPSA's Capital Improvement Plan (**Figure 1; Appendix A**).

The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review for all projects receiving loan assistance from the fund. This document has been prepared in accordance with the *Virginia Department of Health (VDH) Drinking Water Funding Procedural Guidelines, Program Guidance Package #7: Environmental Review, Revised October 11, 2016* (referenced hereafter as the *VDH Procedural Guidelines*) (VDH, 2016). According to the *VDH Procedural Guidelines*, the scope of the proposed action does not meet the criteria for a Categorical Exclusion; therefore, an EA has been prepared prior to implementation of the proposed action.

1.2. Need for the Proposed Action

The Proposed Action is needed because of the following deficiencies of the TCPSA water supply system that have been identified by the TCPSA during engineering evaluations. These deficiencies are detailed in the February 2019 Preliminary Engineering Report for the capital improvements (Thompson & Litton, 2017).

- TCPSA currently owns and operates eight pump stations throughout Tazewell County that require upgrades and rehabilitation to ensure continued operation.
- TCPSA has identified the need to upgrade the water supply capacity of existing undersized water line and replace outdated wrought iron pipe with PVC (plastic) pipe to help maintain a reliable flow of potable water to residents within the county.
- There are 1,785 existing water service meter settings that require the installation of transmitters to extend the use of the TCPSA's existing automated meter reading system.

The purpose of the proposed action is to improve availability of safe and reliable potable water for residences and businesses in Tazewell County.

1.3. Description of the Proposed Action

The proposed action would include improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- Upgrades to eight existing pump stations, which would occur entirely within the existing pump station fenced area and in previously disturbed areas outside of the fence on TCPSA property or TCPSA right-of-way. Upgrades would include installation of new back-up power diesel generators.
- Replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figure 2**).
- Installation of water transmitters in approximately 1,785 existing water service meter settings.
- Installation of leak detection equipment.

1.3.1. Upgrades to Eight Existing Pump Stations

The eight pump stations to be rehabilitated are:

- Panther Branch Pump Station No. 1
- Panther Branch Pump Station No. 2
- Panther Branch Pump Station No. 3
- Coaldan Pump Station No. 1
- Coaldan Pump Station No. 2
- Dailey's Chapel Pump Station
- Cavitt's Creek Pump Station
- College Estates Pump Station

One of the pump stations to be rehabilitated – the Dailey's Chapel pump station – is shown in Photograph 1. The Panther Branch Pump Station No. 1, Coaldan Pump Station No. 1, Cavitt's Creek Pump Station, and College Estates Pump Station look similar to the Dailey's Chapel pump station.



Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coal dan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements would include existing pumps, motors, heating/ventilation/air conditioning, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad would be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry would be replaced to match the current telemetry system used by TCPSA.

1.3.2. Replacement of Existing Water line

Water line replacement would occur in existing disturbed areas in Virginia Department of Transportation (VDOT) and/or TCPSA right-of-way in the area shown in **Figure 2 (Appendix A)**. Approximately 4,400 linear feet of 8-inch ductile iron water line would be replaced with new 10-inch PVC water line. This work would continue east of the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

1.3.3. Installation of Water Service Transmitters

Transmitters would be installed in approximately 1,785 existing water service meter settings. Installation would not result in ground disturbance.

1.4. Community Reaction and Support

In accordance with VDH *Procedural Guidelines*, a public notice describing the proposed project, inviting public comment on the EA will be published twice in the Bluefield Daily Telegraph, a newspaper of general daily circulation in the service area. Typically, after the end of the 30-day EA public comment period, TCPSA would hold a public hearing. However, due to the shutdown of the TCPSA offices and Tazewell public buildings following the Governor of Virginia's Executive Order No. 55 *Temporary Stay at Home Order Due to Novel Coronavirus (COVID-19)*, no public hearing will be held for the project.

Written comments on the proposed project, the alternatives considered, their environmental impact, and the associated user charge impact should be addressed to Mr. Dahmon Ball, Executive Director, TCPSA at 168 Tazewell Mall Circle, Tazewell, VA, 24651 and post marked no later than May 6, 2020. Public comments will be considered when preparing the Final EA.

2.0 AFFECTED ENVIRONMENT

This section of the EA describes existing conditions at the site of the proposed action and the potential environmental impacts (both short and long term as well as beneficial and adverse). Potential impacts to the affected environment and actions to mitigate any potentially significant adverse impacts are discussed in each sub-section.

2.1. Effects, Destruction and/or Displacement of Wildlife and Marine Life, Including Endangered Species, and Their Habitats, or Foodchain

2.1.1. Current Site Conditions

The rehabilitation of eight existing pump stations would occur entirely within previously disturbed areas on TCPSA property or TCPSA right-of-way. There is potential for a 10' x 20' addition at sites where the back-up generator would not physically fit into the existing fenced area. If this addition is needed, all sites should have sufficient open area to expand without the need for tree clearing or creation of newly disturbed areas.

Replacement of the existing water line with a larger diameter 10-inch water line would occur in the same footprint as the current 8-inch water line. All work would occur in existing disturbed areas within VDOT and/or TCPSA right-of-way.

Proposed Water Line Replacement – Database Results and Agency Coordination

Results from a search of the Virginia Department of Conservation and Recreation (DCR) Natural Heritage Data Explorer (NHDE) conducted on August 21, 2019 for the proposed water line replacement site (**Appendix B**) identified the Clinch River-Little River Stream Conservation Unit and the following intersecting predictive models:

- Karst Bedrock
- Tennessee Heelsplitter
- Little Brown Bat
- Tricolored Bat

A search of the Virginia Department of Game and Inland Fisheries (VDGIF) Fish and Wildlife Information Service (VaFWIS) conducted on August 21, 2019 for the water line replacement site (**Appendix B**) resulted in identification of 10 federally- and/or state-listed species noted as “confirmed” in the project area; these 10 species are listed in **Table 2-1** below. The U.S. Fish and Wildlife Service (USFWS) Official Species List dated August 22, 2019 identified 15 species with potential to occur in the project area (**Table 2-1**).

Table 2-1. State and Federally Listed Threatened or Endangered Species with Potential to Occur in the Water Line Replacement Project Area

Common Name	Scientific Name	Federal Status	State Status	Agency Source
Indiana bat	<i>Myotis sodalis</i>	E	E	USFWS
Northern Long-eared Bat	<i>Myotis septentrionalis</i>	E	T	USFWS
Virginia Big-eared Bat	<i>Corynorhinus (=Plecotus) townsendii virginianus</i>	E	E	USFWS
Cumberland Bean (pearlymussel)	<i>Villosa trabalis</i>	E	E	USFWS
Finerayed Pigtoe	<i>Fusconaia cuneolus</i>	E	E	USFWS, VDGIF
Fluted Kidneyshell	<i>Ptchobranhus subtentum</i>	E	E	USFWS, VDGIF
Littlewing Pearlymussel	<i>Pegia fabula</i>	E	E	USFWS, VDGIF
Oyster Mussel	<i>Epioblasma capsaeformis</i>	E	E	USFWS, VDGIF
Purple Bean	<i>Villosa perpurpurea</i>	E	E	USFWS
Rough Rabbitsfoot	<i>Quadrula cylindrica strigillata</i>	E	E	USFWS,
Sheepnose Mussel	<i>Plethobasus cyphus</i>	E	E	USFWS
Shiny Pigtoe	<i>Fusconaia cor</i>	E	E	USFWS
Slabside Pearlymussel	<i>Pleuonaia dolabellodes</i>	E	E	USFWS,
Slippershell Mussel	<i>Alasmidonta viridis</i>	NL	E	VDGIF
Spectaclecase (mussel)	<i>Cumberlandia monodonta</i>	E	E	USFWS
Tan Riffleshell	<i>Epioblasma Florentina walkeri</i> (=E. walkeri)	E	E	USFWS
Sickle Darter	<i>Percina wouldiamsi</i>	NL	T	VDGIF
Spiny Riversnail	<i>Io fluvialis</i>	NL	T	VDGIF

E = endangered, T = threatened, NL = Not listed.

Source: USFWS, 2019b, VDGIF VaFWIS 2019

There is no suitable maternal roosting habitat for the Indiana Bat in the project area. There are no caves known in the project area or vicinity, and none were identified by DCR in the surrounding area. No tree clearing is proposed within the water line replacement area. Thus, the proposed project would have *no effect* on Indiana Bats, their critical habitat, or prime maternal roosting habitat.

The project was reviewed per the Final 4(d) rule for the Northern long-eared bat published by USFWS and the review procedures on the USFWS Virginia Field Office website. The project area is not within the Northern long-eared bat habitat locations identified on the VDGIF map, indicating the project site is greater than 150 feet from a known occupied maternity roost tree and greater than 5.5 miles from a known hibernaculum. No tree removal is proposed within the water line replacement area. The proposed action would have *no effect* on the Northern long-eared bat.

As of the 1984 USFWS Recovery Plan, only two active Virginia Big-eared bat colony locations were known in Virginia: a maternity colony in Cassell Farm Cave No. 2 and a hibernaculum in Higgenbothams Cave, both in Tazewell County. Virginia Big-eared bats are non-migratory, inhabit caves year-round, and return to same maternity roost caves year after year. Care would be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. Therefore, the proposed action would have *no effect* on Virginia Big-eared bat.

Katie Branch is adjacent to the water line replacement area. There are no confirmed observations of aquatic species identified by VDGIF or USFWS in Katie Branch. No in-water work or stream crossing are planned and thus there would be *no effect* to any aquatic species identified by USFWS and VDGIF. The implementation of and strict adherence to state and local erosion and sediment control/stormwater management laws and regulations would minimize impacts to aquatic ecosystems.

3e contacted DCR on August 27, 2019 requesting project review. On September 24, 2019, DCR responded identifying aquatic natural heritage resources associated with Clinch River-Little River Stream Conservation Unit. DCR recommends the implementation of and strict adherence to state and local erosion and sediment control /stormwater management laws and regulations, as well as coordination with USFWS and VDGIF. On September 12, 2019, **3e** contacted VDGIF via email requesting project review. VDGIF responded via email on September 23, 2019 that due to staffing limitations, VDGIF is unable to review this project and provide comments. DCR and VDGIF correspondence is found in **Appendix B**.

Proposed Pump Station Rehabilitation – Agency Coordination

DCR’s project review also provided information on resources near the eight pump station rehabilitation sites. These resources included the presence of karst-forming carbonate rock, identification of the Bluestone-Clinch River-Indian Creek-Big Branch Stream Conservation Unit, presence of an Ecological Core, as well as various threatened and endangered aquatic species.

All pump station rehabilitation would occur on previously disturbed land. There would be no in-water work associated with pump station rehabilitation. The implementation of and strict adherence to state and local erosion and sediment control /stormwater management laws and regulations would prevent impacts to aquatic ecosystems. No tree removal would occur at any pump station rehabilitation sites, preventing the fragmentation of an Ecological Core. Care would be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. DCR’s review of the pump rehabilitation sites is available in **Appendix B**. USFWS and VDGIF coordination did not reveal any resources of concern near the pump rehabilitation sites.

2.1.2. Potential Impacts

The upgrades to the eight existing pump stations and the water line replacement would occur in previously disturbed areas and would not require tree removal. The project areas are located outside of known bat hibernacula and maternal roosting trees. The proposed work would not affect or disturb bat nursery colonies, summer roosting habitat, or winter hibernacula.

There would be no in-stream work and no direct impacts to any rivers or streams from the pump rehabilitation. Erosion and sediment controls would be implemented during construction to minimize the potential for indirect impacts to Waters of the U.S. (WOUS). Based on the lack of habitat including no natural vegetation within the proposed footprint of work at the pump stations, an Official Species List from USFWS was not requested for the pump rehabilitation stations; and no effects to federally-listed threatened and endangered species were provided to USFWS for the pump rehabilitation work. The determination of effects to federally-listed species was provided solely for the water line replacement, with a note to the USFWS regarding the pump rehabilitation stations. Due to the previously disturbed state of the sites, the lack of tree habitat, and the fact that there would be no in-water work, there would be *no effect* to federally-listed species from the proposed waterline replacement.

The determination of effects to federally-listed species was provided to the USFWS via email on September 12, 2019, per Self-Certification project review procedures on the USFWS Virginia Field Office website (**Appendix B**). On October 18, 2019, USFWS responded that they have no comments on this project (**Appendix B**).

Construction and excavation activities may have short-term, minor adverse impacts to wildlife in limited areas; however, no long-term adverse impacts are anticipated. Adverse impacts to aquatic species and aquatic habitats from the proposed water line replacement near adjacent streams are not anticipated because all applicable storm water and erosion and sediment control regulations would be strictly adhered to during the construction phase. Following construction, vegetative cover would be re-established on all disturbed areas, which would further minimize sediment loading to surface waters by reducing the magnitude of surface runoff to pre-construction conditions.

2.1.3. Mitigation

Design and construction of the proposed projects would be in accordance with the applicable requirements of the Endangered Species Act, Clean Water Act (CWA), Virginia Storm Water Management Regulations, State Water Control Law, and the Virginia Erosion and Sedimentation Control Regulations. As per USFWS recommendations, no mitigation is required for temporary impacts to wildlife.

2.2. Destruction or Disturbance of Marshland or Wetlands

2.2.1. Current Site Conditions

According to the USFWS National Wetlands Inventory (NWI) online mapper (USFWS, 2019a), there are no wetlands within the water line replacement area (**Figure 3; Appendix A**). Katie Branch, a tributary to Little River, is shown near the proposed water line replacement area by the National Hydrographic Dataset; however, the National Hydrographic Dataset does not accurately follow the stream channel. **Figures 4 and 5** show the actual location of Katie Branch where the channel is within close proximity (approximately 25 to 50 feet) of the proposed water line replacement. The pump rehabilitation sites have all been previously disturbed and do not have any wetlands or water features on-site.

Erosion and sediment control practices, in compliance with Virginia Department of Environmental Quality (DEQ) regulations, would be implemented prior to and during construction to reduce potential impacts to these water resources.

The project is not anticipated to significantly increase the volume of storm water runoff or sediment loading to surface waters. The footprint of new concrete for backup generator pads at the existing pump stations would have negligible changes to storm water runoff. At the water line replacement site, no in-water construction would occur, and any utility trenches would be backfilled with native soils/gravel and seeded to establish a vegetative surface cover, or re-paved with asphalt where work would occur in the existing paved road shoulder.

Notification letters were submitted on September 12, 2019 to the U.S. Army Corps of Engineers (USACE) and DEQ. Notification letters and responses are included as **Appendix B**. In a letter dated September 19, 2019, DEQ indicated that no long-term adverse impacts to water quality are anticipated from this project, and potential short-term impacts from surface runoff would be minimized using Best Management Practices (BMPs) outlined in the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Regulations. Impacts to water resources would be short-term and minor. Since no in-water work or stream crossings would occur, coordination with Virginia Marine Resources Commission is not required. The USACE responded on December 2, 2019 noting that any work in jurisdictional areas may require a CWA permit. No work would occur in jurisdictional WOUS.

2.2.2. Avoidance, Minimization, Mitigation

No impacts to streams or wetlands are anticipated during the rehabilitation of the pump stations or installation of the water line. Design and construction of the proposed project would be in accordance with the applicable requirements of the CWA, Virginia Storm Water Management Regulations, State Water Control Law, and the Virginia Erosion and Sedimentation Control Regulations.

2.3. Displacement of Households, Businesses, or Services

2.3.1. Current Site Conditions

The proposed project would enhance and support potable water service to households and businesses and would not displace households, businesses, and services. The proposed project would not require demolition or displacement of existing buildings. Work would be completed within existing TCPSA property and utility right-of-way. A small portion of right-of-way is being acquired at one pump station. The water line replacement would not result in a larger footprint than the existing water line.

2.3.2. Potential Impacts

No relocation of existing residences or businesses is required. There would be no adverse impacts from property acquisition. The proposed project would result in long-term, beneficial impacts to residents and businesses from having reliable access to potable water.

2.3.3. Mitigation

Because relocation of existing residences or businesses is not required to implement the project no mitigation is required.

2.4. Land Use Issues

2.4.1. Current Site Conditions

Land use at the pump station rehabilitation sites is solely for operation of TCPSA infrastructure and is within TCPSA right-of-way (a small portion of right-of-way is being acquired at one pump station). Land use surrounding all pump station sites is a mix of forested, undeveloped land, with some single-family residential area homes and roads in the project vicinity. The project area for the water line replacement occurs entirely within the Virginia Department of Transportation right-of-way. The area adjacent to the proposed water line replacement sites (between the right-of-way and Katie Branch) is vegetated open space.

No proposed project sites are located within a Tourism Zone, Enterprise Zone, or Airport Safety Zone as designated in the Tazewell County geographic information system and/or Tazewell County Code of Ordinances.

According to the U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soils map, there is no prime farmland at the water line replacement site (NRCS, 2019), however, there is Prime Farmland and Farmland of Statewide Importance at the pump rehabilitation sites. According to the Virginia Department of Forestry Forest Conservation Value ranking (VDOF, 2019a), no project sites are in an area ranked as having a high forest conservation value, which are areas given priority in land conservation efforts (VDOF, 2019b). There are no formally classified lands in the proposed project areas including national parks, monuments, landmarks, battlefield parks, historic sites/parks, wilderness areas, wild, scenic, or recreational rivers, wildlife refuges, national seashores, lakeshores, or trails, state parks, Bureau of Land Management administered lands, national forests or grasslands, or Native American owned or leased lands.

Soils in the pump station project area are listed in **Table 2-2**. There are no hydric soils at any of the pump rehabilitation sites and all work is occurring on previously disturbed ground. Soils in the water line replacement project area are listed in **Table 2-3**. All water line replacement project work would occur in previously disturbed areas along existing VDOT and/or TCPSA right of ways; therefore, no native soils would be disturbed and are thus not described further in this section. There are hydric soils within the water line replacement area, but not within the proposed footprint of work.

Table 2-2. Soils in the Pump Rehabilitation Areas

Soil Type	Hydric
Berks-Gilpin complex, 25 to 35 percent slopes	No
Berks-Gilpin complex, 35 to 70 percent slopes	No
Craigsville very gravelly sandy loam, 0 to 5 percent slopes, frequently flooded	No
Frederick silt loam, 8 to 15 percent slopes	No
Frederick gravelly silt loam, 7 to 15 percent slopes	No
Frederick gravelly silt loam, 15 to 25 percent slopes	No
Grimsley loam, 35 to 70 percent slopes, very stony	No
Groseclose silt loam, 7 to 15 percent slopes	No
Philo fine sandy loam, 0 to 3 percent slopes, frequently flooded	No

Table 2-3. Soils in the Water Line Replacement Project Area

Map Unit Symbol	Map Unit Name	Hydric
45A	Pope fine sandy loam, 0 to 2 percent slopes, rarely flooded	No
50	Udorthents-Urban land complex	Partially

Source: NRCS, 2019

2.4.2. Potential Impacts

The proposed project would not result in land use changes at the project sites; however, long-term, residential and commercial development may occur because of implementation and operation of the overall TCPSA water supply project (of which the proposed action is Phase 2).

The proposed water line activities would occur in previously disturbed areas within the rights-of-way of the existing roads and water line, and there is no prime farmland, farmland of statewide importance, prime range land, forest land of high conservation value, or other formally classified lands are located within the water line portion of the project. Although there is prime farmland/farmland of statewide importance in the footprint of the proposed pump rehabilitation sites, the entire footprint of work would occur on previously disturbed soils and no farmland would be taken out of production. Therefore, there would be no impacts to prime farmland/farmland of statewide importance.

Short-term impacts would occur to soils during construction due to disturbances associated with excavation, grading and the use of heavy equipment. Temporary impacts would be minimized with implementation of applicable permitting requirements including State Water Control Law, stormwater management, and erosion and sediment control.

2.4.3. Mitigation

Although not a direct result of the proposed action, any development that occurs because of TCPSA's overall water supply project would proceed in compliance with all appropriate laws and regulations, including local zoning and building codes. Short-term impacts resulting from disturbance of soils during construction would be managed through proper and applicable permitting requirements. No mitigating measures would be warranted.

2.5. Effects on Land Having Archaeological Significance

2.5.1. Current Site Conditions

The locations of the pump station rehabilitations and water line replacement would not result in new ground disturbance (land that has not been previously disturbed) and thus no potential for effects to land of archaeological significance.

2.5.2. Potential Impacts

Because project elements (pump station rehabilitations, water line replacement water meters, installation of leak detection equipment) would not result in new ground disturbance (they would all be installed in previously disturbed ground), TCPSA and VDH have determined that the proposed action would have no effect on archaeological resources. A letter was sent to Virginia Department of Historic Resources (DHR) on September 12, 2019 requesting DHR review and concurrence with the determination of no effects to historic properties. DHR responded on October

9, 2019 that they “agree that a determination of no historic properties affected is appropriate for this undertaking.” Copies of correspondence with DHR are in **Appendix B**.

2.5.3. Mitigation

TCPSA is sensitive to the significance of archaeological resources and pledges full coordination and cooperation with DHR during all phases of construction. All site personnel would be instructed to be aware of the potential for encountering archaeological resources and to report and protect any resources potentially encountered during construction efforts. In the event of unanticipated discoveries, work would cease and DHR would be notified immediately. No mitigation would be required.

2.6. Destruction or Disturbance of Areas of Historical Significance

2.6.1. Current Site Conditions

The locations of the pump station rehabilitations and water line replacement would not result in new ground disturbance (land that has not been previously disturbed) or changes to the viewshed and thus no potential for effects to land of architectural significance.

2.6.2. Potential Impacts

No adverse impacts to historic resources are anticipated. Neither the proposed water line replacement or pump station upgrades would result in changes to the existing viewshed or construction of any new facilities or infrastructure that could be seen from an existing historic property. During construction, heavy equipment would be seen but work would be temporary (lasting a few days at any one location). TCPSA and VDH determined that the proposed pump station would have no adverse effects on historic resources. A letter was sent to DHR on September 12, 2019 requesting DHR review and concurrence with the determination of no effects to historic properties. DHR responded on October 9, 2019 that they “agree that a determination of no historic properties affected is appropriate for this undertaking.” Copies of correspondence with DHR are in **Appendix B**.

2.6.3. Mitigation

No mitigation would be required.

2.7. Use of Irretrievable Resources

2.7.1. Current Site Conditions

Current use of properties that comprise the proposed project areas do not involve the use of irretrievable resources.

2.7.2. Potential Impacts

All construction activities required for this proposed action would require a one-time expenditure of funds, which are not considered retrievable. Construction materials needed for the project would be irretrievably committed to the proposed project. No reclamation would be expected.

2.7.3. Mitigation

The use of irretrievable resources is limited under the proposed action. No mitigation is anticipated, other than cost control measures associated with the one-time expenditures of funds.

2.8. Noise

2.8.1. Current Site Conditions

Currently, the primary source of noise in the water line replacement areas is local traffic along U.S. 19. The primary sources of noise heard at the pump station rehabilitation sites is traffic along various state and local roads.

2.8.2. Potential Impacts

Temporary noise impacts in the immediate vicinity of both the water line replacement and pump upgrades would occur during construction activities. The magnitude of impact would be dependent upon the type of equipment used, construction methods employed, and the schedule of work. The construction may include minor grading and compaction of soil at the sites, pouring of concrete for generator pads, and excavating the existing water line. **Table 2-4** presents typical noise levels of construction equipment, while **Table 2-5** presents typical ranges of noise levels associated with construction activities.

Table 2-4. Typical Noise Levels of Principle Construction Equipment.

Clearing		Grading and Compacting	
Bulldozer	80	Grader	80-93
Front end loader	72-84	Roller	73-75
Dump truck	83-94	Paving	
Jack hammer	81-98	Paver	86-88
Crane with ball	75-87	Truck	83-94
Excavation and Earth Moving		Tamper	74-77
Bulldozer	80	Landscaping and Clean-Up	
Backhoe	72-93	Bulldozer	80
Front end loader	72-84	Backhoe	72-93
Dump truck	83-94	Truck	83-94
Jack hammer	81-98	Front end loader	72-84
Scraper	80-93	Dump Truck	83-94
		Paver	86-88
Structure Construction			
Crane	75-77	Welding generator	71-82
Concrete mixer	74-88	Concrete pump	81-84

Clearing		Grading and Compacting	
Concrete vibrator	76	Air compressor	74-87
Pneumatic tools	81-98	Bulldozer	80
Cement and dump trucks	83-94	Front end loader	72-84
Dump truck	83-94	Paver	86-88

Table 2-5. Typical Ranges of Noise Levels at Construction Sites (dBA).

Activity	Domestic Housing		Office Building, Hotel, School, Public Works		Industrial Garage, Religious, Amusement, Recreational, Store, Service Station		Public Works, Roads and Highways, Sewers and Trenches	
	I	II	I	II	I	II	I	II
Grading & Clearing	84	83	84	84	84	87	84	84
Excavation	88	76	89	79	89	74	89	79
Foundations	81	81	78	78	78	78	88	88
Erection	82	71	85	76	85	74	79	79
Finishing	88	74	89	76	89	75	84	84

Notes: I - All pertinent equipment present at site. II - Minimum required equipment present at site.

Measured as Leq with 70dBA Ambient Noise Level.

Source: EPA, 1971

Construction noise would last for the duration of the construction activities, attenuate quickly with distance, and would be intermittent and limited to daylight hours; therefore, construction noise impacts would be temporary and minor.

2.8.3. Mitigation

No noise mitigation measures are anticipated.

2.9. Traffic Circulation and Traffic Pattern Disruption

2.9.1. Current Site Conditions

The proposed water line replacement project would occur entirely along existing roadways, including portions of VDOT right-of-way. Proposed limits of disturbance are within previously disturbed ground at both sites. The upgrades to the pump stations would occur on municipal property or within established right-of-way and would not intersect with a roadway.

2.9.2. Potential Impacts

The proposed action would result in minor disruptions of traffic along U.S. 19 during replacement of the water line; impacts would be limited to the duration of construction (anticipated to be a few days). Minor traffic management would be required during construction to accommodate the installation of water lines adjacent to existing roadways (e.g. temporarily closing a single shoulder

and/or lane). The presence of additional traffic on local roads from construction vehicles associated with the project would result in short-term minor impacts to traffic during the construction. There would be no long-term adverse impacts to transportation routes or traffic patterns. No traffic disruptions are anticipated from the pump station upgrades.

An information request was sent to VDOT Bristol District on September 12, 2019 asking the agency to identify and evaluate any transportation related concerns regarding the project. The September 18, 2019 VDOT response stated that VDOT “has no issues with this work provided environmental resources within VDOT’s existing rights of way are not impacted” (**Appendix B**).

2.9.3. Mitigation

TCPSA’s construction contractor would coordinate with VDOT should unforeseen traffic incidents occur during construction or operations. TCPSA would obtain a VDOT Land Use Permit because the project would encroach on VDOT right-of-way, which would include plans for mitigation of potential short-term traffic impacts. No additional mitigation actions are anticipated.

2.10. Odor/Air Quality

2.10.1. Current Site Conditions

The National Ambient Air Quality Standards (NAAQS) were published by the U.S. Environmental Protection Agency (EPA) as prescribed in the 1970 amendments to the Clean Air Act and 40 CFR 50. The NAAQS are designated as (1) primary, designed to protect human health, and/or (2) secondary, designed to protect agricultural production, forests, building materials, and ecosystems. Standards have been issued for the following six criteria pollutants: ozone, sulfur dioxide, nitrogen oxide, particulate matter less than 10 microns, lead, and carbon monoxide. **Table 2-6** presents the most recent NAAQS for all criteria pollutants as set by the EPA. Virginia has established standards that are the same as or more stringent than the federal standards. Tazewell County is in an attainment area, indicating that DEQ and EPA have determined that the air quality meets the NAAQS.

Table 2-6. National Ambient Air Quality Standards (NAAQS).

Pollutant [final rule cite]	Primary/ Secondary	Averaging Time	Level⁽⁵⁾	Form
Carbon Monoxide [76 FR 54294, Aug 31, 2011]	Primary	8-hour	9 ppm	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead [73 FR 66964, Nov 12, 2008]	Primary and secondary	Rolling 3 mo. avg.	0.15 µg/m ³ ⁽¹⁾	Not to be exceeded
Nitrogen Dioxide [75 FR 6474, Feb 9, 2010] [61 FR 52852, Oct 8, 1996]	Primary	1-hour	100 ppb	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and secondary	Annual	53 ppb ⁽²⁾	Annual Mean

Ozone [73 FR 16436, Mar 27, 2008]		Primary and secondary	8-hour	0.075 ppm ⁽³⁾	Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years
Particle Pollution [78 FR 3085, Dec 14, 2012]	PM _{2.5}	Primary	Annual	12 µg/m ³	Annual mean, averaged over 3 years
		Secondary	Annual	15 µg/m ³	Annual mean, averaged over 3 years
		Primary and secondary	24-hour	35 µg/m ³	98 th percentile, averaged over 3 years
	PM ₁₀	Primary and secondary	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide [75 FR 35520, Jun 22, 2010] [38 FR 25678, Sept 14, 1973]		Primary	1-hour	75 ppb ⁽⁴⁾	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Notes:

(1) Final rule signed October 15, 2008. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

(2) The official level of the annual NO₂ standard is 0.053 ppm, equal to 53 ppb, which is shown here for the purpose of clearer comparison to the 1-hour standard.

(3) Final rule signed March 12, 2008. The 1997 ozone standard (0.08 ppm, annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years) and related implementation rules remain in place. In 1997, EPA revoked the 1-hour ozone standard (0.12 ppm, not to be exceeded more than once per year) in all areas, although some areas have continued obligations under that standard (“anti-backsliding”). The 1-hour ozone standard is attained when the expected number of days per calendar year with maximum hourly average concentrations above 0.12 ppm is less than or equal to 1.

(4) Final rule signed June 2, 2010. The 1971 annual and 24-hour SO₂ standards were revoked in that same rulemaking. However, these standards remain in effect until one year after an area is designated for the 2010 standard, except in areas designated nonattainment for the 1971 standards, where the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standard are approved.

(5) Units of measure for the standards are parts per million (ppm) by volume, parts per billion (ppb) by volume, and micrograms per cubic meter of air (µg/m³).

2.10.2. Potential Impacts

Impacts on air quality would be related to fugitive dust emissions in and around the project sites and construction vehicle emissions during construction. However, there would be a few vehicles associated with the project at any one time (likely between one and ten); therefore, vehicle emissions would not cause significant air quality impacts. Project-related activities would not violate the NAAQS or air toxic standards established by the Commonwealth of Virginia.

DEQ’s response in request to project review, dated September 19, 2019 (**Appendix B**), stated: “This project is not likely to adversely affect air quality. However, during construction fugitive dust must be kept at a minimum. This requires, but is not limited to, measures such as application of water to suppress dust and washing down construction vehicles and paved roadways immediately adjacent to the construction site. Please note any process equipment that prepares coal via breaking, crushing, screening, wet or dry cleaning, thermal drying, etc. should be evaluated for permit applicability. The following sections of Virginia Administrative Code (VAC) may be applicable: 9 VAC 5-50-60 et. seq., governs abatement of visible emissions and fugitive dust emissions, and 9 VAC 5-40-5600 et. seq. addresses open burning.”

In Virginia, the Emission Standards for Odor (9 VAC 5 Chapter 40) stipulates that no facility shall cause any emissions to be discharged into the atmosphere that cause “an odor objectionable to

individuals of ordinary sensibility.” No such odors or related impacts are anticipated to be generated by the proposed project.

2.10.3. Mitigation

Fugitive dust emission impacts would be short-term (during construction) and would be minimized by ensuring that construction equipment is well-maintained and operated in well-ventilated areas. Regular washing of construction vehicles, use of construction entrances, and regular application of water on construction areas would minimize fugitive dust. Vehicle emissions would be minimized by encouraging drivers to avoid idling their vehicles. No adverse odors are anticipated, and thus no odor-mitigating measures are proposed.

2.11. Damage and/or Pollution of Surface Water Resulting from Erosion, Discharges or Other Sources

2.11.1. Current Site Conditions

According to the National Hydrography Dataset (NHD), Katie Branch runs parallel to the water line replacement, with a separation of approximately 25-50 feet between the stream and water line replacement area (**Figures 3, 4 and 5**). The pump station rehabilitation sites are not near any surface waters (USGS, 2019).

The DEQ approved the Final 2018 305(b)/303(d) Water Quality Assessment Integrated Report on September 16, 2019. The 2018 Integrated Report is a summary of the water quality conditions in Virginia from January 1, 2001, through December 31, 2016. The DEQ develops and submits this report to the EPA to satisfy CWA Sections 305(b) and 303(d). The water line replacement project area is along Katie Branch in the watershed of Little River in the Tennessee and Big Sandy River Basin (Clinch River Subbasin). Katie Branch and Little River are currently assessed as Fully Supporting of the Aquatic Life Use, but Little River is assessed as Not Supporting of the Recreation Use due to high levels of *E. coli* bacteria (DEQ, 2018).

2.11.2. Potential Impacts

There are no crossings of Katie Branch, and no in-water work would occur for the water line replacement. The pump station rehabilitations would occur on entirely previously disturbed land, and no work would occur at or immediately adjacent to any surface waters. Therefore, the proposed project would have no direct impacts to WOUS. Since the project would not directly affect, cross, or result in placing fill in existing water bodies, neither a Virginia Marine Resources Commission permit or Joint Permit Application under CWA Sections 404/401 is required.

A notification letter was submitted on September 12, 2019 to the USACE. The USACE responded on December 2, 2019 noting that any work in jurisdictional areas may require a CWA permit. Copies of USACE correspondence are provided in **Appendix B**. No work would occur in jurisdictional WOUS.

Appropriate erosion and sediment control measures would be implemented during construction to protect downstream water quality at all proposed project sites. Design and construction of the proposed project would be done in accordance with applicable requirements of the CWA, Virginia Stormwater Management Regulations, State Water Control Law, and the Virginia Erosion and Sediment Control Regulations.

Adverse impacts to surface waters are not anticipated because all applicable stormwater and erosion and sediment control regulations would be followed during construction. Following construction, vegetative cover would be re-established on all disturbed areas, or recovered by sidewalk (for the water line replacement work), which would minimize sediment loading to surface waters. Spill containment measures in accordance with DEQ and Virginia regulations would be located at each diesel generator.

A notification letter was sent to DEQ on September 12, 2019. The DEQ response dated September 19, 2019 stated: “Although no long-term adverse impacts to water quality are anticipated from this project, potential short-term adverse impacts resulting from surface runoff due to construction must be minimized. This can be achieved by using Best Management Practices (BMPs).” Notification letters and responses are included as **Appendix B**. During construction, TCPSA’s construction contractor would implement erosion and sediment control measures in accordance with the current edition of the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Regulations.

2.11.3. Mitigation

Project construction would strictly adhere to erosion and sediment control plans and stormwater management plans. No stream crossing permits or CWA permits would be needed. If any buried solid or hazardous wastes or impacted subsurface media are encountered during construction, they would be properly characterized, managed, and disposed of in full compliance with state, local, and federal regulations. No permanent impacts to surface waters would result from the implementation of the project.

2.12. Aesthetic Concerns and Visual Impacts

2.12.1. Current Site Conditions

Currently the proposed water line replacement area consists of mowed grass, asphalt, and electric utility poles. The area is entirely in VDOT right-of-way adjacent to U.S. 19. The pump station rehabilitation areas consist of nearby residential buildings, farmland, and town roads. The existing pump stations are all on TCPSA property. The water line replacement project sites are all in VDOT right-of-way adjacent to an existing paved road (U.S. 19).

2.12.2. Potential Impacts

Short term impacts to aesthetics would occur during construction due to the presence of heavy equipment in the project areas. Construction of the water line and pump upgrades may be seen

from the road and surrounding properties. There would be no long-term changes to the visual setting from replacement of existing water lines. All upgrades to existing pump stations would occur in already disturbed areas and would result in minor improvements to the visual setting as damaged fences would be replaced.

2.12.3. Mitigation

TCPSA would maintain work areas to minimized impacts during construction. No long-term mitigation is necessary.

2.13. Effects on Designated Wild, Scenic, and/or Recreational Rivers

2.13.1. Current Site Conditions

As previously described in section 2.11 of this EA, Katie Branch, a tributary to nearby Little River, is near the water line replacement project area. There are no designated wild, scenic, and/or recreational rivers located within the proposed project areas. No Virginia Scenic Rivers (DCR), National Wild and Scenic Rivers (National Park Service), or American Heritage Rivers (EPA) are designated in Tazewell County, VA.

2.13.2. Potential Impacts

No negative impacts to designated wild, scenic, and/or recreational river use are anticipated by the proposed action.

2.13.3. Mitigation

Appropriate erosion and sediment control measures would be implemented during construction to protect downstream water quality. No additional mitigation measures are anticipated.

2.14. Socio-Economic Changes and Environmental Justice Issues

2.14.1. Current Site Conditions

According to the most recent U.S. Census Bureau American Community Survey 5- year estimates for Tazewell County, VA (US Census Bureau, 2019), there are approximately 42,689 people (2017), 17,330 households (2017), and 20,788 housing units (2017) in the County. Population density after the 2010 Census was 86.9/square mile (compared to the Virginia average of 202.6/square mile). According to 2017 estimates, the racial makeup of the County is 94.7% White, 3.0% Black or African American, 0.2% Native American, 0.5% Asian, 0.9% Hispanic or Latino, and 1.3% two or more races.

In 2017, the county had an average per capita income of \$24,325 compared to the average of \$36,268 for Virginia as a whole. According to 2017 estimates, 15.6% of the census tract's population lived below the poverty level compared to 11.2% in Virginia as a whole.

Users of the water supplied by implementation of the overall water supply project would be subject to the same county-wide rates as all users. October 2019 TCPA water rates are shown in **Table 2-7**.

Table 2-7. October 2019 TCPSA water rates.

Number of gallons per month	Rate
Residential	
0 – 1,000	\$24.82
Over 1,000	\$8.66/1,000 gal.
Commercial	
0 – 1,000	\$34.05
1,001 – 30,000	\$12.70/1,000 gal.
30,001 – 120,000	\$11.54/1,000 gal.
Over 120,000	\$7.79/1,000 gal.

Source: TCPSA, 2019

In addition to the usage rates, all first-time users are subject to a security deposit (\$100 for residential and \$150 for commercial; customers who own and live on the property being served are exempt) and a water tap fee of \$1,100 (or cost plus 10%, whichever is greater).

2.14.2. Potential Impacts

The proposed project would not generate significant in- or out-migration within the area, as construction-related jobs would be from the existing labor pool of the region. No changes in the demographic characteristics of the community are expected. The proposed project would provide benefits to the surrounding community, primarily as a safer, more reliable source of potable water, along with short-term employment opportunities. Positive economic impacts are anticipated from the construction jobs, purchases of materials, and expenditures for goods and services for operation/maintenance. Positive impacts to the community are anticipated by eliminating dependence on an unreliable source of water and improving human health.

The proposed project would not displace any residences, would not create physical barriers that divide the community, nor would operations create adverse conditions to the community. The project would not have disproportionately high or adverse human health or environmental effects to minority or low-income residents within the project area.

The DEQ response dated September 19, 2019 stated: DEQ is “pleased to support the upgrade of public water supplies in Tazewell County. The proposed project will improve quality of life of the citizens of Virginia by providing safe, reliable drinking water.” Notification letters and responses are included as **Appendix B**.

2.14.3. Mitigation

No mitigation measures are anticipated.

2.15. Floodplain Impacts

2.15.1. Current Site Conditions

The water line replacement site is shown on Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) 51185C0320D in Zone X, area of minimal flood hazard (**Figure 6; Appendix A**). No portions of the water line replacement lie in the 100- or 500-year floodplains. One of the pump rehabilitation sites lies in the 500-year floodplain. No other pump station rehabilitation sites lie in the 100- or 500- year floodplain and all pump station rehabilitation sites are previously developed (FEMA, 2011).

2.15.2. Potential Impacts

No parts of the proposed project would result in impacts to the floodplain. The proposed project would not result in obstruction of floodwaters or development of the floodplain. No excess soil or other materials derived from construction would be disposed of or stored in the floodplain.

2.15.3. Mitigation

No mitigation is required.

2.16. Availability of Raw Water During Periods of Drought

2.16.1. Current Site Conditions

The current project would be upgrading and installing pump stations and replacing existing water supply lines. It would not make any additional withdrawals from any local streams or waterways.

2.16.2. Potential Impacts

The proposed action, as a phase of the Tazewell County overall water supply project, would enable the existing infrastructure to provide an increased amount of potable water to residents and businesses. As such, the overall proposed project would have long-term beneficial impacts on water availability during drought periods.

2.16.3. Mitigation

No mitigation is necessary.

2.17. Water Quality Information

2.17.1. Current Site Conditions

The DEQ approved the Final 2018 305(b)/303(d) Water Quality Assessment Integrated Report on September 16, 2019. The 2018 Integrated Report is a summary of the water quality conditions in Virginia from January 1, 2001, through December 31, 2016. The DEQ develops and submits this report to the EPA to satisfy CWA Sections 305(b) and 303(d). The water line replacement project

area is along Katie Branch in the watershed of Little River in the Tennessee and Big Sandy River Basin (Clinch River Subbasin). Katie Branch and Little River are currently assessed as Fully Supporting of the Aquatic Life Use, but Little River is assessed as Not Supporting of the Recreation Use due to high levels of *E. coli* bacteria. Based on the 2018 Integrated Report, there are no impaired waters located within the project limits of disturbance

Three reaches are listed as impaired waterways in the vicinity of the water line replacement. Reach ID VAS-P05R_LTR02A00 (Little River), VAS-p05R_LTR02A02 (Little River), and VAS-P05R_IDN01A04 (Indian Creek) are listed as Category 4A due to *E. coli* and Fecal coliform. One additional reach is listed as an impaired waterway in the same area. Reach ID VAS-P05R_LUC01A10 (Laurel Creek) is listed as Category 4A due to Benthic-Macroinvertebrate Bioassessments (DEQ, 2018).

2.17.2. Potential Impacts

This project would provide more reliable water service for Tazewell County residents and would not result in adverse impacts to water quality of streams, wetlands, or other WOUS.

A notification letter was sent to the DEQ on September 12, 2019. The DEQ response dated September 19, 2019 stated: “Although no long-term adverse impacts to water quality are anticipated from this project, potential short-term adverse impacts resulting from surface runoff due to construction must be minimized. This can be achieved by using Best Management Practices (BMPs).” Notification letters and responses are included as **Appendix B**. During construction, the proposed project would implement erosion and sediment control measures in accordance with the current edition of the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Regulations.

With implementation of erosion and sediment control BMPs during construction, excavation and construction activities are not anticipated to result in adverse impacts to water quality. Following construction, vegetative cover would be re-established on disturbed areas and the sidewalk over the water line replacement would be reconstructed as needed, which would minimize the potential for transport of sediment to surface waters after construction. The proposed project would not increase the volume of storm water runoff to local or regional drainage basins. The contractor would adhere to all applicable Virginia Pollutant Discharge Elimination System permitting requirements as necessary. No long-term impacts are anticipated.

2.17.3. Mitigation

Design and construction of the pump station rehabilitations and water line replacement would be in accordance with the applicable requirements of the CWA, Virginia Storm Water Management Regulations, State Water Control Law, and the Virginia Erosion and Sedimentation Control Regulations. Project construction would strictly adhere to erosion and sediment control plans and stormwater management plans. No other mitigation is anticipated.

2.18. Impact on Fisheries from Surface Water Intakes

2.18.1. Current Site Conditions

The proposed project consists of upgrading and installing generators at existing pump stations and replacing an existing water supply line. The project would not result in withdrawals from local streams or waterways.

2.18.2. Potential Impacts

No surface withdrawals would be made with this current project, there would be no impacts to fisheries.

2.18.3. Mitigation

No impacts are anticipated from the proposed construction. No mitigation measures are necessary.

2.19. Impacts to Coastal Zones and Coastal Barrier Resource Systems

2.19.1. Current Site Conditions

The proposed action is not in a coastal zone or Coastal Barrier Resource Systems unit.

2.19.2. Potential Impacts

Because the proposed action is not in a coastal zone or Coastal Barrier Resource Systems unit, there are no potential impacts on coastal resources.

2.19.3. Mitigation

No mitigation measures are needed.

3.0 SUMMARY OF ANY SIGNIFICANT IMPACTS AND REQUIRED MITIGATION

Implementation of the proposed action would not result in adverse impacts to the immediate project site and surrounding areas, including utilities, traffic, natural and cultural resources, noise, water, and air quality. Beneficial impacts would occur from providing a safe and reliable source of potable water for TCPSA customers and from a temporary increase in construction-related jobs and material purchases. A summary of potential impacts is provided below in **Table 3-1**.

Table 3-1. Impact Summary for the Proposed Action.

Description	Potential Impact(s)	Comments, BMPS, Mitigation, Permits
Effects, Destruction and/or Displacement of Wildlife and Marine Life, Including Endangered Species, and Their Habitats, or Foodchain	Short-Term, Minor	<p>All project activities would occur on previously disturbed land and would not require tree removal. The project areas are located outside of known bat hibernacula and maternal roosting trees.</p> <p>Wildlife may be temporarily disturbed during construction. There would be no in-stream work or crossings associated with the proposed project. No direct impacts to aquatic resources are expected since work would occur in upland areas. To minimize any potential indirect impacts to the aquatic resources, TCPSA would implement erosion and sediment controls and adhere to stormwater management laws and regulations, including development of an emergency spill plan. The proposed action would be implemented in accordance with the applicable requirements of the Endangered Species Act, Clean Water Act, Virginia Storm Water Management Regulations, State Water Control Law, and the Virginia Erosion and Sedimentation Control Regulations.</p>
Destruction or Disturbance of Marshland or Wetlands	None	<p>None of the project areas have wetlands or water features on-site.</p> <p>The project is not anticipated to significantly increase the volume of storm water runoff or sediment loading to surface waters. The area of concrete poured to establish backup generator pads at the existing pump stations has a small footprint that would not change the overall storm water runoff regime. At the water line replacement site, no in-water construction would occur, and any utility trenches would be backfilled with native soils/gravel and seeded to establish a vegetative surface cover in places that would not be recovered by sidewalk.</p> <p>Surface runoff and sedimentation would be controlled using BMPs outlined in the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Regulations.</p>
Displacement of Households, Businesses, or Services	Long-Term, Beneficial	No relocation of existing residences or businesses is required by the project. No mitigation actions are required.
Land Use Issues	Long-Term, Minor	Areas of prime farmland and farmland of statewide importance exist in the pump station upgrade areas; however, all sites have been previously disturbed. There are no forest lands of high conservation value or other formally classified lands are in the project areas. Short term impacts would occur to soils during construction due to disturbances associated with excavation, grading, and the use of heavy equipment. TCPSA would minimize these impacts via applicable requirements including CWA, State Water Control Law, stormwater management, and erosion and sediment control.

Description	Potential Impact(s)	Comments, BMPS, Mitigation, Permits
Effects on Land Having Archeological Significance	None	No impacts on archaeological resources or areas of historical significance. DHR concurs with the determination of no effects to historic properties.
Destruction or Disturbance of Areas of Historical Significance	None	
Use of Irretrievable Resources	Minor	Implementation of the proposed action would involve an irretrievable commitment of materials needed for construction, and the one-time expenditure of funds. No mitigation is anticipated, other than cost control measures associated with the one-time expenditure of public funds.
Noise	Short-Term, Minor	Proper maintenance and operation of construction equipment would minimize short term noise impacts associated with construction. Noise from emergency generators would only occur during testing or during power outages, at which point their benefit would outweigh any noise impacts.
Traffic Circulation and Traffic Pattern Disruption	Short-Term, Minor	Coordination with VDOT during construction and adherence to VDOT safety BMPs for traffic control would minimize potential short-term impacts on traffic, particularly related to the water line replacement work.
Odor/Air Quality	Short-Term, Minor	DEQ stated that this project is not likely to adversely affect air quality. However, during construction fugitive dust must be kept at a minimum. This requires measures such as application of water to suppress dust and washing down construction vehicles and paved roadways immediately adjacent to the construction site.
Damage and/or Pollution of Surface Waters Resulting from Erosion, Discharge(s), or Other Sources	Short-Term, Minor	DEQ stated that although no long-term adverse impacts to water quality are anticipated from this project, potential short-term adverse impacts resulting from surface runoff due to construction must be minimized by using BMPs. Implementation of erosion and sediment control plans and storm water plans in compliance with State Water Control Law and would minimize impacts.
Aesthetic Concerns and Visual Impacts	Short-Term, Minor, Adverse and Long-Term, Minor, Beneficial	Short term impacts to aesthetics would occur during construction due to the presence of heavy equipment in the project areas. Construction of the water line and pump upgrades may be seen from the road and surrounding properties. There would be no long-term changes to the visual setting from replacement of existing water lines. All upgrades to existing pump stations would occur in already disturbed areas and would result in minor improvements to the visual setting as damaged fences would be replaced.
Designated Wild, Scenic, and/or Recreational Rivers	None	No Virginia Scenic Rivers (DCR), National Wild and Scenic Rivers (National Park Service), or American Heritage Rivers (EPA) are designated in Tazewell County, VA.
Socio-economic Changes and Environmental Justice Issues	Long-Term, Beneficial	Positive impacts to the community are anticipated by increasing the reliability of water for Tazewell County and improving human health. The project would not have disproportionately high or adverse human health or environmental effects to minority or low-income residents within the project area.

Description	Potential Impact(s)	Comments, BMPS, Mitigation, Permits
Floodplain Impacts	None	The project would not result in obstruction of a floodway or development of the floodplain.
Availability of Raw Water during Periods of Drought	None.	Water conservation measures would be implemented during construction and operation where practicable.
Water Quality Information	Short-Term, Minor	DEQ stated that although no long-term adverse impacts to water quality are anticipated from this project, potential short-term adverse impacts resulting from surface runoff due to construction must be minimized by using BMPs. Implementation of erosion and sediment control plans and storm water plans in compliance with State Water Control Law would minimize impacts.
Fisheries from Surface Water Intakes	None	The project would develop additional water capacity by installing and upgrading ground water wells and replacing existing water supply lines. No withdrawals would be made from local streams and waterways.
Coastal Zones and Coastal Barrier Resource Systems	None	Project is not in a coastal zone and or coastal barrier resource system.

3.1. Secondary and Cumulative Impacts

Secondary and cumulative impacts have been considered in terms of socio-economic impacts, potential utility demands, traffic generation, and similar factors. The secondary and cumulative impacts of the proposed action, together with all other foreseeable developments in the project area, would not result in significant impacts.

3.2. Relationship Between Short-Term Use of the Environment and the Maintenance and Enhancement of Long-Term Productivity

The local short-term uses of the environment would include impacts during construction activities including noise of construction vehicles and activities, exhaust emission from construction machinery and worker vehicles, and increased traffic due to construction machinery and workers. Overall, TCPSA's planned improvements to their existing water system would result in long-term benefits to local populations and would benefit the local and regional economy, human health, and the environment from reliable access to potable water.

3.3. Alternative to Proposed Project

Since a large portion of the scope of work involves replacement/upgrades to existing equipment, there were few alternatives available for consideration. For the water line replacement, the only alternative would be to construct a new line; however, this alternative was dismissed because it would require disturbance in a new footprint as opposed to disturbing an area that was previously disturbed when the original water line was constructed. Therefore, TCPSA did not evaluate this option further. Similar circumstances governed the decision to upgrade the eight existing pump stations, as constructing new stations would be cost prohibitive and require new disturbed areas.

4.0 REFERENCES

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- VDH. 2016. Virginia Department of Health Drinking Water Funding Procedural Guidelines, Package #7-Environmental Review (October 11, 2016).
<http://www.vdh.virginia.gov/content/uploads/sites/14/2016/09/PG-7-Environmental-Review.pdf>

Appendix A: Figures

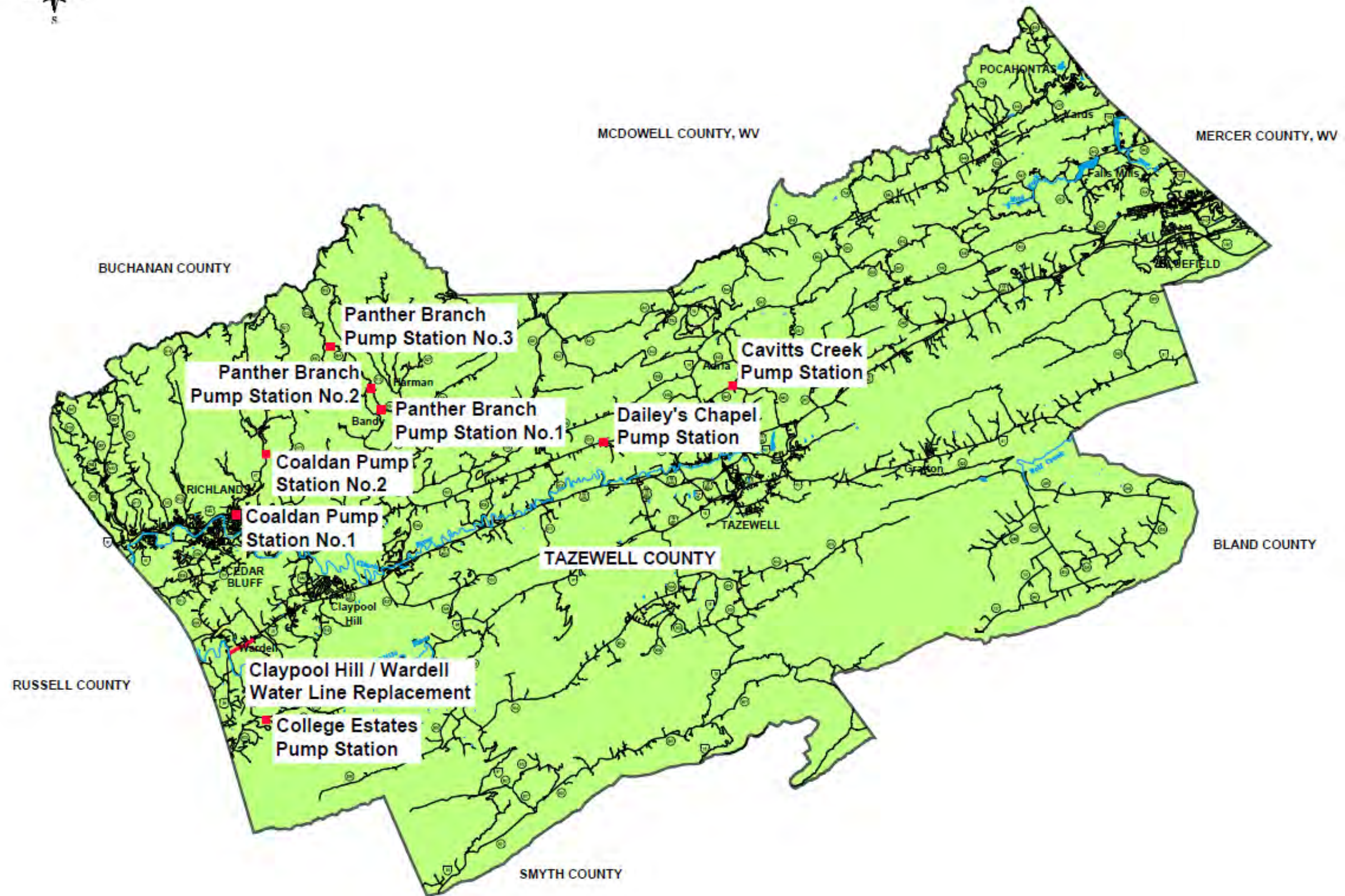
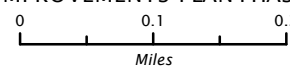
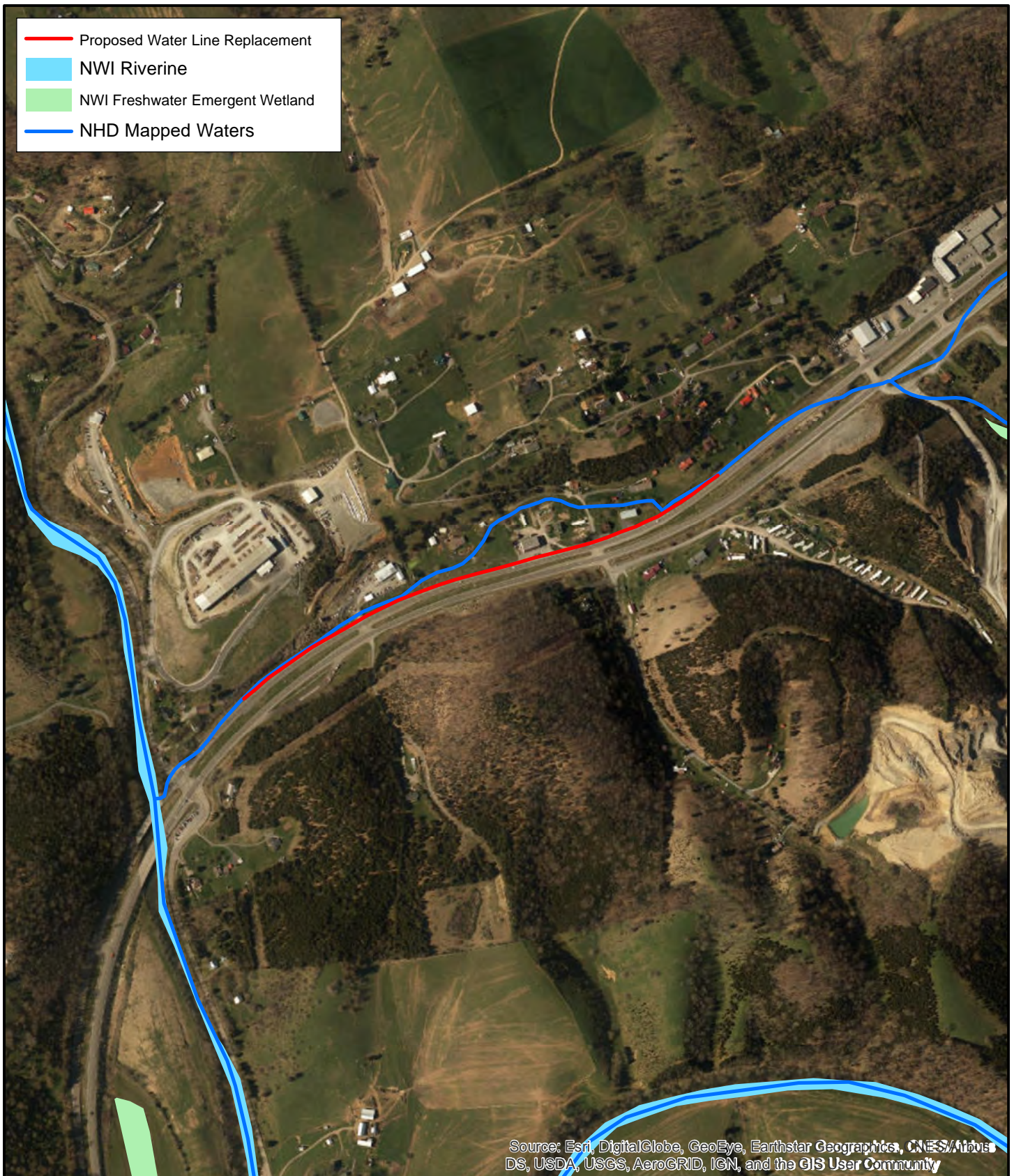


FIGURE 1
PUMP STATION UPGRADES AND
WATER LINE REPLACEMENT
TCPSA DRINKING WATER CAPITAL IMPROVEMENTS PLAN PHASE II



FIGURE 2
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





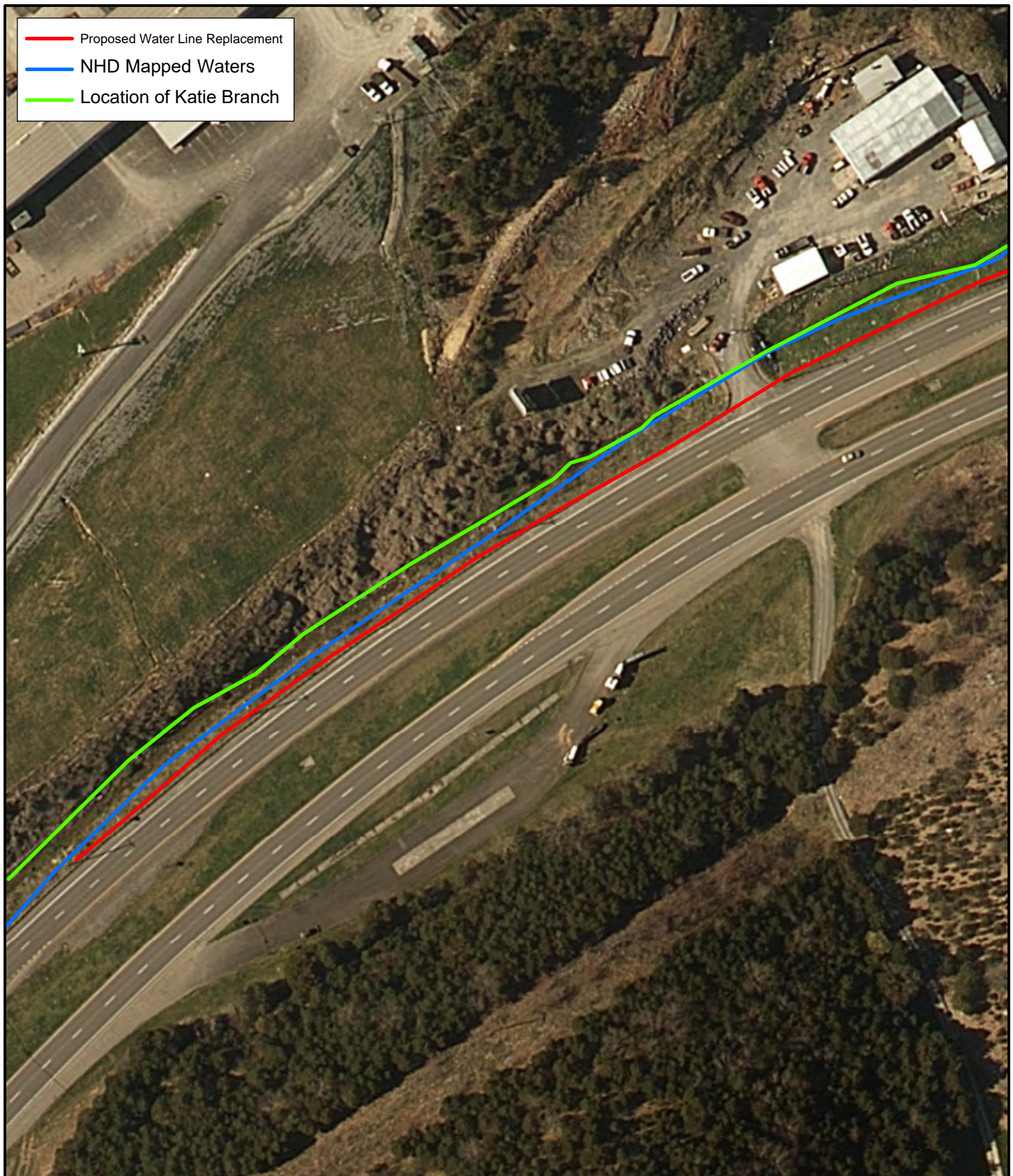
EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions

Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502



FIGURE 3
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 0.1 0.2
Miles
Tazewell, VA



- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch



EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions



Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 4
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II
0 100 200
Feet
Tazewell, VA



- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch



Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502



FIGURE 5
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II
0 50 100
Feet
Tazewell, VA



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Prepared by L. Potts, 08/21/2019
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FIGURE 6
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 0.1 0.2
Miles
Tazewell, VA

Appendix B: Agency Coordination



September 12, 2019

Ms. Martha Chapman
Department of Environmental Quality
Southwest Regional Office
355 Deadmore St.
Abingdon, Virginia 24210

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan, Tazewell County, Virginia
Ref: EEE Consulting Project No. 19-769

Dear Ms. Frazier:

The Tazewell County Public Service Authority (TCPSA) is conducting an environmental review pursuant to the National Environmental Policy Act (NEPA). The TCPSA is preparing this environmental review in accordance with the *Virginia Department of Health – Drinking Water Funding Environmental Review Procedural Guidelines, Revised October 11, 2016* to determine the potential environmental impacts associated with proposed public water service improvements throughout Tazewell County, Virginia. The project will be funded at least partially by the Virginia Department of Health (VDH) Drinking Water Funding Program. The project will be designed to comply with the latest edition of the VDH Waterworks Regulations and the American Water Works Association.

Project Description

The project includes improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas
- replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figures 2 and 3**)
- installation of water transmitters in approximately 1,785 existing water service meter settings
- installation of leak detection equipment

Rehabilitation of Eight Existing Pump Stations

The eight pump stations to be rehabilitated are:

- Panther Branch Pump Station No. 1
- Panther Branch Pump Station No. 2
- Panther Branch Pump Station No. 3
- Coaldan Pump Station No. 1
- Coaldan Pump Station No. 2
- Dailey's Chapel Pump Station
- Cavitt's Creed Pump Station
- College Estates Pump Station

One of the pump stations to be rehabilitated – the Dailey's Chapel pump station – is shown in Photograph 1 below. The following four stations look similar to the Dailey's Chapel pump station: Panther Branch Pump Station No. 1, Coaldan Pump Station No. 1, Cavitt's Creek Pump Station, and College Estates Pump Station.



Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coaldan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements will include existing pumps, motors, HVAC, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad will be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry will be replaced to match the current telemetry system used by TCPSA.

Replacement of Existing Waterline

Waterline replacement will occur in existing disturbed areas in Virginia Department of Transportation and/or TCPSA right-of-way in the location depicted in **Figures 5, 6, and 7**. Approximately 4,400 linear feet of 8-inch ductile iron water line will be replaced with new 10-inch PVC water line. This work will continue east from the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

Installation of Water Service Meter Transmitters and Leak Detection Equipment

Transmitters will be installed in approximately 1,785 existing water service meter settings to extend the use of the TCPSA's existing automated meter reading system. Leak detection equipment will be acquired and installed to identify potential problems throughout the TCPSA system.

Biological and Water Resources

Katie Branch, a tributary to Little River, is near the proposed water line replacement project area, as identified by the National Hydrographic Dataset and shown on **Figure 5**. However, the National Hydrographic Dataset does not accurately depict the location of the Katie Branch channel. **Figures 6 and 7** show the actual location of Katie Branch where the channel is within close proximity (approximately 25 to 50 feet) of the proposed water line replacement. According to the National Wetlands Inventory 2016 Dataset, no wetlands are located near the proposed water line replacement (**Figure 5**). According to FEMA floodplain information, no portion of the waterline replacement lies in a floodplain (**Figure 8**).

Database search results from the Department of Game and Inland Fisheries Virginia Fish and Wildlife Information System for a 2-mile radius of the water line replacement area included confirmed observations of the following federal- or state-listed threatened or endangered species:

Species with Confirmed Observations in a 2-mile Radius of the Water Line Replacement Area	Status
Oyster mussel (<i>Epioblasma capsaeformis</i>)	FE
Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	FE
Rough rabbitsfoot (<i>Theliderma cylindrica</i>)	FE
Littlewing pearl mussel (<i>Pegias fabula</i>)	FE
Fluted kidneyshell (<i>Ptychobranhus subtentus</i>)	FE
Northern long-eared bat (<i>Myotis septentrionalis</i>)	FT
Tri-colored bat (<i>Perimyotis subflavus</i>)	SE
Slippershell mussel (<i>Alasmidonta viridis</i>)	SE
Sickle darter (<i>Percina williamsi</i>)	ST
Spiny rivet snail (<i>Io fluvialis</i>)	ST

F – federal, S – state, E – endangered, T – threatened

There are no trees within the footprint of the project sites and no tree removal would occur as part of this project; therefore, this is no bat habitat in the proposed water line replacement or pump rehabilitation areas. No disturbance will take place in Little River, the location of the observations for all aquatic species noted in the VDGIF a database. There will be no in-water work or direct impacts to Katie Branch or Little River. Thus, there will be no direct impacts to aquatic species. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.

Historic Resources

The locations of the pump station rehabilitation and the replacement water line would not result in new ground disturbance, nor would the project result in changes to the viewshed. Therefore, there would be no effects to archaeolgocial or architectural resources.

On September 10, 2019, 3e initiated coordination with DHR and requested concurrence with the determination that no historic properties would be affected by the proposed undertaking. Should unidentified historic properties be discovered during implementation of the project, TCPSA will immediately stop work and notify VDH and DHR for further instruction.

Agency Coordination

We request that the Virginia Department of Environmental Quality identify any known environmental concerns within the vicinity of the proposed action and conduct a project impact review. Please provide any recommendations you may have to mitigate or avoid impacts. We are also separately requesting and/or have obtained project review from the following agencies (per regulations and VDH guidance):

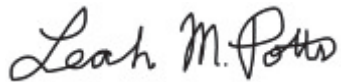
- Virginia Department of Transportation
- Virgnia Department of Conservation and Recreation
- Virginia Department of Historic Resources
- Virignia Department of Game and Inland Fisheries
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service

Ms. Martha Chapman
September 12, 2019
Page 6

We would appreciate a response within 30 days. If you require any further information or wish to discuss the project, please contact me at (540) 953-0170 or lpotts@eee-consulting.com.

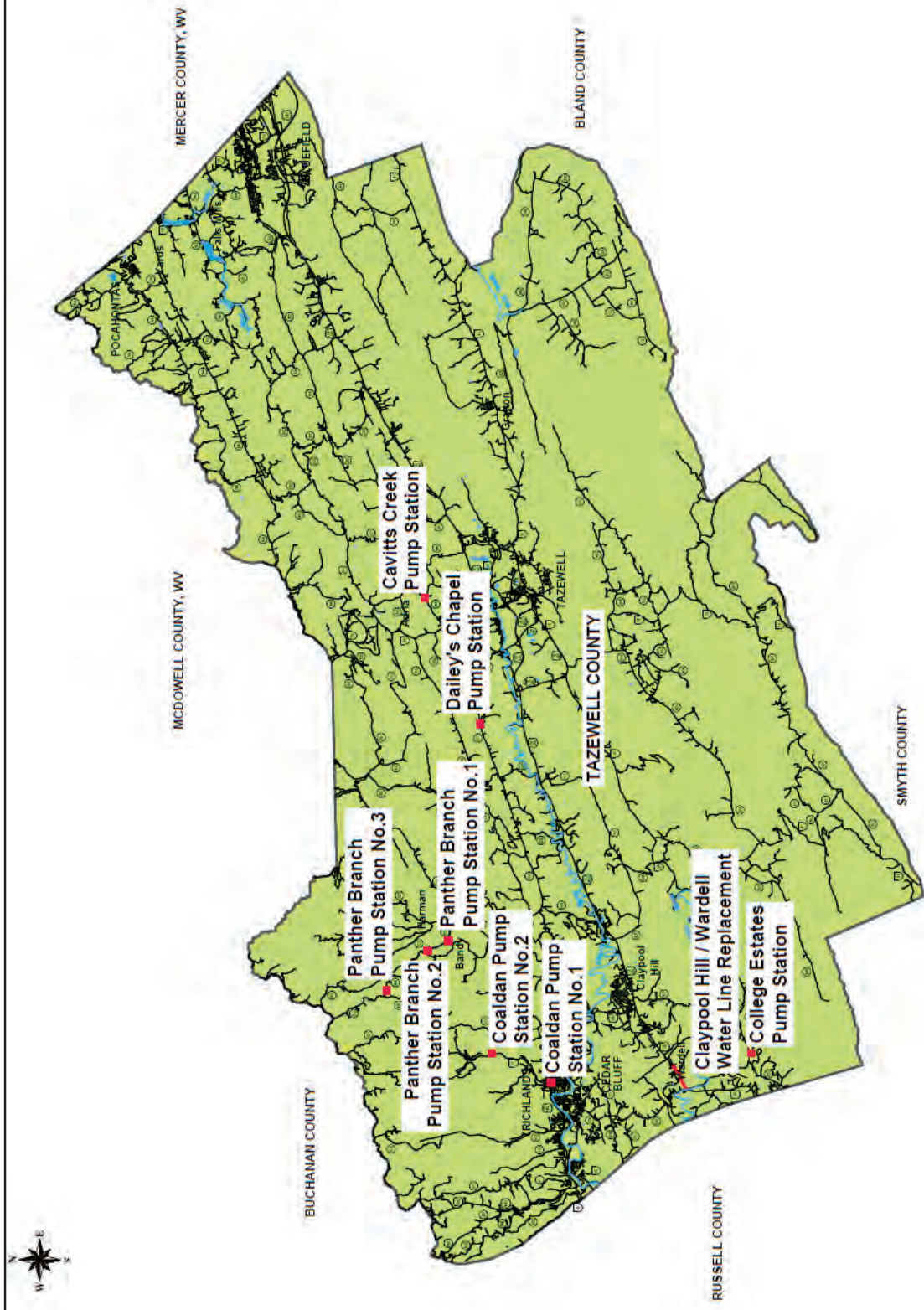
Sincerely,

EEE Consulting, Inc.

A handwritten signature in black ink that reads "Leah M. Potts". The signature is written in a cursive, flowing style.

Leah Potts, EIT

Attachments: Figures
USFWS IPaC Package
DGIF VaFWIS Search Results
DCR NHDE Search Results



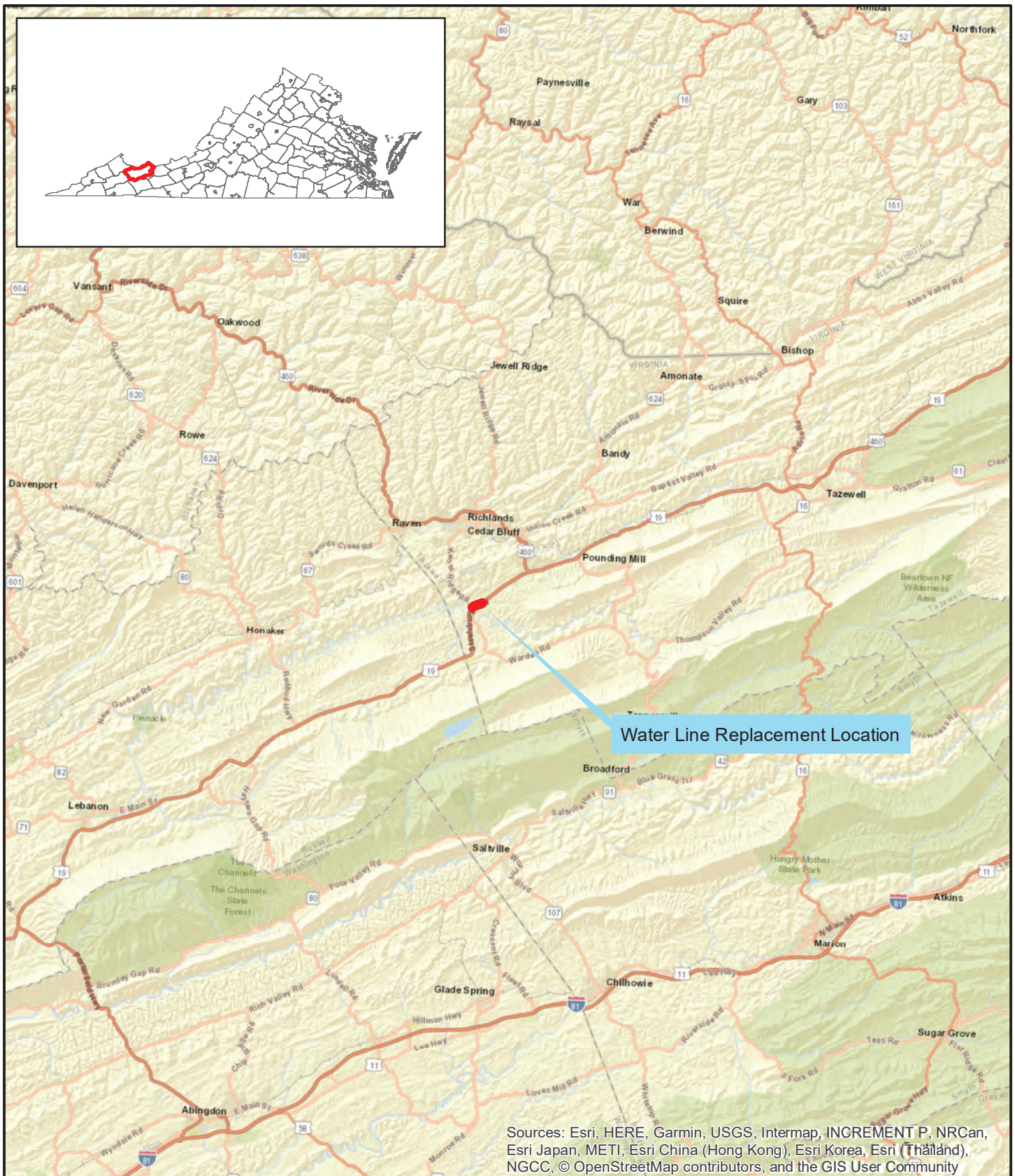
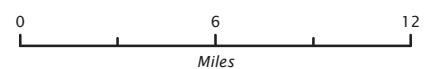


FIGURE 2
WATER LINE REPLACEMENT LOCATION
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



Tazewell, VA

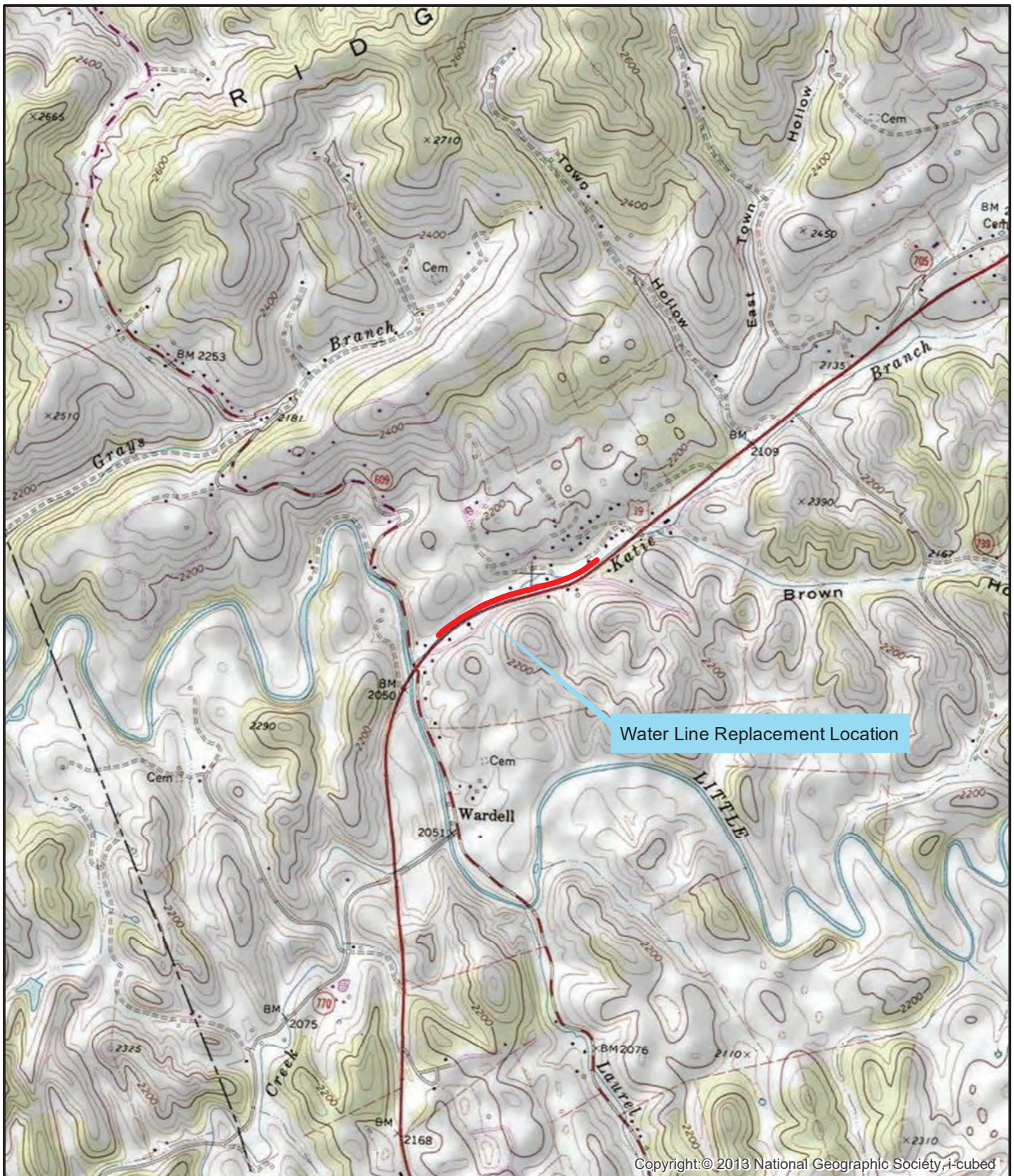


FIGURE 3
WATER LINE REPLACEMENT
TOPOGRAPHIC MAP

TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II

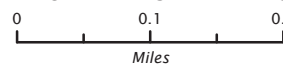
0 0.35 0.7
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Tazewell, VA

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FIGURE 4
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



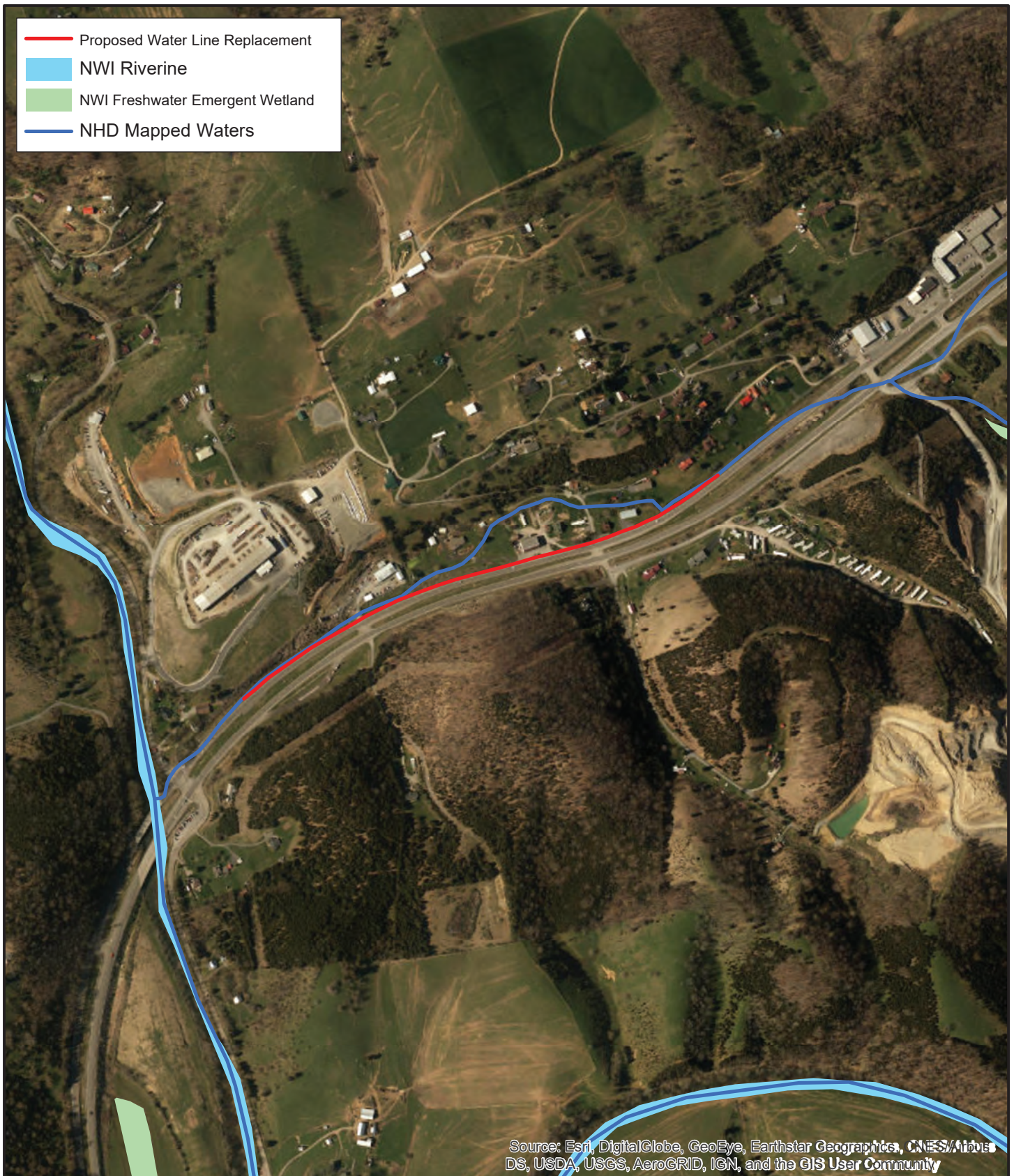
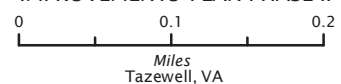
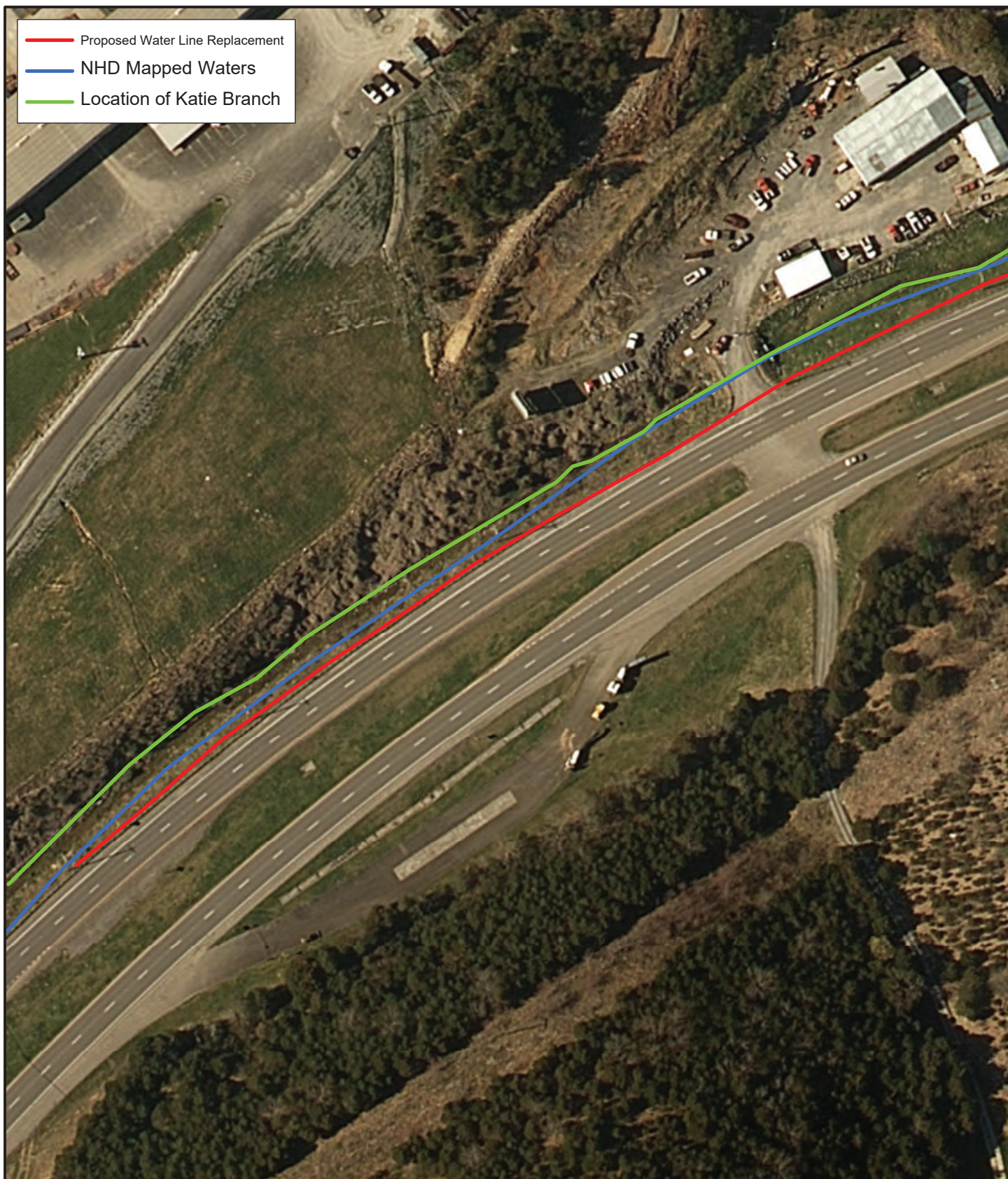


FIGURE 5
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions

Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502



FIGURE 6
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 100 200
Feet
Tazewell, VA



EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions

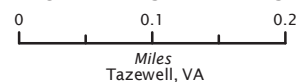


Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 7
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II
0 50 100
Feet
Tazewell, VA



FIGURE 8
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





United States Department of the Interior

FISH AND WILDLIFE SERVICE



Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

Date: 8/23/19

Self-Certification Letter

Project Name: TCPSA EA for Drinking Water Capital Improvements Plan Phase 2

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in:

- “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR § 17.40(o) [as determined through the Information, Planning, and Consultation System (IPaC) northern long-eared bat assisted determination key]; and/or
- “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat.

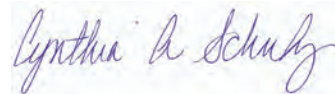
We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “may affect, not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia A. Schulz". The signature is written in a cursive style.

Cindy Schulz
Field Supervisor
Virginia Ecological Services

Enclosures - project review package



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

Phone: (804) 693-6694 Fax: (804) 693-9032

<http://www.fws.gov/northeast/virginiafield/>



In Reply Refer To:

August 22, 2019

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Tazewell County Public Service (TCPSA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, replacement of old telemetry to match the current telemetry system used by TCPSA, installation of a new diesel generator to serve as backup power, and a new approximately 10 foot by 20 foot concrete pad. Because the generators at some stations would be placed in the area outside of the existing fence, TCPSA would remove part of the existing perimeter fencing and install new fencing to surround the concrete pad and new generator. TCPSA would build fence at stations where there currently is none to provide security for the new generator. TCPSA would install water transmitters in approximately 1,785 existing water service meter settings to extend the use of TCPSA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSA system. The 4,400 lf of new water line would be installed immediately adjacent to the current water line and within existing TCPSA right-of-way. All proposed project actions, including all work at the pump stations (including the areas outside of existing fencing), and the new water line would occur on previously disturbed land. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.040698412976724N81.79277725728076W>



Counties: Tazewell, VA

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
Virginia Big-eared Bat <i>Corynorhinus (=Plecotus) townsendii virginianus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8369	Endangered

Clams

NAME	STATUS
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranthus subtentum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5629	Endangered
Sheepnose Mussel <i>Plethobasus cyphus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6903	Endangered
Shiny Pigtoe <i>Fusconaia cor</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2573	Endangered
Slabside Pearlymussel <i>Pleuroaia dolabelloides</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1518	Endangered
Spectaclecase (mussel) <i>Cumberlandia monodonta</i> No critical habitat has been designated for this species.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/7867	
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1247	

Critical habitats

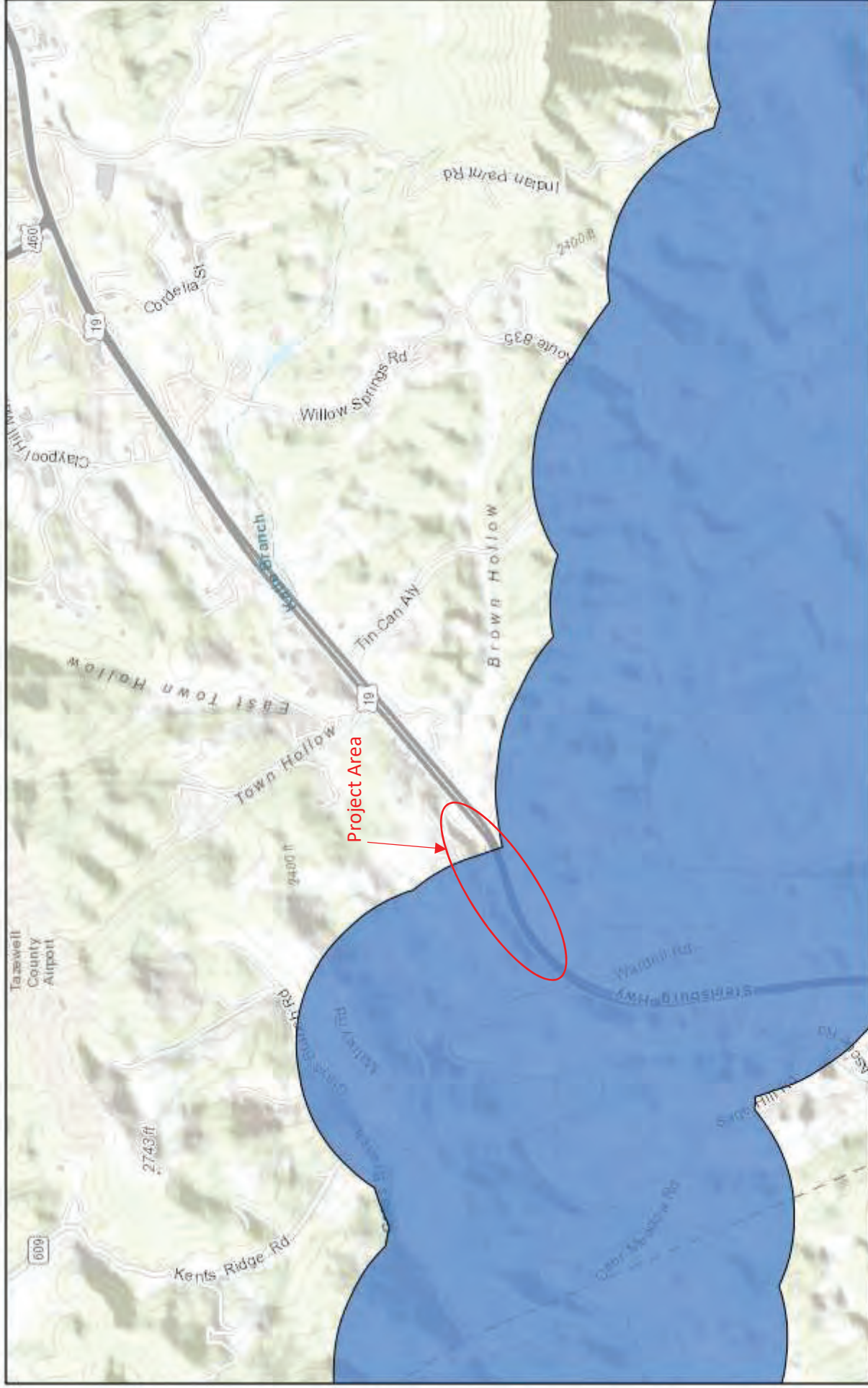
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

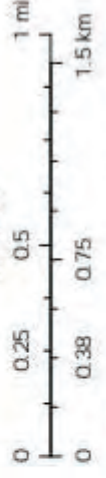
TCPSA Waterline Replacement



August 23, 2019

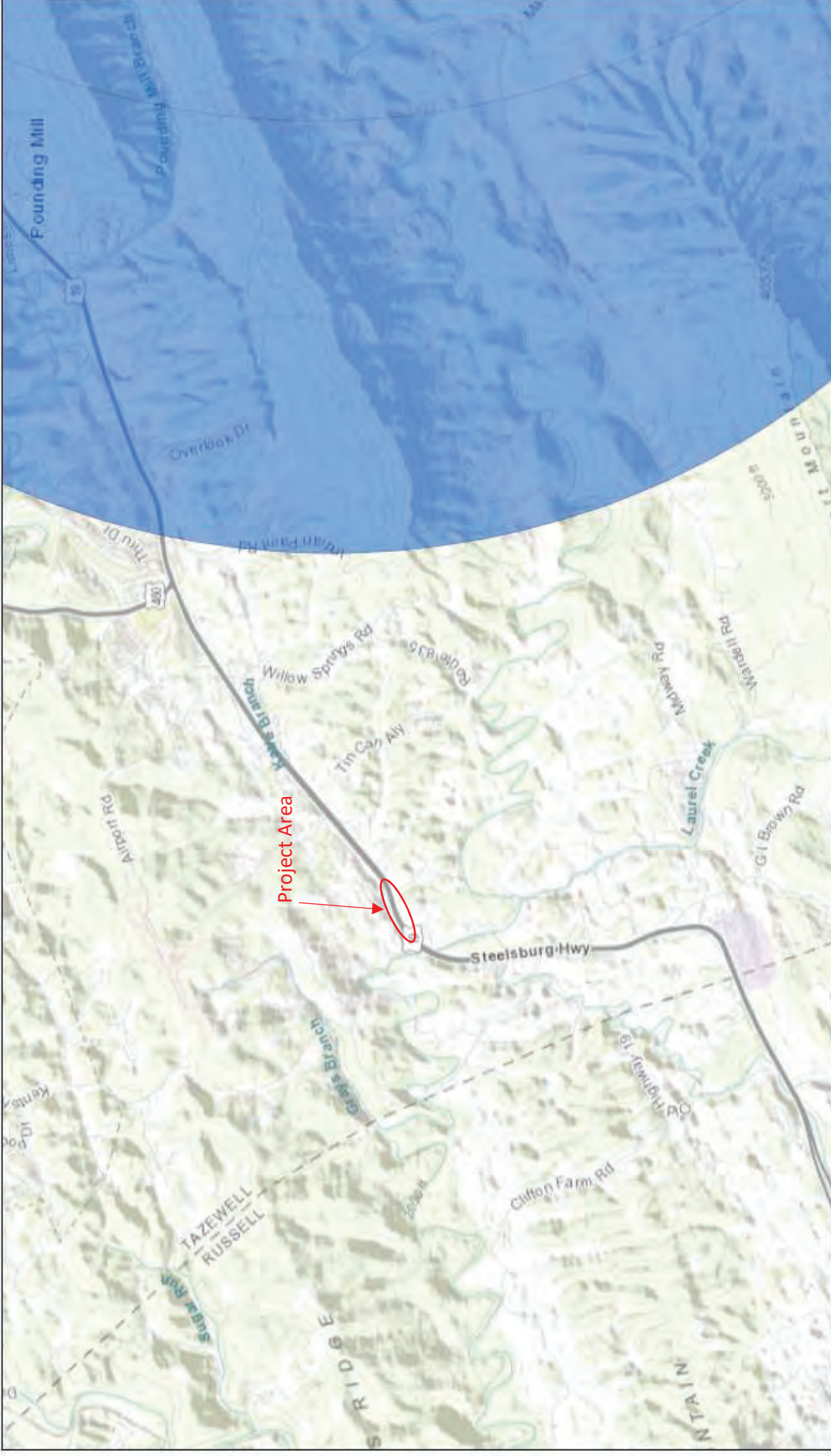
Virginia Critical Habitat (published)

1:36,112



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

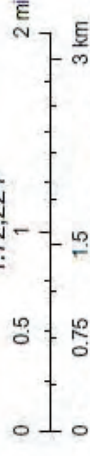
NLEB Locations and Roost Trees



8/23/2019, 1:45:38 PM

NLEB Hibernaculum 5.5 Mile Buffer

1:72,224



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA | VA Dept. Game & Inland Fisheries

Species Conclusions Table

Project Name: 19-769 Tazewell County Public Service Authority (TCP SA) Environmental Assessment for Drinking Water Capital Improvements Plan Phase 2 – Water Line Replacement, Tazewell, VA

Date: 09-10-2019

Note: The work associated with rehabilitating the eight pump stations would occur entirely on previously disturbed land and there would be no vegetation removal (including no tree removal). The pump station sites are developed with gravel surface. There is no natural vegetation or habitat within the pump station sites. Thus, an official species list was not requested for these sites. The determination of effects is based solely on the waterline portion of the proposed project.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Indiana Bat (<i>Myotis sodalis</i>)	No suitable habitat present.	No effect.	<p>Neither DCR nor VDGIF returned species observation records within a 2-mile radius of the action areas.</p> <p>No tree clearing is proposed within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action areas.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.</p> <p>The action area is located beyond the 0.25-mi radius of a known NLEB location according to the VDGIF NLEB Winter Habitat and Roost Trees Map.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action</p>
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	No suitable habitat present.	No effect.	

			area. According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.
Virginia Big-eared Bat (<i>Corynorhinus townsendii virginianus</i>)	No suitable habitat present.	No effect.	<p>According to VDGIF, this species is known to occur in three caves in Tazewell County during the summer, and five caves (Highland, Bland and Tazewell counties) in the winter. It is one of two Virginia bat species which roost in caves in the summer. They are found exclusively in limestone caves.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified</p>
Cumberland bean (<i>Villosa trahalis</i>)	No suitable habitat present.	No effect.	There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.

			<p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Fluted kidneyshell (<i>Ptychobranthus subtentum</i>)	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF</p>

			<p>database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Littlewing pearlymussel (<i>Pegias fabula</i>)</p>	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Oyster mussel (<i>Epioblasma capsaeformis</i>)</p>	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p>

			<p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented, in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Purple bean (<i>Villosa perpurpurea</i>)</p>	No suitable habitat present.	No effect.	<p>The purple bean is found only in the Clinch River in Virginia and in Copper Creek, a tributary, where it occurs in low numbers within Tazewell County (Stansbery et al., 1986). Although known from Tazewell County and the Clinch River, it is not known from the action area streams. The DCR search did not identify this species in the subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Rough rabbitsfoot (<i>Quadrula cylindrica strigillata</i>)</p>	No suitable habitat present.	No effect.	<p>The rough rabbitsfoot is rare in the Clinch River in Tazewell and Scott Counties. Although known from Tazewell County and the Clinch River, it is not known from the action area</p>

			<p>streams. The DCR search did not identify this species in the project subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Sheepnose mussel (<i>Plethobasus cyphus</i>)	No suitable habitat present.	No effect.	<p>In Virginia, this species is known only from the Clinch River near Dunganon, Scott County, and the Powell River from Flannary Bridge of Lee County (VDGIF 2009). This species is not known from the action area streams or subwatershed, or Tazewell County (VDGIF 2009, DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>

Shiny pigtoe (<i>Fusconaia cor</i>)	No suitable habitat present.	No effect.	<p>The shiny pigtoe occupies the Clinch, Powell and Elk Rivers in southwestern Virginia. Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Slabside Pearlymussel (<i>Pleuronaia dolabelloides</i>)	No suitable habitat present.	No effect.	<p>The slabside pearlymussel is found in the Clinch, Powell, Holston, Elk, Duck, and Buffalo Rivers in Virginia (Terwilliger, 1991). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance</p>

			with Virginia Erosion and Sedimentation Control Regulations.
Spectaclecase (mussel) (<i>Cumberlandia monodonta</i>)	No suitable habitat present.	No effect.	<p>The spectaclecase is known to only occur in the Clinch River in Scott County (Terwilliger, 1991). Although known from the Clinch River, this species is not known from action area streams, subwatershed, or Tazewell County (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Tan riffleshell (<i>Epioblasma florentina walkeri</i> (=e. walkeri))	No suitable habitat present.	No effect.	<p>Records in Virginia for this species exist only from the Clinch, South Fork Holston, and Middle Fork Holston Rivers; no confirmed species observations in action area streams, subwatershed, or Tazewell County, VA (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the</p>

				water line replacement. To minimize effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.
Critical Habitat		Critical habitat is present.	Not likely to adversely affect.	Waterline replacement action area intersections a critical habitat area for the Fluted Kidneyshell according to the Virginia Field Office Critical Habitat Map Tool. There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.

Site Location

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center

Base Map [Choices](#)

Topography ▼

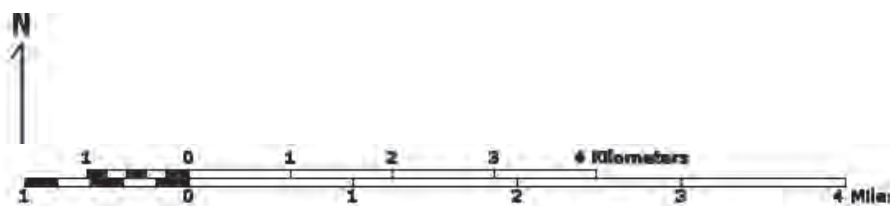
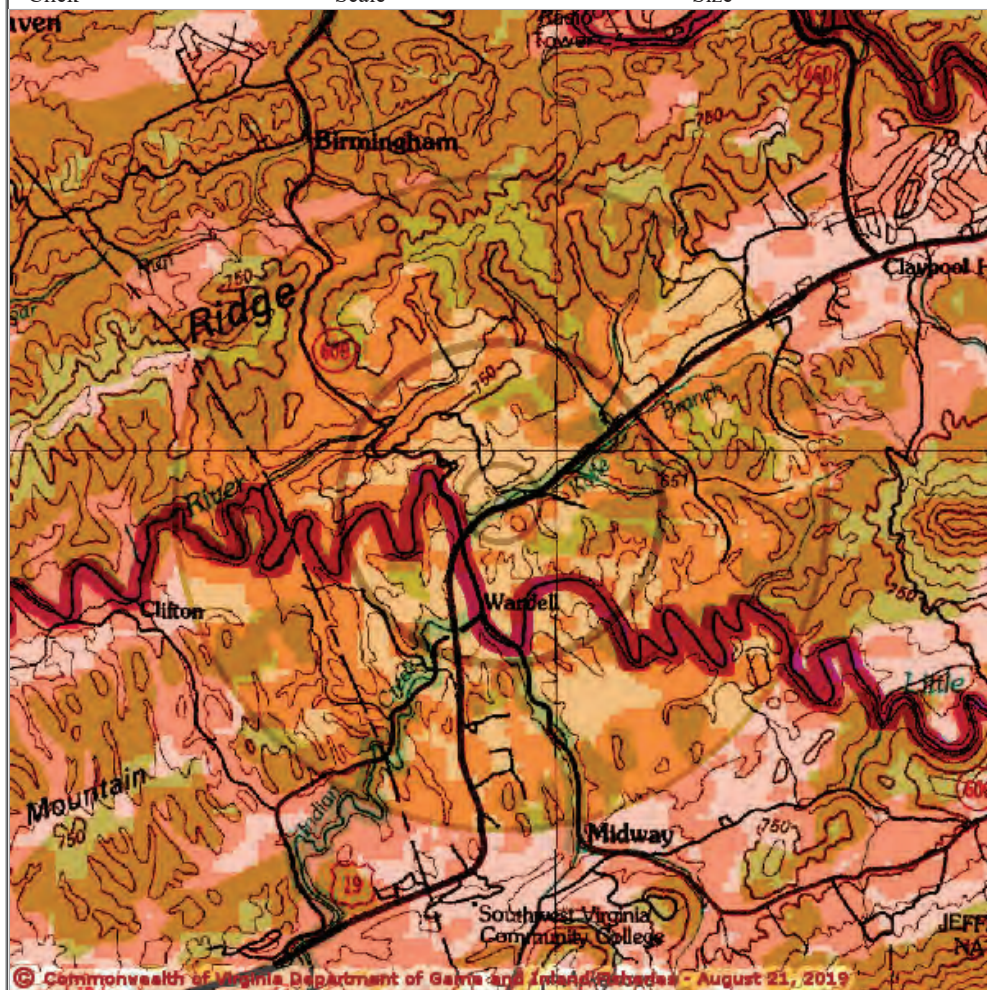
Map Overlay [Choices](#)

Current List: Position, Search,
BECAR, BAEANests,
TEWaters, TierII, Habitat,
Trout, Anadromous

Map Overlay Legend

Map Click **Pan** **Id** **M** Map Scale **In** **Zoom** **Out** Screen Size **Small** **Size** **Big** [Help](#)

[Refresh Browser Page](#)



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

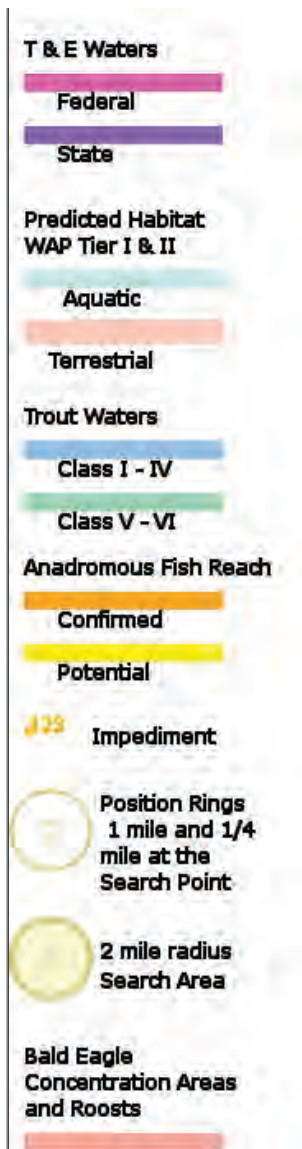
☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The



map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic

<http://www.national.geographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2019-08-21 14:19:54 (qa/qc March 21, 2016 12:20 - tn=989500.0 dist=3218 I)

\$poi=37.0406760 -81.7925548

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VaFWIS Initial Project Assessment Report

Compiled on 8/21/2019, 2:21:16 PM

 Known or likely to occur within a **2 mile radius around point 37.0406760 -81.7925548**
 in **167 Russell County, 185 Tazewell County, VA**
[View Map of Site Location](#)

 606 Known or Likely Species ordered by Status Concern for Conservation
 (displaying first 72) (72 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050023	FESE	Ia	Bat, Indiana	Myotis sodalis		BOVA
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		BOVA
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		BOVA
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens		BOVA
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	Theliderma intermedia		BOVA
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	Yes	BOVA, TEWaters, Habitat
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra		BOVA
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		BOVA
060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	Yes	BOVA, TEWaters, Habitat
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		BOVA
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	Yes	BOVA, SppObs
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata		BOVA
060021	FESE	Ib	Spectaclecase	Margaritifera monodonta		BOVA, Habitat
060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	Yes	BOVA, TEWaters, Habitat, SppObs
050021	FESE	Ila	Bat, gray	Myotis grisescens		BOVA
050035	FESE	Ila	Bat, Virginia big-eared	Corynorhinus townsendii virginianus		BOVA
060146	FESE	Ila	Bean, Rayed	Villosa fabalis		BOVA
060121	FESE	Ila	Kidneyshell, fluted	Ptychobranhus subtentus	Yes	BOVA, Habitat, SppObs
060110	FESE	Ila	Mussel, sheepnose	Plethobasus cyphus		BOVA
060083	FESE	Ila	Pearlymussel, slabside	Pleuroanaia dolabellodes		BOVA, Habitat
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis	Yes	BOVA, SppObs
010111	FTST	Ic	Chub, slender	Erimystax cahni		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA, SppObs
010430	SE	Ib	Dace, Tennessee	Chrosomus tennesseensis		BOVA
060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes	BOVA, TEWaters, Habitat, SppObs
060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia		BOVA, Habitat
060174	SE	Ila	Pigtoe, pyramid	Pleurobema rubrum		BOVA
060139	SE	Ilc	Lilliput, purple	Toxolasma lividum		BOVA
060027	SE	IIla	Elephantear	Elliptio crassidens		BOVA
060168	SE	IIlb	Deertoe	Truncilla truncata		BOVA

2/4

		060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0258784)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0260082)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0260726)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261235)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261534)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261660)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0262433)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0262692)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0263208)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0263849)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0265564)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0265792)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0266056)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0266318)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	

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 (6 Reaches) [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					
Indian Creek (60102051)	FESE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
Katie Branch (60102051)	SE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
Laurel Creek (60102051)	SE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
Little River (60102051)	FESE	010075		Ilc	Shiner, popeye	Notropis ariommmus	Yes
		010341		Ila	Logperch, blotchside	Percina burtoni	
		010342	ST	Ic	Darter, sickle	Percina williamsi	
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060021	FESE	Ib	Spectaclecase	Margaritifera monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060051	FESE	Ia	Pigtoe, finerayed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060083	FESE	Ila	Pearlymussel, slabside	Pleuironaia dolabelloides	
		060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
Little River (60102051)	FESE	010341		Ila	Logperch, blotchside	Percina burtoni	Yes
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
tributary (60102051)	SE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	

Habitat Predicted for Terrestrial WAP Tier I & II Species

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020011		Ila	Frog, mountain chorus	Pseudacris brachyphona	Yes

Public Holdings:

N/A

Compiled on 8/21/2019, 2:21:17 PM I989500.0 report=IPA searchType=R dist= 3218 poi= 37.0406760 -81.7925548
PixelSize=64, Anadromous=0.049983, BECAR=0.023824, Bats=0.023764, Buffer=0.096966, County=0.116298, Impediments=0.025264, Inlt=0.154176, PublicLands=0.047038, SppObs=0.332666, TEWaters=0.091465, TierReaches=0.113748, TierTerrestrial=0.179952, Total=1.449152, Tracking_BOVA=0.216038, Trout=0.04589

TE Waters Group Little River (0260082)

37,02,26.4 -81,47,33.2
is the Search Point

Display at center Item Location is not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles radius

Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search, Observation

Map Overlay Legend

T & E Waters

Federal

Selected Federal

State

Selected State

Position Rings
1 mile and 1/4 mile at the Search Point

2 mile radius Search Area

Data Observation Site

Map Click

Pan To M

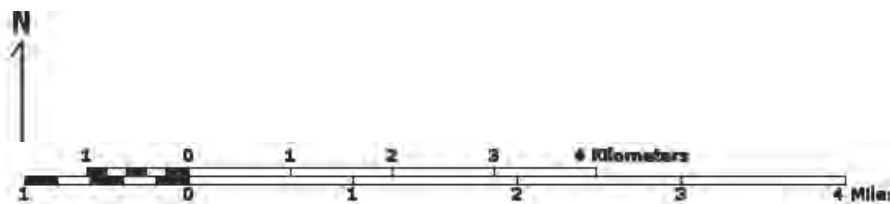
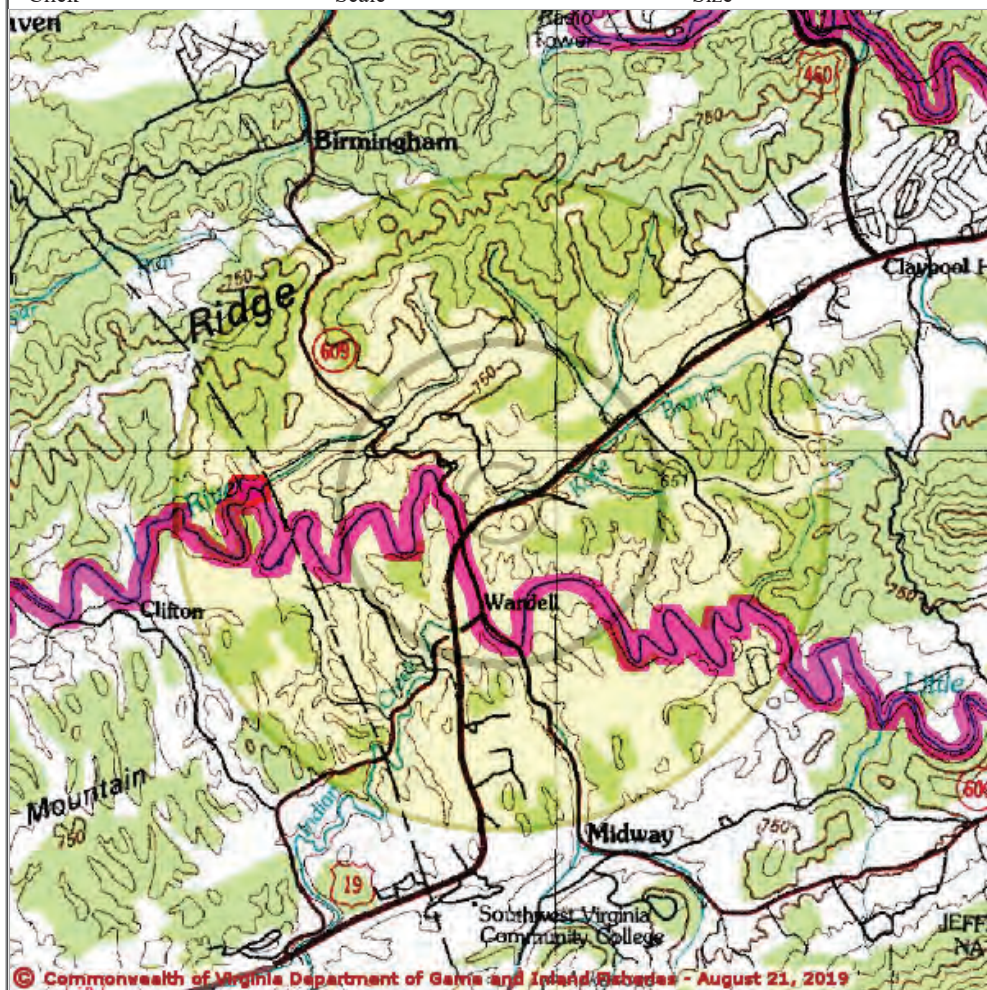
Map Scale

In Zoom Out

Screen Size

Small Size Big

Help



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System:** ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2019-08-21 14:36:20 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)
\$poi=37.0406760 -81.7925548\$query=select Convert(varchar(10),floor((minx+maxx)/2))
+ '' + Convert(varchar(10),floor((miny+maxy)/2)) from vafwis_tables.dbo.cvTEWaters
where SEG_ID in (0257861)

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7 Species Observations where Kidneyshell, fluted (060121) observed

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center

Base Map [Choices](#)

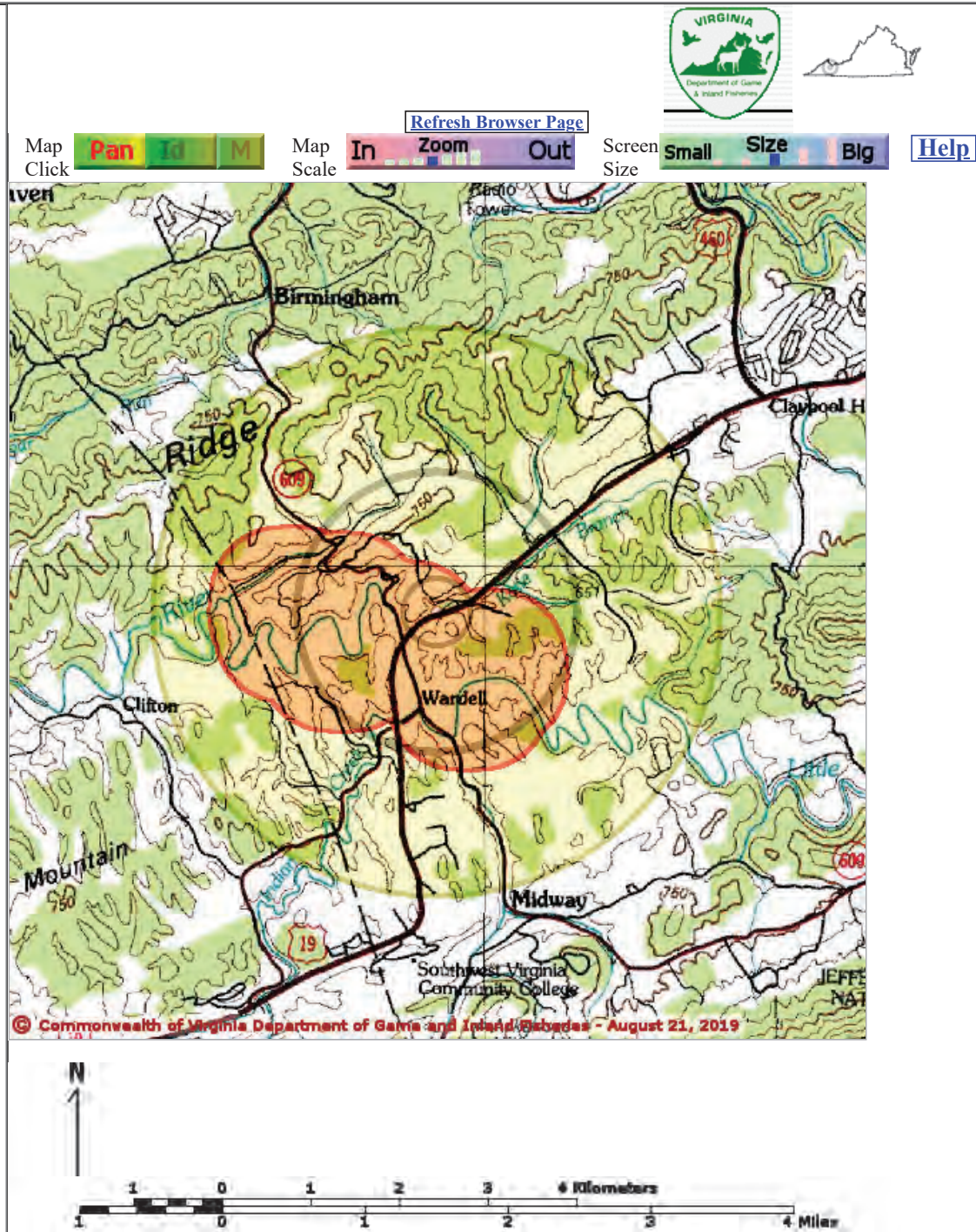
Topography ▼

Map Overlay [Choices](#)

Current List: Position, Search,
SppObs

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

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\$poi=37.0406760 -81.7925548

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Species Observations where Rabbitsfoot, rough (060122) observed 611428

37,02,26.4 -81,47,33.2
is the Search Point

Display Item Location is
at center not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center




Base Map Choices

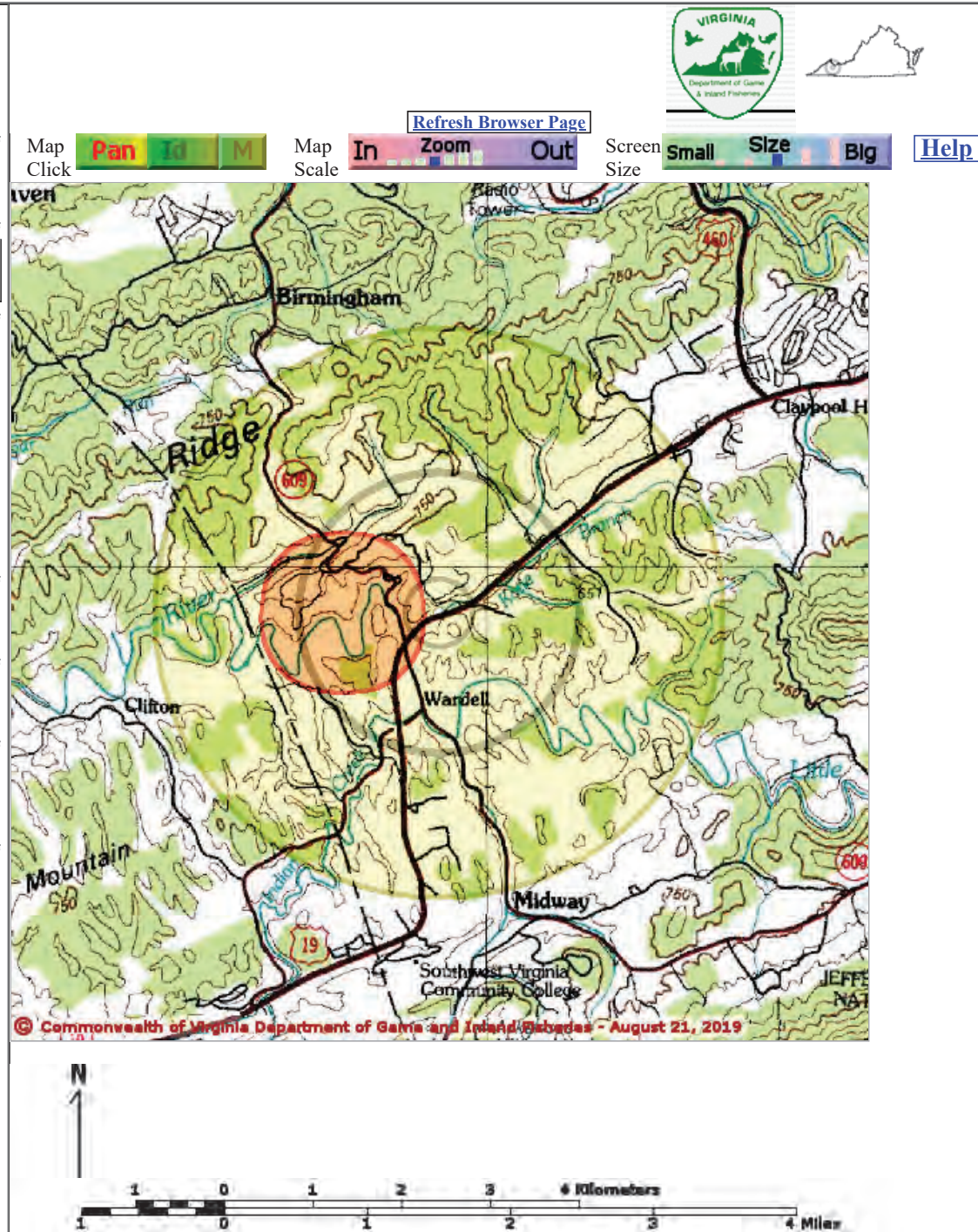
Topography ▼

Map Overlay Choices

Current List: Position, Search,
Observation

Map Overlay Legend

-  Position Rings
1 mile and 1/4
mile at the
Search Point
-  2 mile radius
Search Area
-  Data
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](https://microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

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map assembled 2019-08-21 14:37:37 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)
 \$poi=37.0406760 -81.7925548\$query=select xy.x,xy.y, xxvy256.Displace_X, xxvy256.Displace_Y, cc.High_TE, obs.FeatType from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs obs on obs.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSite256 s256 on s256.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSitexxvy256 xxvy256 on xxvy256.obsSite256 = s256.obsSite256 join vafwis_tables.dbo.cvSppObs_CC cc on cc.obsID = xy.obsID JOIN vafwis_tables.dbo.udf_List2Table('611428','') list on list.item = obs.obsID

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Species Observations where Bat, tri-colored (050027) observed 230908

37,02,26.4 -81,47,33.2
is the Search Point

Display Item Location is
at center not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center




Base Map Choices

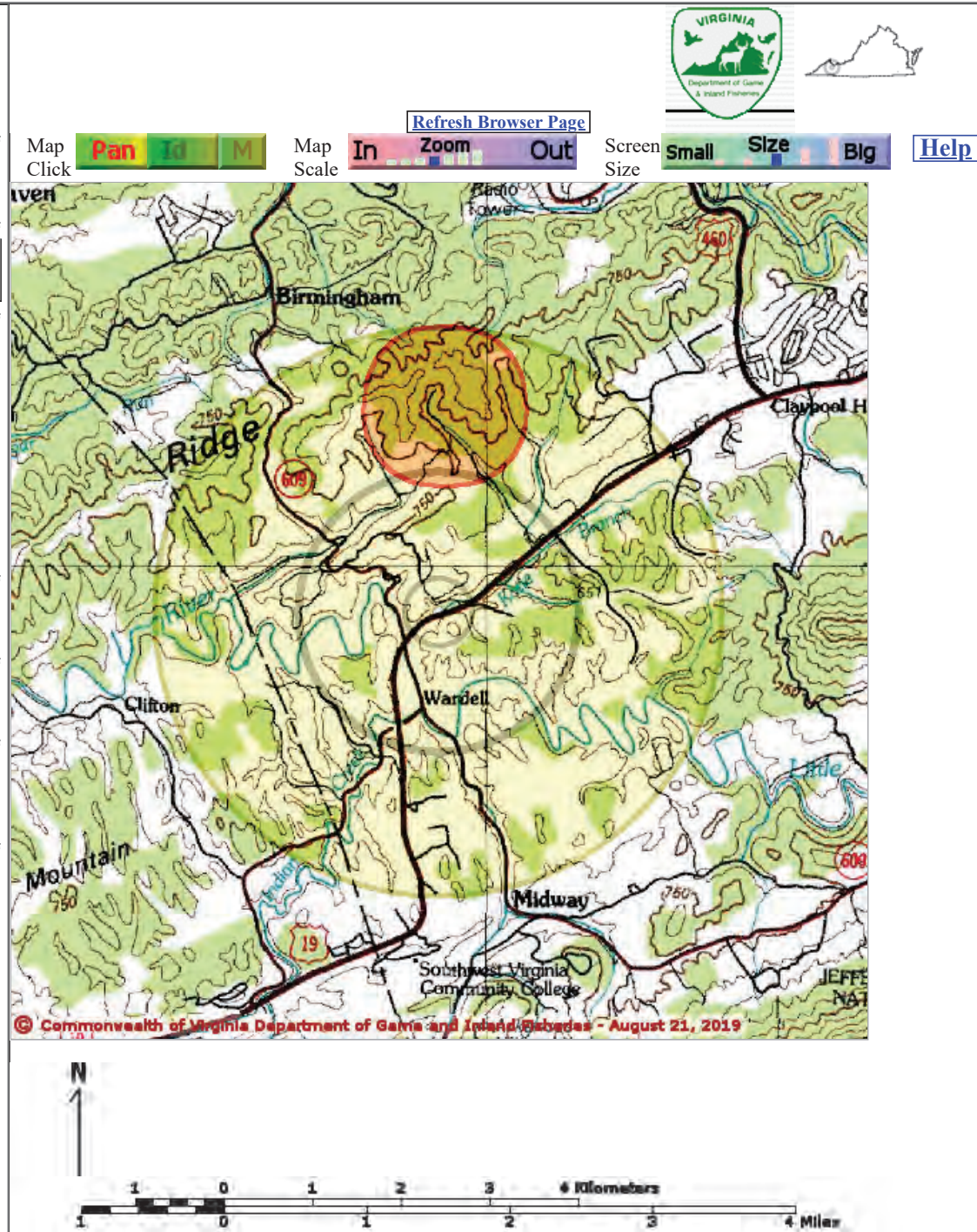
Topography ▼

Map Overlay Choices

Current List: Position, Search,
Observation

Map Overlay Legend

-  Position Rings
1 mile and 1/4
mile at the
Search Point
-  2 mile radius
Search Area
-  Data
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System:** ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

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map assembled 2019-08-21 14:39:47 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)

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4 Species Observations where Bat, northern long-eared (050022) observed

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center



Base Map [Choices](#)

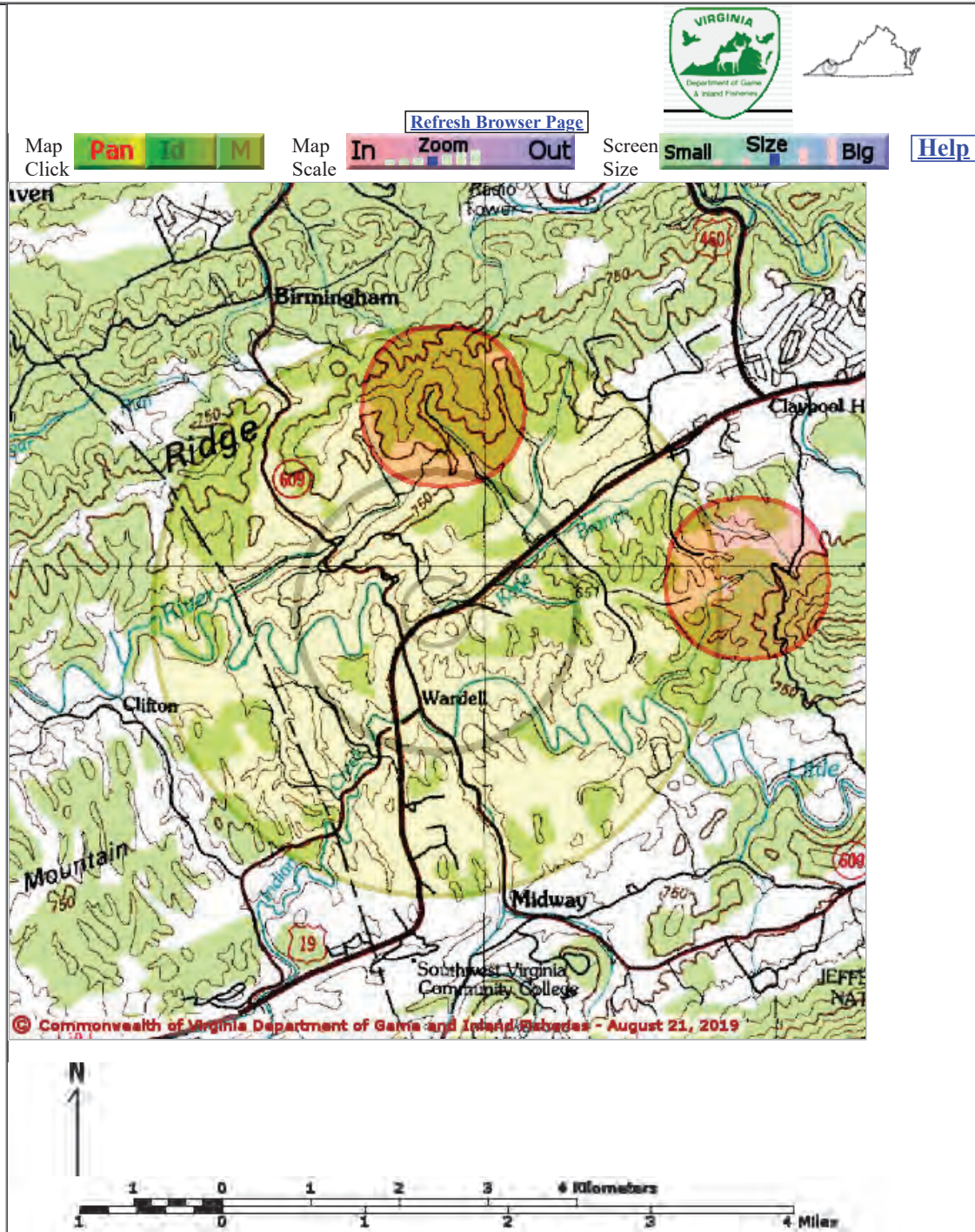
Topography ▼

Map Overlay [Choices](#)

Current List: Position, Search,
SppObs

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraser.com](https://microsoft.terraser.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

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map assembled 2019-08-21 14:39:22 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)
\$poi=37.0406760 -81.7925548

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Department of Conservation & Recreation

[CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES](#)

PROJECT INFORMATION

Web Project ID: WEB00000011533

Client Project Number: 19-769

TITLE: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

DESCRIPTION: The Tazewell County Public Service (TCPSPA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, installation of a diesel generator on a concrete pad at each site with additional fencing, and replacement of old telemetry to match the current telemetry system utilized by TCPSPA. Water transmitters would be installed in approximately 1,785 existing water service meter settings in order to extend the use of TCPSPA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSPA system. The 4,400 lf of new water line would be installed as close as possible to the current water line and within existing right-of-way. All proposed project sites have been previously disturbed. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

EXISTING SITE CONDITIONS: Developed

QUADRANGLES: Richlands

COUNTIES: Tazewell

Latitude/Longitude (DMS): 37° 2' 27.2084" N / 81° 47' 31.4306" W

Acreage: 4 acres

Comments:

REQUESTOR INFORMATION

Priority: N

Tier Level: Tier II

Tax ID:

Contact Name: Leah Potts

Company Name: EEE Consulting, Inc

Address: 201 Church St Suite C

City: Blacksburg

State: VA

Zip: 24060

Phone: 5408083273

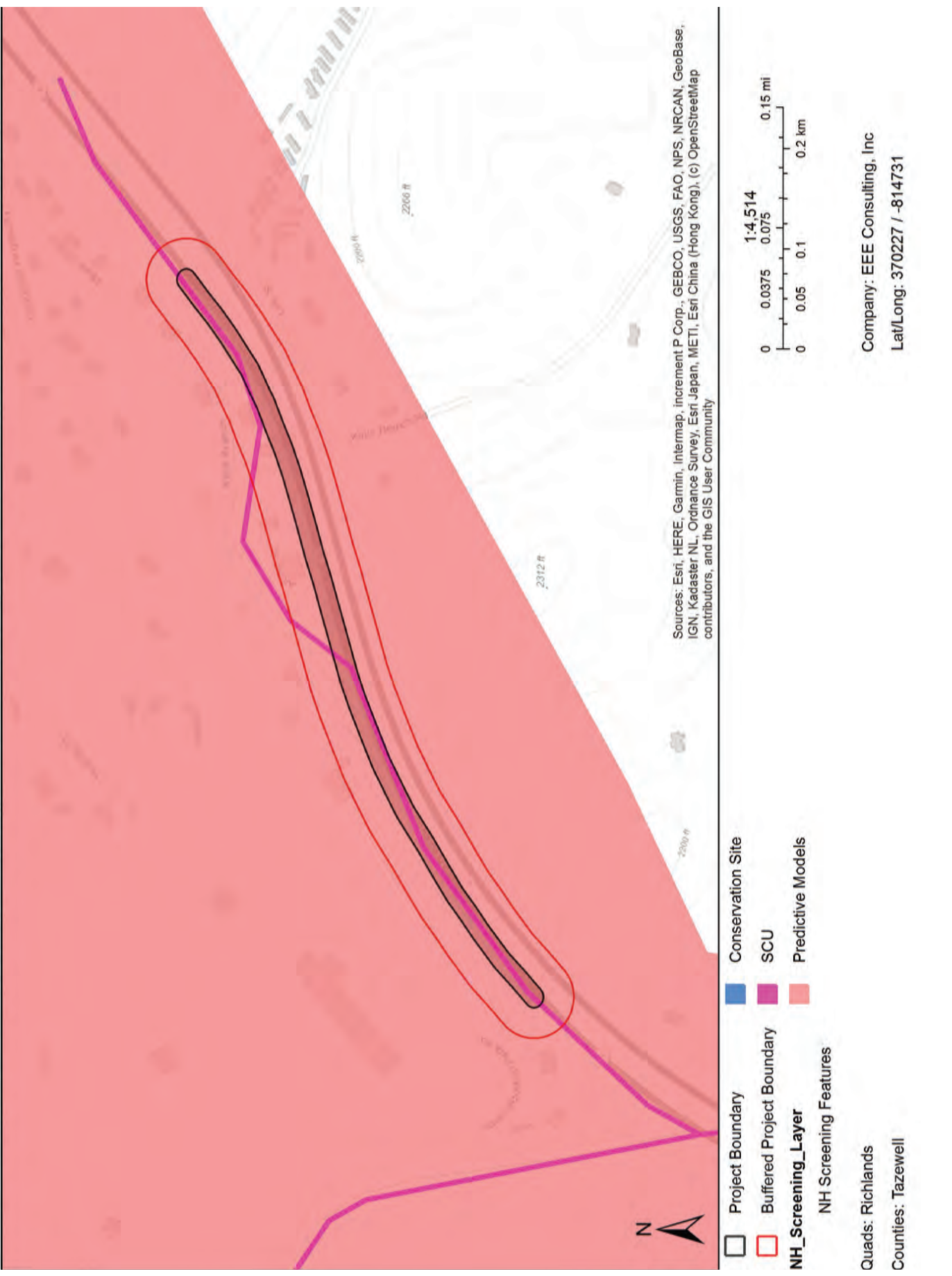
Fax:

Email: lpotts@eee-consulting.com

Conservation Site						
CLINCH RIVER - LITTLE RIVER SCU						
Natural Heritage Screening Features Intersecting Project Boundary						
	Site Type	Brank	Acreage	Listed Species	Presence	
	SCU	B2	1159		FL	

Site Name	Group Name	Common Name	Scientific Name	GRANK	SRANK	Fed Status	Species of Concern	State Status	EO Rank	Last Obs Date	Precision
Natural Heritage Resources Intersecting Project Boundary											

Intersecting Predictive Models											
Karst Bedrock											
Tennessee Heelsplitter											
Little Brown Bat											
Tricolored Bat											
Predictive Model Results											





COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

The project mapped as part of this report has been searched against the Department of Conservation and Recreation's Biotics Data System for occurrences of natural heritage resources from the area indicated for this project. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics files, NATURAL HERITAGE RESOURCES HAVE BEEN DOCUMENTED within the submitted project boundary including a 100 foot buffer and/or PREDICTED HABITAT MODELS FOR NATURAL HERITAGE RESOURCES intersect the project area.

You have submitted this project to DCR for a more detailed review for potential impacts to natural heritage resources. DCR will review the submitted project to identify the specific natural heritage resources within the proposed project area including a 100 foot buffer. Using the expertise of our biologists, DCR will evaluate whether your specific project is likely to impact these resources. DCR's response will indicate whether any negative impacts are likely and, if so, make recommendations to avoid, minimize and/or mitigate these impacts. If the potential negative impacts are to species that are state- or federally-listed as threatened or endangered, DCR will also recommend coordination with the appropriate regulatory agencies: the Virginia Department of Game and Inland Fisheries for state-listed animals, the Virginia Department of Agriculture and Consumer Services for state-listed plants and insects, and the United States Fish and Wildlife Service for federally listed plants and animals. If your project is expected to have positive impacts we will report those to you with recommendations for enhancing these benefits.

There will be a charge for this service for "for profit companies": \$60, plus an additional charge of \$35 for 1-5 occurrences and \$60 for 6 or more occurrences.

Please allow up to 30 calendar days for a response, unless you requested a priority response of 5 business days at an additional surcharge of \$500 or 15 calendar days at an additional surcharge of \$300. An invoice will be provided with your response.

We will review the project based on the information you included in the Project Info submittal form, which is included in this report. Also any additional information including photographs, survey documents, etc. attached during the project submittal process and/or sent via email referencing the project title (from the first page of this report).

Thank you for submitting your project for review to the Virginia Natural Heritage Program through the NH Data Explorer. Should you have any questions or concerns about DCR, the Data Explorer, or this report, please contact the Natural Heritage Project Review Unit at 804-371-2708.

Leah Potts

From: Chapman, Martha <martha.chapman@deq.virginia.gov>
Sent: Thursday, September 12, 2019 11:10 AM
To: Hutchison Michael fjw10703
Cc: Leah Potts; Suzie Richert
Subject: Fwd: Environmental Review Request: Pump Rehabilitation and Water Line Replacement in Tazewell County
Attachments: TCPSA EA Ph II - DEQ - 20190912 - Final.pdf; DEQ Attachments 20190912.pdf

Mike,
Please see the attached for your review.

Thanks,
Martha

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

From: **Leah Potts** <lpotts@eee-consulting.com>
Date: Thu, Sep 12, 2019 at 11:02 AM
Subject: Environmental Review Request: Pump Rehabilitation and Water Line Replacement in Tazewell County
To: Martha.Chapman@deq.virginia.gov <Martha.Chapman@deq.virginia.gov>
Cc: Suzie Richert <srichert@eee-consulting.com>

Dear Ms. Chapman,

Tazewell County Public Service Authority is preparing an Environmental Assessment for eight proposed pump rehabilitation sites and a proposed water line replacement. This email is to provide you with the attached project information and request your review and input on the proposed project. Please contact me with any questions.

Regards,

Leah

Leah M. Potts, EIT, CFM

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273

[LinkedIn](#)



EEE CONSULTING, INC.

201 Church Street, Suite C | Blacksburg, VA 24060

www.eee-consulting.com



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--

Martha Chapman

Water Monitoring & Assessment Scientist
Southwest Regional Office
Virginia Department of Environmental Quality
355A Deadmore Street
Abingdon, VA 24210
Direct: (276) 676-4845



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

SOUTHWEST REGIONAL OFFICE

355-A Deadmore Street, Abingdon, Virginia 24210

Phone (276) 676-4800 Fax (276) 676-4899

www.deq.virginia.gov

Matt Strickler
Secretary of Natural Resources

David K. Paylor
Director

Jeffrey L. Hurst
Regional Director

September 19, 2019

Leah Potts, EIT, CFM
EEE Consulting
201 Church St. Suite C
Blacksburg, VA 24060

Re: Tazewell County Pump Rehabilitation and Water Line Replacement

Dear Ms. Potts:

The Virginia Department of Environmental Quality's Southwest Regional Office is pleased to support the upgrade of public water supplies in Tazewell County. The proposed project will improve the quality of life of the citizens of Virginia by providing safe, reliable drinking water.

The project consists of replacing approximately 4,400 linear feet of 8" iron waterline with 10" waterline, upgrading eight existing pump stations, installation of transmitters in approximately 1,785 water service meters, and the installation of leak detection equipment. All of this work would take place in previously disturbed areas.

The waterline replacement project area is along Katie Branch in the watershed of Little River in the Tennessee and Big Sandy River Basin (Clinch River Subbasin), Section 2, Class IV (mountainous zone waters). Katie Branch and Little River are currently assessed as Fully Supporting of the Aquatic Life Use, but Little River is assessed as Not Supporting of the Recreation Use due to high levels of E. coli bacteria.

The following discussion is provided as a guideline of programs administered by the Department of Environmental Quality (DEQ) and other agencies of the Commonwealth, which could be applicable to the proposed action. Final determination concerning potential impacts on these programs rests with DEQ's Southwest Regional Office and the appropriate agency administering each program. It is the responsibility of the applicant to coordinate development with these agencies.

The Department of Environmental Quality has no objections to the project provided that the applicant abides by all applicable state, Federal, and local laws and regulations. Prior to construction, all permits and approvals must be obtained. In general, development must incorporate features which prevent significant adverse impacts on ambient air quality, water quality, wetlands, historic structures, fish wildlife, and species of plants, animals, or insects listed by state agencies as rare, threatened, or endangered.

1. Water Quality and Wetlands. Although no long-term adverse impacts to water quality are anticipated from this project, potential short-term adverse impacts resulting from surface runoff due to construction must be minimized. This can be achieved by using Best Management Practices (BMPs).

Federal and state governments regulate impacts to streams and wetlands. The Virginia Marine Resources Commission serves as the clearinghouse for the Joint Permit Application (JPA) used by: (1) U.S. Army Corps of Engineers for issuing permits pursuant to *§ 404 of the Clean Water Act* and *§ 10 of the Rivers and Harbors Act*; (2) Department of Environmental Quality for issuance of Virginia Water Protection Permit pursuant to *§ 401 of the Clean Water Act*, Virginia Code § 62.1-44.2 et seq., Virginia Code § 62.1-44.15:5, and Virginia Administrative Code 9 VAC 25-210-10 et seq.; and (3) Virginia Marine Resources Commission regulates encroachments on or over state-owned subaqueous beds as well as tidal wetlands pursuant to Virginia Code § 28.2-1200 through 1400. Contact VMRC at (757) 247-2200 to determine the need for a JPA for this project. VMRC will distribute the application to the appropriate agencies. Each agency will conduct its review and respond.

In general, DEQ recommends that the amount of stream and wetland impacts be avoided to the maximum extent practicable. For unavoidable impacts, DEQ encourages the following practices to minimize the impacts to wetlands and waterways: use of directional drilling from upland locations; operation of machinery and construction vehicles outside of stream-beds and wetlands; use of synthetic mats when in-stream work is unavoidable; stockpiling of material excavated from the trench for replacement if directional drilling is not feasible; and preservation of the top 12 inches of trench material removed from wetlands for use as wetland seed and root stock in the excavated area. The Southwest Regional contact is Clairise Shaheen at (276) 676-4809 or email Clairise.Shaheen@deq.virginia.gov if a permit is necessary to go forward with the project.

2. Erosion and Sediment Control and Stormwater Management. Erosion and sediment control measures must be implemented in accordance with the current edition of the Virginia Erosion and Sediment Control Handbook and the Virginia Erosion and Sediment Control Regulations, which are available online: <http://www.deq.virginia.gov/Programs/Water/LawsRegulationsGuidance.aspx>. If the total land disturbance exceeds 10,000 square feet, an erosion and sediment control plan will be required. Erosion and sediment control requirements are regulated by the

local government where your land disturbing activity is occurring. Please contact the appropriate county, city or town for information and compliance requirements. Stormwater management planning and permitting is required through our Department should your land disturbance be greater than one (1) acre or lie within the boundaries of a common plan of development. Information, permit application, and regulations on our stormwater management program are available online at:
<http://www.deq.virginia.gov/Programs/Water/StormwaterManagement.aspx>.

Please contact Kelly Miller at our Southwest Regional Office at (276) 676-4879 or email Kelly.Miller@deq.virginia.gov for more information.

3. Air Quality. This project is not likely to adversely affect air quality. However, during construction fugitive dust must be kept at a minimum. This requires, but is not limited to, measures such as application of water to suppress dust and washing down construction vehicles and paved roadways immediately adjacent to the construction site. Please note any process equipment that prepares coal via breaking, crushing, screening, wet or dry cleaning, thermal drying, etc. should be evaluated for permit applicability. The following sections of Virginia Administrative Code (VAC) may be applicable: 9 VAC 5-50-60 *et. seq.*, governs abatement of visible emissions and fugitive dust emissions, and 9 VAC 5-40-5600 *et. seq.* addresses open burning. The Southwest Regional contact is Crystal Bazyk at (276) 676-4829 or email Crystal.Bazyk@deq.virginia.gov.

4. Solid and Hazardous Wastes, and Hazardous Substances. DEQ administers the Virginia Solid Waste Management Regulations and the Virginia Hazardous Waste Management Regulations. We recommend that all solid wastes generated at the site be reduced at the source, reused, or recycled. All hazardous wastes should be minimized. Otherwise, all solid waste and hazardous waste must be managed in accordance with all applicable federal, state, and local environmental regulations. The Southwest Regional Office contact is Daniel Manweiler at (276) 676-4837 or email Daniel.Manweiler@deq.virginia.gov concerning location and availability of waste management facilities in the project area.

5. Pesticides and Herbicides. DEQ recommends that the use of herbicides or pesticides for construction or landscape maintenance should be in accordance with the principles of integrated pest management. The least toxic pesticides that are effective in controlling the target species should be used. Please contact the Virginia Department of Agriculture and Consumer Services at (804) 786-3501 for more information.

6. Pollution Prevention. DEQ recommends that construction projects incorporate the principles of pollution prevention including the following recommendations:

- Consider environmental attributes when purchasing materials. For example, the extent of recycled material content and toxicity level should be considered.

- Consider contractors' commitments to the environment when choosing contractors. Also, specifications regarding raw material selection (alternative fuels and energy sources) and construction practices can be included in contract documents and requests for proposals.
- Choose sustainable practices and materials in infrastructure and construction and design. These could include asphalt and concrete containing recycled materials and integrated pest management in landscaping.
- Integrate pollution prevention techniques into maintenance and operation activities to include source reduction (fixing leaks, energy efficient products).

Pollution prevention measures are likely to reduce potential environmental impacts and reduce costs for material purchasing and waste disposal. For more information, contact Sharon Baxter at DEQ's Office of Pollution Prevention at (804) 698-4344 Sharon.Baxter@deq.virginia.gov.

7. Energy Conservation. Structures should be planned and designed to comply with state and federal guidelines and industry standards for energy conservation and efficiency. For example, energy efficiency of any structures can be enhanced by maximizing the use of the following

- thermally-efficient building shell components (roof, wall, floor, and insulation);
- high efficiency heating, ventilation, air conditioning systems; and
- high efficiency lighting systems.

Gerald Wilkes, Department of Mines, Minerals and Energy, at (434) 951-6364 should be contacted for assistance in meeting this challenge.

8. Natural Heritage Resources. The Department of Conservation and Recreation's Division of Natural Heritage (DNH) can search its Biotics Data System (BDS) for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered animal and plant species, unique or exemplary natural communities, and significant geologic communities.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Department of Conservation and Recreation (DCR), DCR has the authority to report for VDACS on state-listed plant and insect species. We recommend that the DNH be contacted at (804) 786-7951, to secure updated information on natural heritage resources before the project is implemented.

9. Wildlife Resources. The Department of Game and Inland Fisheries (DGIF), as the Commonwealth's wildlife and freshwater fish management agency, exercises enforcement and regulatory jurisdiction over wildlife and freshwater fish, including state or federally listed endangered or threatened species, but excluding listed insects (*Virginia Code* Title 29.1). DGIF is a consulting agency under the U.S. Fish and Wildlife

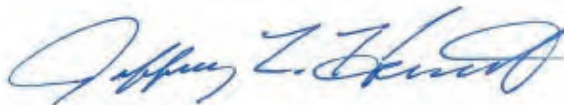
Coordination Act (16 U.S.C. sections 661 *et seq.*), and provides environmental analysis of projects or permit applications coordinated through DEQ and several other state and federal agencies. DGIF determines likely impacts upon fish and wildlife resources and habitat, and recommends appropriate measures to avoid, reduce, or compensate for those impacts. For more information, see the DGIF website at www.dgif.state.va.us or contact Ray Fernald at (804) 367-6913.

10. Historic and Archaeological Resources. *Section 106 of the National Historic and Preservation Act of 1966*, as amended, requires that activities that receive federal funding must consider effects to properties that are listed or eligible for listing on the National Register of Historic Places. The Department of Historic Resources (DHR) conducts reviews of projects to determine their effect on historic structures or cultural resources. If applicable, contact DHR. In the event that archaeological resources are encountered during construction, immediately contact Ms. Ethel Eaton at (804) 367-2323.

11. Waterworks Operation. Installation of new water lines and appurtenances must comply with the State's Waterworks Regulations. The Virginia Department of Health administers both federal and state laws governing waterworks operation. For more information, contact Brian.Blankenship@vdh.virginia.gov.

Thank you for your inquiry. We appreciate your interest in complying with Virginia's environmental legislation. If you have any further questions please do not hesitate to call Michael Hutchison at (276) 676-4865.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey L. Hurst".

Jeffrey L. Hurst
Regional Director

cc. file



Department of Conservation & Recreation

[CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES](#)

PROJECT INFORMATION

Web Project ID: WEB00000011533

Client Project Number: 19-769

TITLE: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

DESCRIPTION: The Tazewell County Public Service (TCPSPA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, installation of a diesel generator on a concrete pad at each site with additional fencing, and replacement of old telemetry to match the current telemetry system utilized by TCPSPA. Water transmitters would be installed in approximately 1,785 existing water service meter settings in order to extend the use of TCPSPA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSPA system. The 4,400 lf of new water line would be installed as close as possible to the current water line and within existing right-of-way. All proposed project sites have been previously disturbed. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

EXISTING SITE CONDITIONS: Developed

QUADRANGLES: Richlands

COUNTIES: Tazewell

Latitude/Longitude (DMS): 37° 2' 27.2084" N / 81° 47' 31.4306" W

Acreage: 4 acres

Comments:

REQUESTOR INFORMATION

Priority: N

Tier Level: Tier II

Tax ID:

Contact Name: Leah Potts

Company Name: EEE Consulting, Inc

Address: 201 Church St Suite C

City: Blacksburg

State: VA

Zip: 24060

Phone: 5408083273

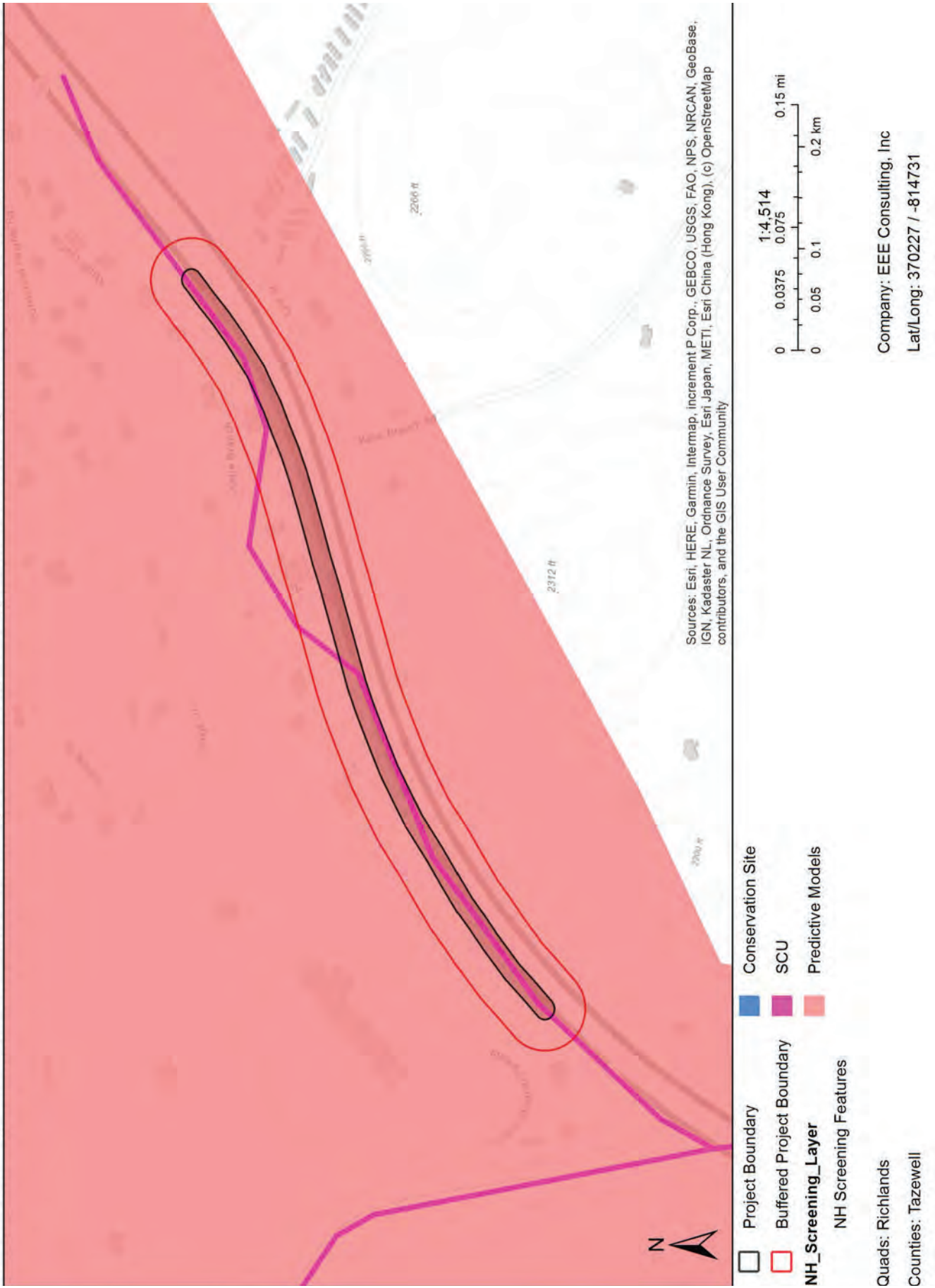
Fax:

Email: lpotts@eee-consulting.com

Conservation Site						
CLINCH RIVER - LITTLE RIVER SCU						
Natural Heritage Screening Features Intersecting Project Boundary						
	Site Type	Brank	Acreage	Listed Species	Presence	
	SCU	B2	1159		FL	

Site Name	Group Name	Common Name	Scientific Name	GRANK	SRANK	Fed Status	Species of Concern	State Status	EO Rank	Last Obs Date	Precision
Natural Heritage Resources Intersecting Project Boundary											

Intersecting Predictive Models											
Karst Bedrock											
Tennessee Heelsplitter											
Little Brown Bat											
Tricolored Bat											
Predictive Model Results											





COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

The project mapped as part of this report has been searched against the Department of Conservation and Recreation's Biotics Data System for occurrences of natural heritage resources from the area indicated for this project. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics files, NATURAL HERITAGE RESOURCES HAVE BEEN DOCUMENTED within the submitted project boundary including a 100 foot buffer and/or PREDICTED HABITAT MODELS FOR NATURAL HERITAGE RESOURCES intersect the project area.

You have submitted this project to DCR for a more detailed review for potential impacts to natural heritage resources. DCR will review the submitted project to identify the specific natural heritage resources within the proposed project area including a 100 foot buffer. Using the expertise of our biologists, DCR will evaluate whether your specific project is likely to impact these resources. DCR's response will indicate whether any negative impacts are likely and, if so, make recommendations to avoid, minimize and/or mitigate these impacts. If the potential negative impacts are to species that are state- or federally-listed as threatened or endangered, DCR will also recommend coordination with the appropriate regulatory agencies: the Virginia Department of Game and Inland Fisheries for state-listed animals, the Virginia Department of Agriculture and Consumer Services for state-listed plants and insects, and the United States Fish and Wildlife Service for federally listed plants and animals. If your project is expected to have positive impacts we will report those to you with recommendations for enhancing these benefits.

There will be a charge for this service for "for profit companies": \$60, plus an additional charge of \$35 for 1-5 occurrences and \$60 for 6 or more occurrences.

Please allow up to 30 calendar days for a response, unless you requested a priority response of 5 business days at an additional surcharge of \$500 or 15 calendar days at an additional surcharge of \$300. An invoice will be provided with your response.

We will review the project based on the information you included in the Project Info submittal form, which is included in this report. Also any additional information including photographs, survey documents, etc. attached during the project submittal process and/or sent via email referencing the project title (from the first page of this report).

Thank you for submitting your project for review to the Virginia Natural Heritage Program through the NH Data Explorer. Should you have any questions or concerns about DCR, the Data Explorer, or this report, please contact the Natural Heritage Project Review Unit at 804-371-2708.

Leah Potts

From: brandon.gravett@dcr.virginia.gov on behalf of nhreview, rr
<nhreview@dcr.virginia.gov>
Sent: Thursday, September 5, 2019 9:35 AM
To: Leah Potts
Cc: brandon.gravett@dcr.virginia.gov; Suzie Richert
Subject: Re: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

Hey Leah,

Thanks for the follow up. The shapefile was received and the project is on track for review (30 days from when we received the shapefile).

have a wonderful day.

On Thu, Sep 5, 2019 at 9:25 AM Leah Potts <lpotts@eee-consulting.com> wrote:

Hi Brandon,

I wanted to follow up and make sure that this shapefile is what you needed. Please let me know if you need anything else for your review.

Thanks,

Leah

Leah M. Potts

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273



EEE CONSULTING, INC.

From: Leah Potts

Sent: Tuesday, August 27, 2019 3:10 PM

To: nhreview, rr <nhreview@dcr.virginia.gov>; brandon.gravett@dcr.virginia.gov

Cc: Suzie Richert <srichert@eee-consulting.com>

Subject: RE: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

Brandon,

Please find the files attached. Thank you!

Leah

Leah M. Potts

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273



EEE CONSULTING, INC.

From: brandon.gravett@dcr.virginia.gov <brandon.gravett@dcr.virginia.gov> **On Behalf Of** nhreview, rr

Sent: Thursday, August 22, 2019 10:23 AM

To: Leah Potts <lpotts@eee-consulting.com>

Subject: Re: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

Thanks for the quick response, base of the photos it will be worthwhile to add these locations to the project footprint via a shapefile so we can inform your

team of possible resources located at the sites. Thanks for your understanding.

talk soon,

Brandon

On Thu, Aug 22, 2019 at 9:44 AM Leah Potts <lpotts@eee-consulting.com> wrote:

Hi Brandon,

Thanks for reaching out. All the work at the eight pump stations is occurring on previously disturbed ground at the TCPSA-owned sites, with the exception of one pump station which is next to a previously disturbed residential lot onto which work will extend.

The construction work at each site will involve interior replacement of existing equipment, installation of a diesel generator and a concrete pad at each site with fencing, and replacement of old telemetry to match the current telemetry system utilized by TCPSA.

Here are photos of a few of the pump stations being rehabilitated. All work will occur on previously disturbed areas such as the gravel areas shown. TCPSA is planning to install a concrete pad on which to place a generator. Fencing will be added where there is none, or existing fencing expanded to include the generator area.





Since all of the work is occurring on previously disturbed ground, do you still need a shapefile? Please let me know and we could create one.

Thanks,

Leah M. Potts

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273



EEE CONSULTING, INC.

From: brandon.gravett@dcr.virginia.gov <brandon.gravett@dcr.virginia.gov> **On Behalf Of** nhreview, rr

Sent: Thursday, August 22, 2019 9:22 AM

To: Leah Potts <lpotts@eee-consulting.com>

Subject: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

Good Morning Leah,

Thanks for submitting this project for review through the Natural Heritage Data Explorer, before we can begin the review process, would you clarify the construction methods for the rehabilitation of the eight water distribution pump stations?

Specifically, will there be any ground disturbance associated with the work done at these sites? Are the concrete pads already built?

If so, could you please provide a shapefile or Lat/Long coordinates corresponding to the locations of these pump stations so that we can update the project footprint.

Thanks so much and have a great day,

Brandon Gravett

Project Review Assistant

Virginia Natural Heritage Program

Virginia Department of Conservation and Recreation

600 East Main Street, Richmond VA

(804) 371-2672 (o)

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
*Deputy Director of
Administration and Finance*

Russell W. Baxter
*Deputy Director of
Dam Safety & Floodplain
Management and Soil & Water
Conservation*

Thomas L. Smith
Deputy Director of Operations

September 24, 2019

Leah Potts
EEE Consulting
201 Church Street
Blacksburg, VA 24050

Re: 19-769, Tazewell County Public Service Authority, Capital Improvements Project Phase II

Dear Ms. Potts:

The Department of Conservation and Recreation's Division of Natural Heritage (DCR) has searched its Biotics Data System for occurrences of natural heritage resources from the area outlined on the submitted map. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

Upon review of the proposed project, DCR offers the following comments by 1:24,000 quadrangles:

Saltville Quad

Existing College EST and College ES Pump Stations

This project is situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR karst staff screened this project against the Virginia Speleological Survey (VSS) database and the Virginia Department of Mines, Minerals and Energy (DMME) sinkhole coverage for documented sensitive karst features and caves. To minimize impacts to karst resources, DCR recommends the stabilization of the soil around the site be prioritized during all the phases of the project and all standard erosion control measures that are appropriate for the site be used.

If karst features such as sinkholes, caves, disappearing streams, and large springs are encountered during the project, please coordinate with Wil Orndorff (540-230-5960, Wil.Orndorff@dcr.virginia.gov) to document and minimize adverse impacts. Discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to surface collapse, flooding, erosion and sedimentation, groundwater contamination, and degradation of subterranean habitat for natural heritage resources. If the project involves filling or "improvement" of sinkholes or cave openings, DCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of VDOT Form EQ-120 will suffice.

Tazewell North Quad

Cavitt's Creek Pump Station

According to the information currently in our files, the Bluestone-Clinch River-Indian Creek-Big Branch Stream Conservation Unit (SCU) is located within 100 feet of the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Bluestone-Clinch River-Indian Creek-Big Branch SCU has been given a biodiversity ranking of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

<i>Alasmodonta viridis</i>	Slippershell mussel	G4G5/S1/NL/LE
<i>Chrosomus sp. 1</i>	Clinch dace	G1/S1/SOC/NL
<i>Cryptobranchus alleganiensis</i>	Hellbender	G3G4/S2/NL/NL
<i>Cumberlandia monodonta</i>	Spectaclecase	G3/S1/LE/LE
<i>Epioblasma capseformis</i>	Oyster mussel	G1/S1/LE/LE
<i>Epioblasma florentina aureola</i>	Tan riffleshell	G1T1/S1/LE/LE
<i>Fusconia cor</i>	Shiny pigtoe	G1/S1/LE/LE
<i>Ichthyomyzon greeleyi</i>	Mountain brook lamprey	G4/S2/NL/NL
<i>Lasmigona holstonia</i>	Tennessee heelsplitter	G3/S1/NL/LE
<i>Notropis spectrunculus</i>	Mirror shiner	G4/S2/NL/NL
<i>Pegias fabula</i>	Littlewing pearlymussel	G1/S1/LE/LE
<i>Pleurobema oviforme</i>	Tennessee clubshell	G2G3/S2S3/SOC/NL
<i>Pleurobema barnesiana</i>	Tennessee pigtoe	G2G3/S2/SOC/NL
<i>Pleurobema dolabellodes</i>	Slabside pearlymussel	G2/S2/LE/LT
<i>Ptychobranchus subtentum</i>	Fluted kidneyshell	G2/S2/LE/NL
<i>Quadrula cylindrical strigillata</i>	Rough rabbits foot	G3G4T2/S2/LE/LE
<i>Villosa perpurpurea</i>	Purple bean	G1/S1/LE/LE

In addition, Cavitts Creek has also been designated by the VDGIF as a "Threatened and Endangered Species Water" for the Tennessee Heelsplitter.

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of several of the species associated with this site, DCR also recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and Virginia's regulatory authority for the management and protection of these species, the VDGIF, to ensure compliance with protected species legislation.

Daily's Chapel Pump Station

This project is situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR karst staff screened this project against the Virginia Speleological Survey (VSS) database and the Virginia Department of Mines, Minerals and Energy (DMME) sinkhole coverage for documented sensitive karst features and caves. To minimize impacts to karst resources, DCR recommends the stabilization of the soil around the site be prioritized during all the phases of the project and all standard erosion control measures that are appropriate for the site be used.

If karst features such as sinkholes, caves, disappearing streams, and large springs are encountered during the project, please coordinate with Wil Orndorff (540-230-5960, Wil.Orndorff@dcr.virginia.gov) to document and minimize adverse impacts. Discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to surface collapse, flooding, erosion and sedimentation, groundwater contamination,

and degradation of subterranean habitat for natural heritage resources. If the project involves filling or “improvement” of sinkholes or cave openings, DCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of VDOT Form EQ-120 will suffice.

Richlands Quad

Coaldan No.1 Pump Station

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Waterline Replacement

According to the information currently in our files, the Clinch River – Little River Stream Conservation Unit (SCU) is located within the project area. SCUs identify stream reaches that contain aquatic natural heritage resources, including 2 miles upstream and 1 mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Clinch River – Little River SCU has been given a biodiversity ranking of B2, which represents a site of very high significance. The natural heritage resources associated with this site are:

<i>Alasmodonta marginata</i>	Elktoe	G4/S1S2/NL/NL
<i>Apalone spinifera</i>	Spiny softshell	G5/S2/NL/NL
<i>Aplodinotus grunniens</i>	Freshwater drum	G5/S2/NL/NL
<i>Cryptobranchus alleganiensis</i>	Hellbender	G3G4/S2/NL/NL
<i>Cumberlandia monodonta</i>	Spectacle case	G3/S1/LE/LE
<i>Cyprinella whipplei</i>	Steelcolor shiner	G5/S1/NL/LE
<i>Cyprogenia stegaria</i>	Fan shell	G1Q/S1/LE/LE
<i>Elliptio crassidens</i>	Elephant ear	G5/S1/NL/LE
<i>Epioblasma brevidens</i>	Cumberland combshell	G1/S1/LE/LE
<i>Epioblasma capsaeformis</i>	Oyster mussel	G1/S1/LE/LE
<i>Epioblasma triquetra</i>	Snuffbox	G3/S1/LE/LE
<i>Etheostoma camurum</i>	Bluebreast darter	G4/S2/NL/NL
<i>Etheostoma cinereum</i>	Ashy darter	G2G3/S1/SOC/NL
<i>Etheostoma denoncourti</i>	Golden darter	G2/S1/SOC/LT
<i>Etheostoma meadiae</i>	Bluespar darter	G4/S2/NL/NL
<i>Etheostoma percnurum</i>	Duskytail darter	G2/S1/LE/LE
<i>Etheostoma swannanoa</i>	Swannanoa darter	G4/S2/NL/NL
<i>Etheostoma vulneratum</i>	Wounded darter	G3/S2S3/NL/NL
<i>Fusconaia cor</i>	Shiny pigtoe	G1/S1/LE/LE
<i>Fusconaia cuneolus</i>	Fine-rayed pigtoe	G1/S1/LE/LE
<i>Gomphus consanguis</i>	Cherokee clubtail	G3/S2/NL/NL
<i>Gomphus ventricosus</i>	Skillet clubtail	G3/S1/NL/NL
<i>Gomphus viridifrons</i>	Green-faced clubtail	G3G4/S2/NL/NL
<i>Hemistena lata</i>	Cracking pearlymussel	G1/S1/LE/LE
<i>Ichthyomyzon bdellium</i>	Ohio lamprey	G3G4/S2/NL/NL
<i>Io fluviatilis</i>	Spiny riversnail	G2/S2/SOC/LT
<i>Labidesthes sicculus</i>	Brook silverside	G5/S2/NL/NL
<i>Lemiox rimosus</i>	Birdwing pearlymussel	G1/S1/LE/LE

<i>Leptodea fragilis</i>	Fragile papershell	G5/S1/NL/LT
<i>Ligumia recta</i>	Black sandshell	G4G5/S2/NL/LT
<i>Lythrurus lirus</i>	Mountain shiner	G4/S2S3/NL/NL
<i>Moxostoma carinatum</i>	River redhorse	G4/S2S3/NL/NL
<i>Necturus maculosus</i>	Mud puppy	G5/S2/NL/NL
<i>Neurocordulia yamaskanensis</i>	Stygian shadowdragon	G5/S2/NL/NL
<i>Notropis ariommus</i>	Popeye shiner	G3/S2S3/NL/NL
<i>Noturus eleutherus</i>	Mountain madtom	G4/S2S3/NL/NL
<i>Noturus flavipinnis</i>	Yellowfin madtom	G1/S1/LT/LT
<i>Noturus flavus</i>	Stonecat	G5/S2/NL/NL
<i>Pegias fabula</i>	Little-winged pearlymussel	G1/S1/LE/LE
<i>Percina aurantiaca</i>	Tangerine darter	G4/S2S3/NL/NL
<i>Percina burtoni</i>	Blotchside logperch	G2G3/S1/SOC/NL
<i>Percina copelandi</i>	Channel darter	G4/S2/NL/NL
<i>Percina evides</i>	Gilt darter	G4/S2/NL/NL
<i>Percina sciera</i>	Dusky darter	G5/S1S2/NL/NL
<i>Percina williamsi</i>	Sickle darter	G2/S1S2/SOC/LT
<i>Plethobasus cyphus</i>	Sheepnose	G3/S1/LE/LE
<i>Pleurobema oviforme</i>	Tennessee clubshell	G2G3/S2S3/SOC/NL
<i>Pleurobema rubrum</i>	Pyramid pigtoe	G2G3/SH/SOC/LE
<i>Pleuronaia barnesiana</i>	Tennessee pigtoe	G2G3/S2/SOC/NL
<i>Pleuronaia dolabelloides</i>	Slabside pearlymussel	G2/S2/LE/LT
<i>Ptychobranchius subtentum</i>	Fluted kidneyshell	G2/S2/LE/NL
<i>Quadrula cylindrica strigillata</i>	Rough Rabbits Foot	G3G4T2/S2/LE/LE
<i>Quadrula pustulosa</i>	Pimple back	G5/S2/NL/LT
<i>Quadrula sparsa</i>	Appalachian monkeyface	G1/S1/LE/LE
<i>Sander canadensis</i>	Sauger	G5/S2S3/NL/NL
<i>Spiraea virginiana</i>	Virginia spiraea	G2/S1/LT/LE
<i>Sternotherus minor</i>	Loggerhead Musk turtle	G5/S2/NL/NL
<i>Truncilla truncata</i>	Deertoe	G5/S1/NL/LE
<i>Villosa perpurpurea</i>	Purple Bean	G1/S1/LE/LE
	Freshwater Mussel Concentration Area	G3/SNR/NL/NL

To minimize adverse impacts to the aquatic ecosystem as a result of the proposed activities, DCR recommends the implementation of and strict adherence to applicable state and local erosion and sediment control/storm water management laws and regulations. Due to the legal status of several of the species associated with this site, DCR also recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and VDGIF, Virginia's regulatory authority for the management and protection of these species to ensure compliance with protected species legislation. DCR also recommends the implementation of the best management practices for hydrostatic testing including not removing water from "Threatened and Endangered Waters" and releasing chlorinated water back into streams and creeks supporting rare aquatic resources.

This project is situated on karst-forming carbonate rock and can be characterized by sinkholes, caves, disappearing streams, and large springs. The Virginia DCR karst staff screened this project against the Virginia Speleological Survey (VSS) database and the Virginia Department of Mines, Minerals and Energy (DMME) sinkhole coverage for documented sensitive karst features and caves. To minimize impacts to karst resources, DCR recommends the stabilization of the soil around the site be prioritized during all the phases of the project and all standard erosion control measures that are appropriate for the site be used.

If karst features such as sinkholes, caves, disappearing streams, and large springs are encountered during the project, please coordinate with Wil Orndorff (540-230-5960, Wil.Orndorff@dcr.virginia.gov) to document and minimize adverse impacts. Discharge of runoff to sinkholes or sinking streams, filling of sinkholes, and alteration of cave entrances can lead to surface collapse, flooding, erosion and sedimentation, groundwater contamination, and degradation of subterranean habitat for natural heritage resources. If the project involves filling or

“improvement” of sinkholes or cave openings, DCR would like detailed location information and copies of the design specifications. In cases where sinkhole improvement is for storm water discharge, copies of VDOT Form EQ-120 will suffice

Jewell Ridge Quad

Coaldan No.2 Pump Station

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Amonate Quad

Panther Branch No.1 Pump Station

Panther Branch within the project area has been designated by the VDGIF as a “Threatened and Endangered Species Water” for the Tan Riffleshell and the Purple bean. Due to the legal status of these freshwater mussels, DCR recommends coordination with the USFWS and Virginia's regulatory authority for the management and protection of these species, the VDGIF to ensure compliance with the Virginia Endangered Species Act (VA ST §§ 29.1-563 – 570).

Panther Branch No. 2 Pump Station

According to the information currently in Biotics, natural heritage resources have not been documented within the submitted project boundary including a 100-foot buffer. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. In addition, the project boundary does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Panther Branch No. 3 Pump Station

If tree removal is proposed for the project, the project will fragment an Ecological Core(s) (C3) as identified in the Virginia Natural Landscape Assessment (<https://www.dcr.virginia.gov/natural-heritage/vaconvisvnl>), one of a suite of tools in Virginia ConservationVision that identify and prioritize lands for conservation and protection.

Ecological Cores are areas of unfragmented natural cover with at least 100 acres of interior that provide habitat for a wide range of species, from interior-dependent forest species to habitat generalists, as well as species that utilize marsh, dune, and beach habitats. Cores also provide benefits in terms of open space, recreation, water quality (including drinking water protection and erosion prevention), and air quality (including carbon sequestration and oxygen production), along with the many associated economic benefits of these functions. The cores are ranked from C1 to C5 (C5 being the least ecologically relevant) using many prioritization criteria, such as the proportions of sensitive habitats of natural heritage resources they contain.

Fragmentation occurs when a large, contiguous block of natural cover is dissected by development, and other forms of permanent conversion, into one or more smaller patches. Habitat fragmentation results in biogeographic changes that disrupt species interactions and ecosystem processes, reducing biodiversity and habitat quality due to limited recolonization, increased predation and egg parasitism, and increased invasion by weedy species.

Therefore minimizing fragmentation is a key mitigation measure that will reduce deleterious effects and preserve the natural patterns and connectivity of habitats that are key components of biodiversity. DCR recommends efforts to minimize edge in remaining fragments, retain natural corridors that allow movement between fragments and designing the intervening landscape to minimize its hostility to native wildlife (natural cover versus lawns).

Mapped cores in the project area can be viewed via the Virginia Natural Heritage Data Explorer, available here: <http://vanhde.org/content/map>.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the DCR, DCR represents VDACS in comments regarding potential impacts on state-listed threatened and endangered plant and insect species. The current activity will not affect any documented state-listed plants or insects.

There are no State Natural Area Preserves under DCR's jurisdiction in the project vicinity.

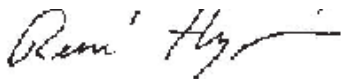
New and updated information is continually added to Biotics. Please re-submit a completed order form and project map for an update on this natural heritage information if the scope of the project changes and/or six months has passed before it is utilized.

A fee of \$685.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

The VDGIF maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov. There is potential for the little brown bat (*Myotis lucifugus*), the tri-colored bat (*Perimyotis subflavus*) and the Northern long-eared bat (*Myotis septentrionalis*) to occur within the following quads: Saltville, Tazewell North and Richlands. Therefore, DCR recommends coordination with the U.S. Fish and Wildlife Service (USFWS) and VDGIF, Virginia's regulatory authority for the management and protection of these species to ensure compliance with protected species legislation.

Should you have any questions or concerns, feel free to contact me at 804-371-2708. Thank you for the opportunity to comment on this project.

Sincerely,



S. René Hypes
Natural Heritage Project Review Coordinator

Cc: Wil Orndorff, DCR-Karst
Ernie Aschenbach, VDGIF
Troy Andersen, USFWS



EEE Consulting, Inc.

Environmental, Engineering and Educational Solutions

September 12, 2019

Mr. Ray Fernald, Manager
Environmental Services Section
Virginia Department of Game and Inland Fisheries
Via email to: ESSProjects@dgif.virginia.gov

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan, Tazewell County, Virginia
Ref: EEE Consulting Project No. 19-769

Dear Mr. Fernald:

The Tazewell County Public Service Authority (TCPSA) is conducting an environmental review pursuant to the National Environmental Policy Act (NEPA). The TCPSA is preparing this environmental review in accordance with the *Virginia Department of Health – Drinking Water Funding Environmental Review Procedural Guidelines, Revised October 11, 2016* to determine the potential environmental impacts associated with proposed public water service improvements throughout Tazewell County, Virginia. The project will be funded at least partially by the Virginia Department of Health (VDH) Drinking Water Funding Program. The project will be designed to comply with the latest edition of the VDH Waterworks Regulations and the American Water Works Association.

Project Description

The project includes improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas
- replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figures 2 and 3**)
- installation of water transmitters in approximately 1,785 existing water service meter settings
- installation of leak detection equipment

Rehabilitation of Eight Existing Pump Stations

The eight pump stations to be rehabilitated are:

- Panther Branch Pump Station No. 1
- Panther Branch Pump Station No. 2
- Panther Branch Pump Station No. 3
- Coaldan Pump Station No. 1
- Coaldan Pump Station No. 2
- Dailey's Chapel Pump Station
- Cavitt's Creed Pump Station
- College Estates Pump Station

One of the pump stations to be rehabilitated – the Dailey's Chapel pump station – is shown in Photograph 1 below. The following four stations look similar to the Dailey's Chapel pump station: Panther Branch Pump Station No. 1, Coaldan Pump Station No. 1, Cavitt's Creek Pump Station, and College Estates Pump Station.



Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coaldan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements will include existing pumps, motors, HVAC, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad will be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry will be replaced to match the current telemetry system used by TCPSA.

Replacement of Existing Waterline

Waterline replacement will occur in existing disturbed areas in Virginia Department of Transportation and/or TCPSA right-of-way in the location depicted in **Figures 5, 6, and 7**. Approximately 4,400 linear feet of 8-inch ductile iron water line will be replaced with new 10-inch PVC water line. This work will continue east from the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

Installation of Water Service Meter Transmitters and Leak Detection Equipment

Transmitters will be installed in approximately 1,785 existing water service meter settings to extend the use of the TCPSA's existing automated meter reading system. Leak detection equipment will be acquired and installed to identify potential problems throughout the TCPSA system.

Biological and Water Resources

Katie Branch, a tributary to Little River, is near the proposed water line replacement project area, as identified by the National Hydrographic Dataset and shown on **Figure 5**. However, the National Hydrographic Dataset does not accurately depict the location of the Katie Branch channel. **Figures 6 and 7** show the actual location of Katie Branch where the channel is within close proximity (approximately 25 to 50 feet) of the proposed water line replacement. According to the National Wetlands Inventory 2016 Dataset, no wetlands are located near the proposed water line replacement (**Figure 5**). According to FEMA floodplain data, no portions of the waterline replacement are lie in a floodplain (**Figure 8**).

Database search results from the Department of Game and Inland Fisheries Virginia Fish and Wildlife Information System for a 2-mile radius of the water line replacement area inlcud confirmed observations of the following federal- or state-listed threatened or endangered species:

Species with Confirmed Observations in a 2-mile Radius of the Water Line Replacement Area	Status
Oyster mussel (<i>Epioblasma capsaeformis</i>)	FE
Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	FE
Rough rabbitsfoot (<i>Theliderma cylindrica</i>)	FE
Littlewing pearlymussel (<i>Pegias fabula</i>)	FE
Fluted kidneyshell (<i>Ptychobranhus subtentus</i>)	FE
Northern long-eared bat (<i>Myotis septentrionalis</i>)	FT
Tri-colored bat (<i>Perimyotis subflavus</i>)	SE
Slippershell mussel (<i>Alasmidonta viridis</i>)	SE
Sickle darter (<i>Percina williamsi</i>)	ST
Spiny rivresnail (<i>Io fluviialis</i>)	ST

F – federal, S – state, E – endangered, T – threatened

There are no trees within the footprint of the project sites and no tree removal would occur as part of this project; therefore, this is no bat habitat in the proposed water line replacement or pump rehabilitation areas. No disturbance will take place in Little River, the location of the observations for all aquatic species noted in the VDGIF a database. There will be no in-water work or direct impacts to Katie Branch or Little River. Thus, there will be no direct impacts to aquatic species. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.

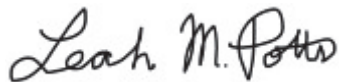
Agency Coordination

TCPSA is contacting the U.S. Fish and Wildlife Service (USFWS) as part of this project and will submit a determination of effects to Federally-listed species to the USFWS. The TCPSA will review the sites for Waters of the US jurisdictional features under US Army Corps of Engineers (USACE) authority and obtain necessary permits from the USACE as needed. However, because there is no in-water work and all work would remain on uplands, TCPSA does not anticipate the need for USACE or Virginia Marine Resources Commission permits for this project.

We would appreciate a response within 30 days. If you require any further information or wish to discuss the project, please contact me at (540) 953-0170 or lpotts@eee-consulting.com.

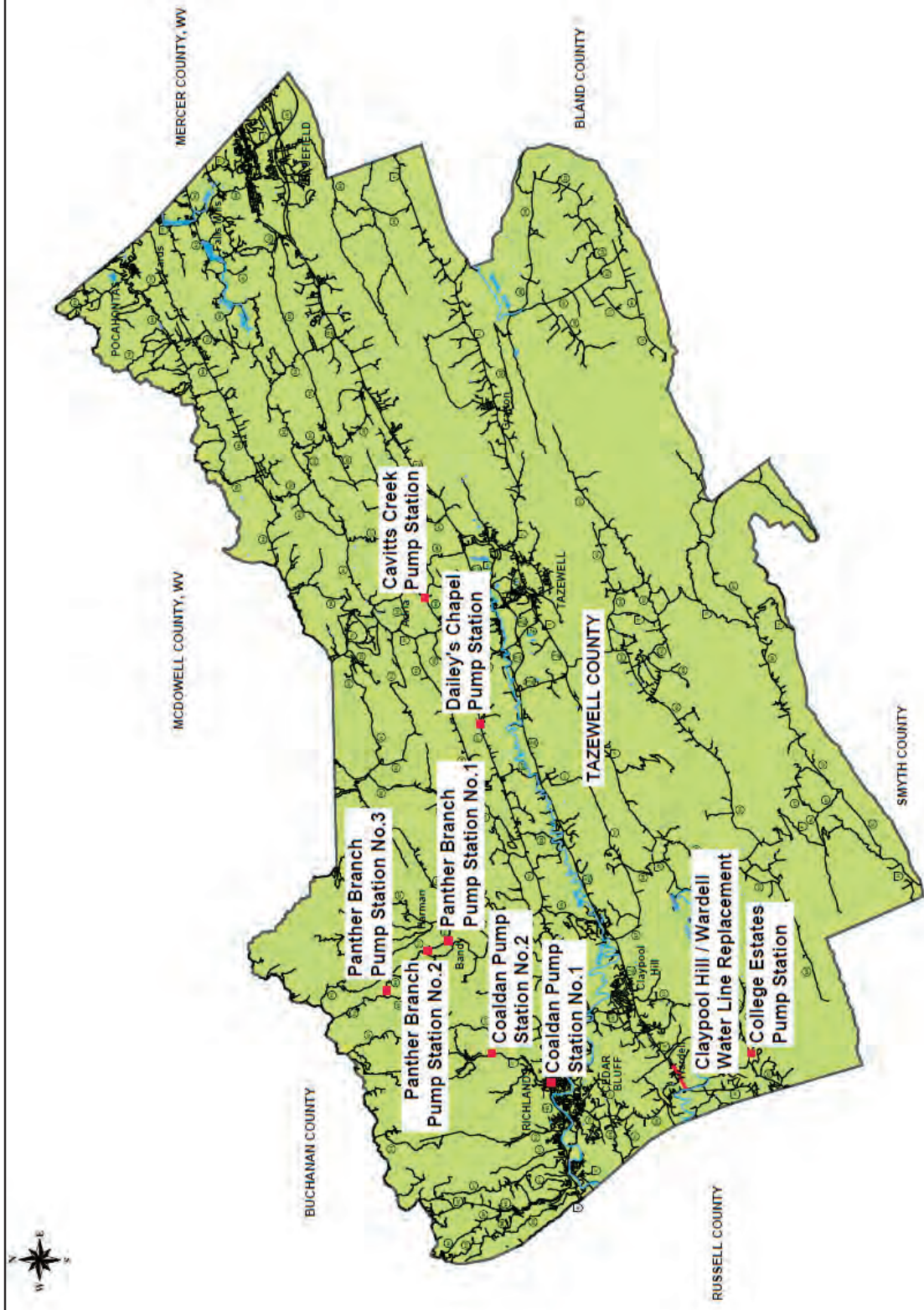
Sincerely,

EEE Consulting, Inc.



Leah Potts, EIT

Attachments: Figures
VDGIF VaFWIS Search Report
USFWS IPaC Package
DCR NHDE Search Report



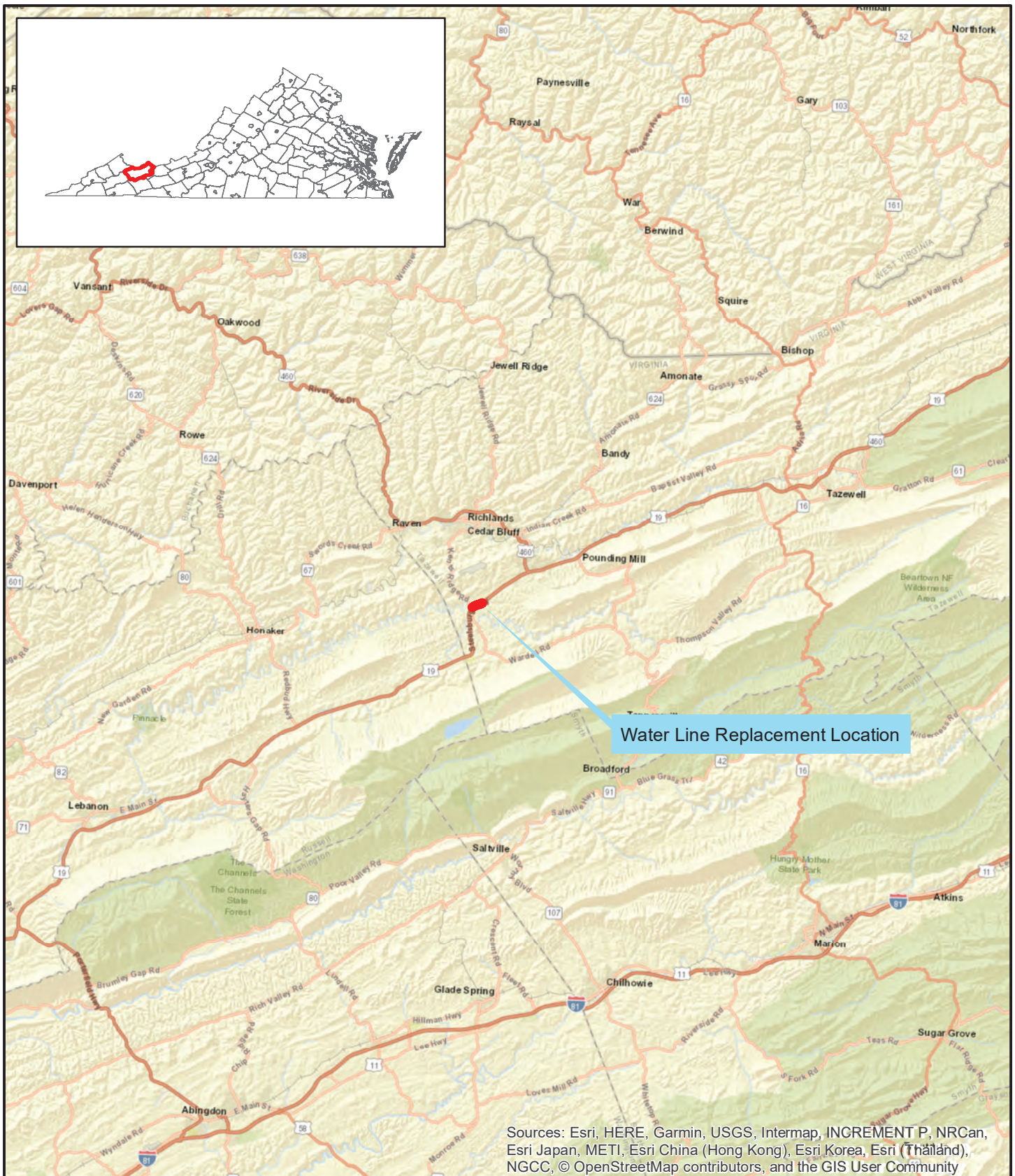
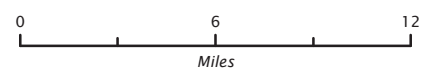
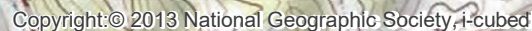


FIGURE 2
WATER LINE REPLACEMENT LOCATION
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



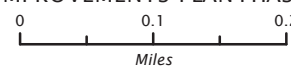
Tazewell, VA

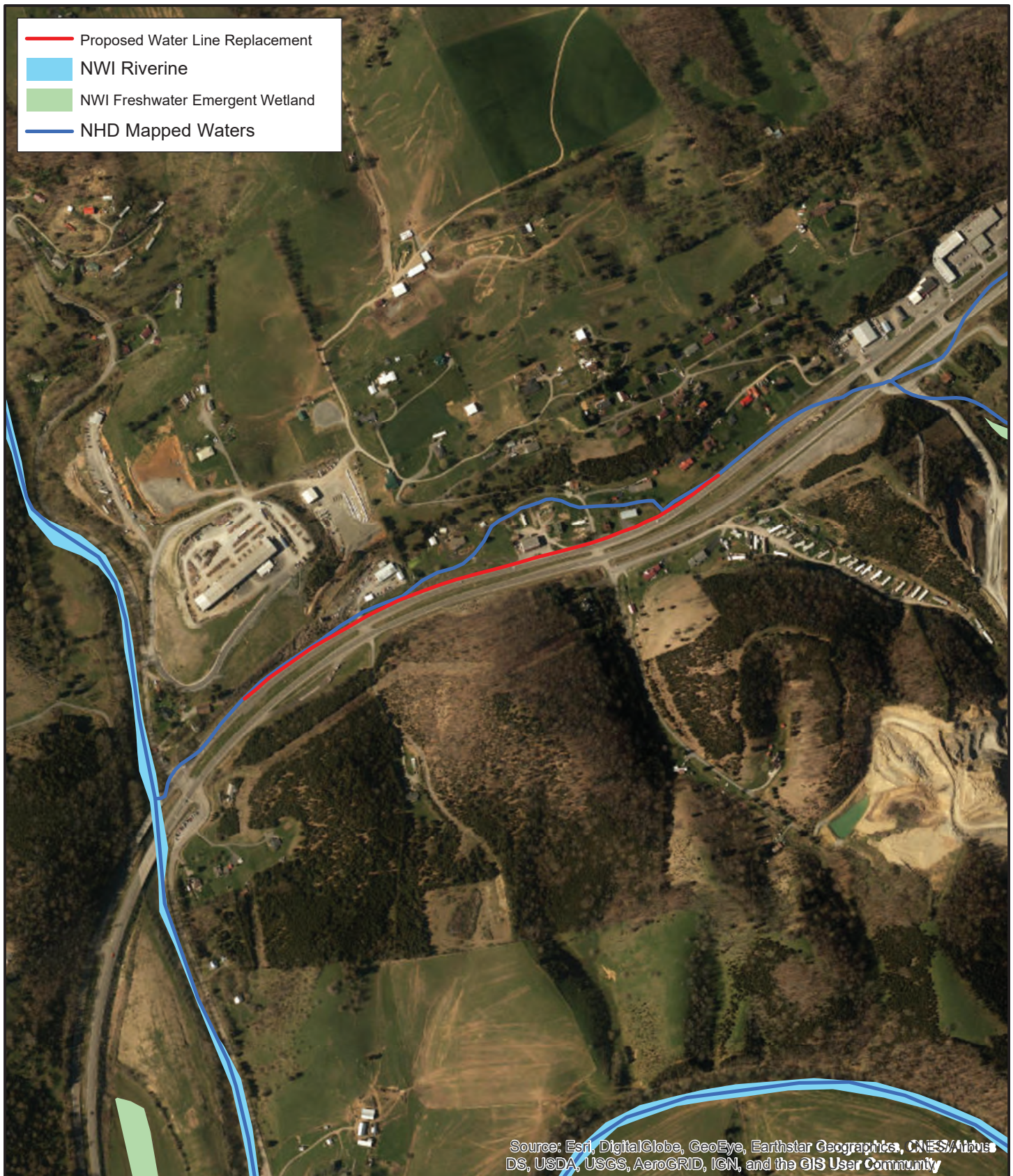


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FIGURE 4
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

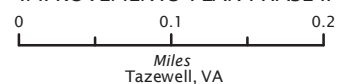


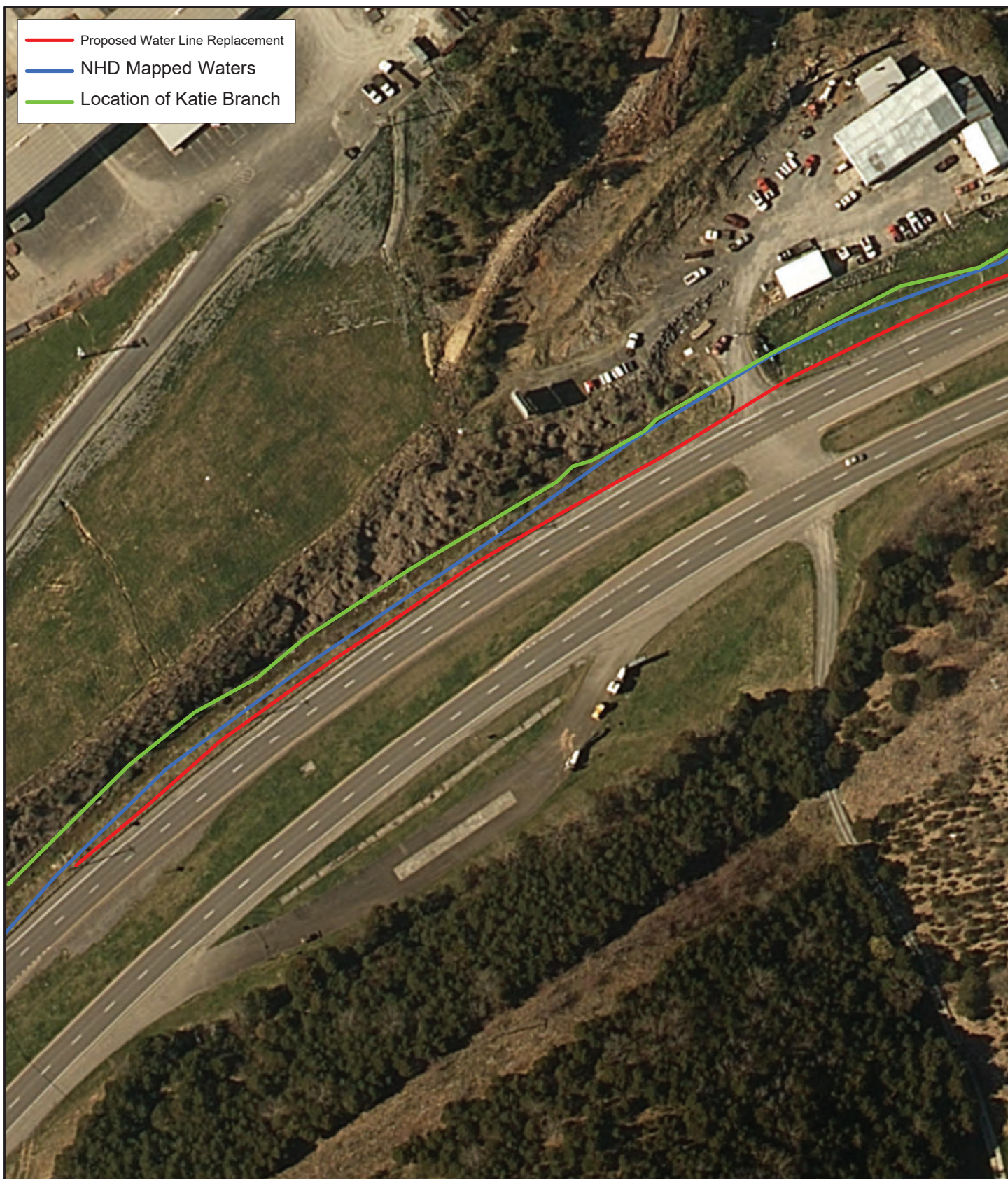


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



FIGURE 5
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch

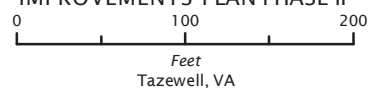


EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions



Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 6
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch



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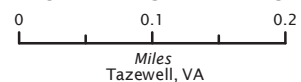
Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 7
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 50 100
Feet
Tazewell, VA



FIGURE 8
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





United States Department of the Interior

FISH AND WILDLIFE SERVICE



Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

Date: 8/23/19

Self-Certification Letter

Project Name: TCPSA EA for Drinking Water Capital Improvements Plan Phase 2

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in:

- “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR § 17.40(o) [as determined through the Information, Planning, and Consultation System (IPaC) northern long-eared bat assisted determination key]; and/or
- “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat.

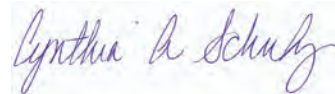
We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “may affect, not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia A. Schulz". The signature is written in a cursive style.

Cindy Schulz
Field Supervisor
Virginia Ecological Services

Enclosures - project review package



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

Phone: (804) 693-6694 Fax: (804) 693-9032

<http://www.fws.gov/northeast/virginiafield/>



In Reply Refer To:

August 22, 2019

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Tazewell County Public Service (TCPSA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, replacement of old telemetry to match the current telemetry system used by TCPSA, installation of a new diesel generator to serve as backup power, and a new approximately 10 foot by 20 foot concrete pad. Because the generators at some stations would be placed in the area outside of the existing fence, TCPSA would remove part of the existing perimeter fencing and install new fencing to surround the concrete pad and new generator. TCPSA would build fence at stations where there currently is none to provide security for the new generator. TCPSA would install water transmitters in approximately 1,785 existing water service meter settings to extend the use of TCPSA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSA system. The 4,400 lf of new water line would be installed immediately adjacent to the current water line and within existing TCPSA right-of-way. All proposed project actions, including all work at the pump stations (including the areas outside of existing fencing), and the new water line would occur on previously disturbed land. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.040698412976724N81.79277725728076W>



Counties: Tazewell, VA

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
Virginia Big-eared Bat <i>Corynorhinus (=Plecotus) townsendii virginianus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8369	Endangered

Clams

NAME	STATUS
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranthus subtentum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5629	Endangered
Sheepnose Mussel <i>Plethobasus cyphus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6903	Endangered
Shiny Pigtoe <i>Fusconaia cor</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2573	Endangered
Slabside Pearlymussel <i>Pleuroaia dolabelloides</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1518	Endangered
Spectaclecase (mussel) <i>Cumberlandia monodonta</i> No critical habitat has been designated for this species.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/7867	
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1247	

Critical habitats

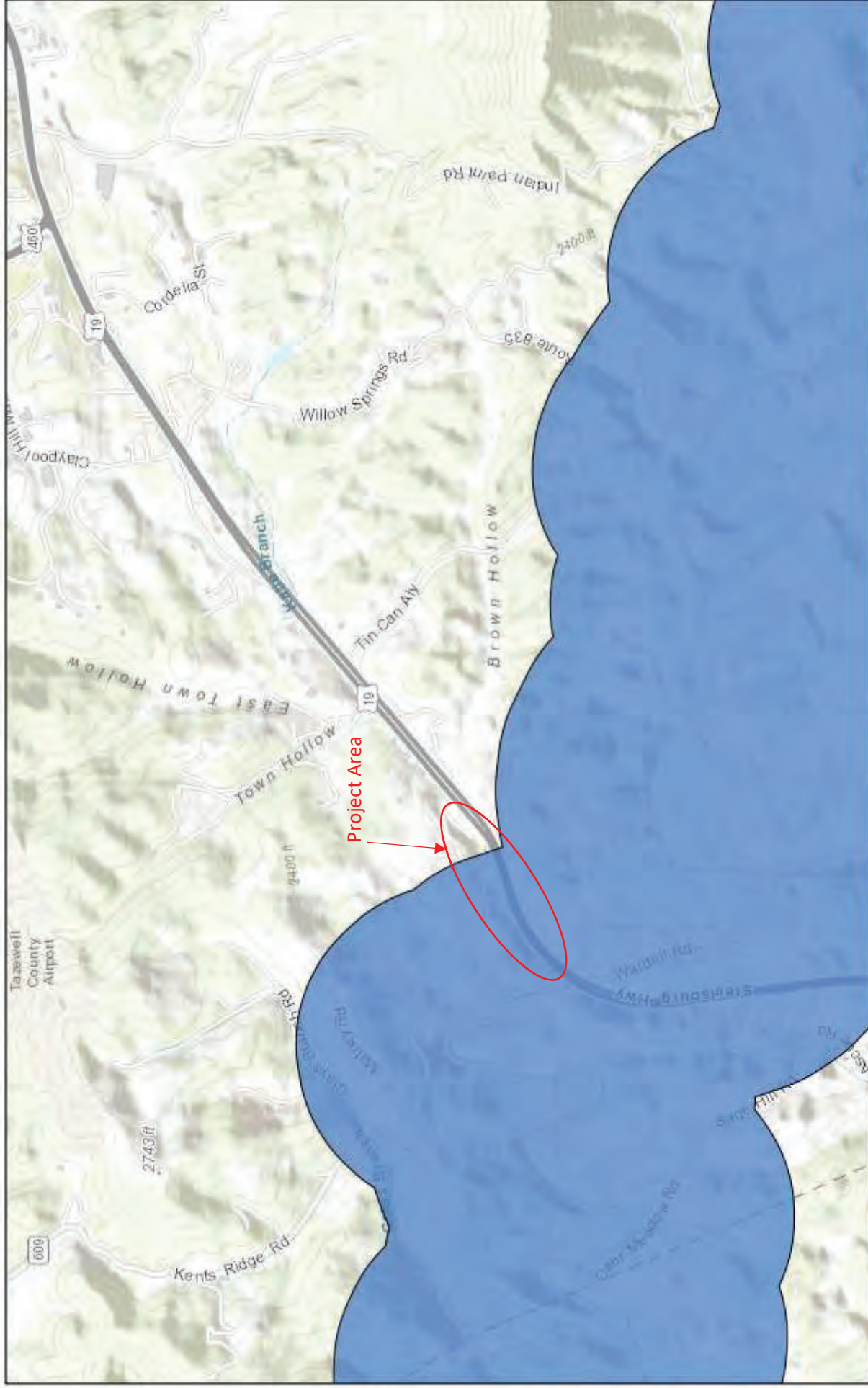
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

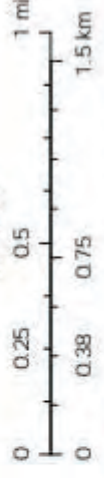
TCPSA Waterline Replacement



August 23, 2019

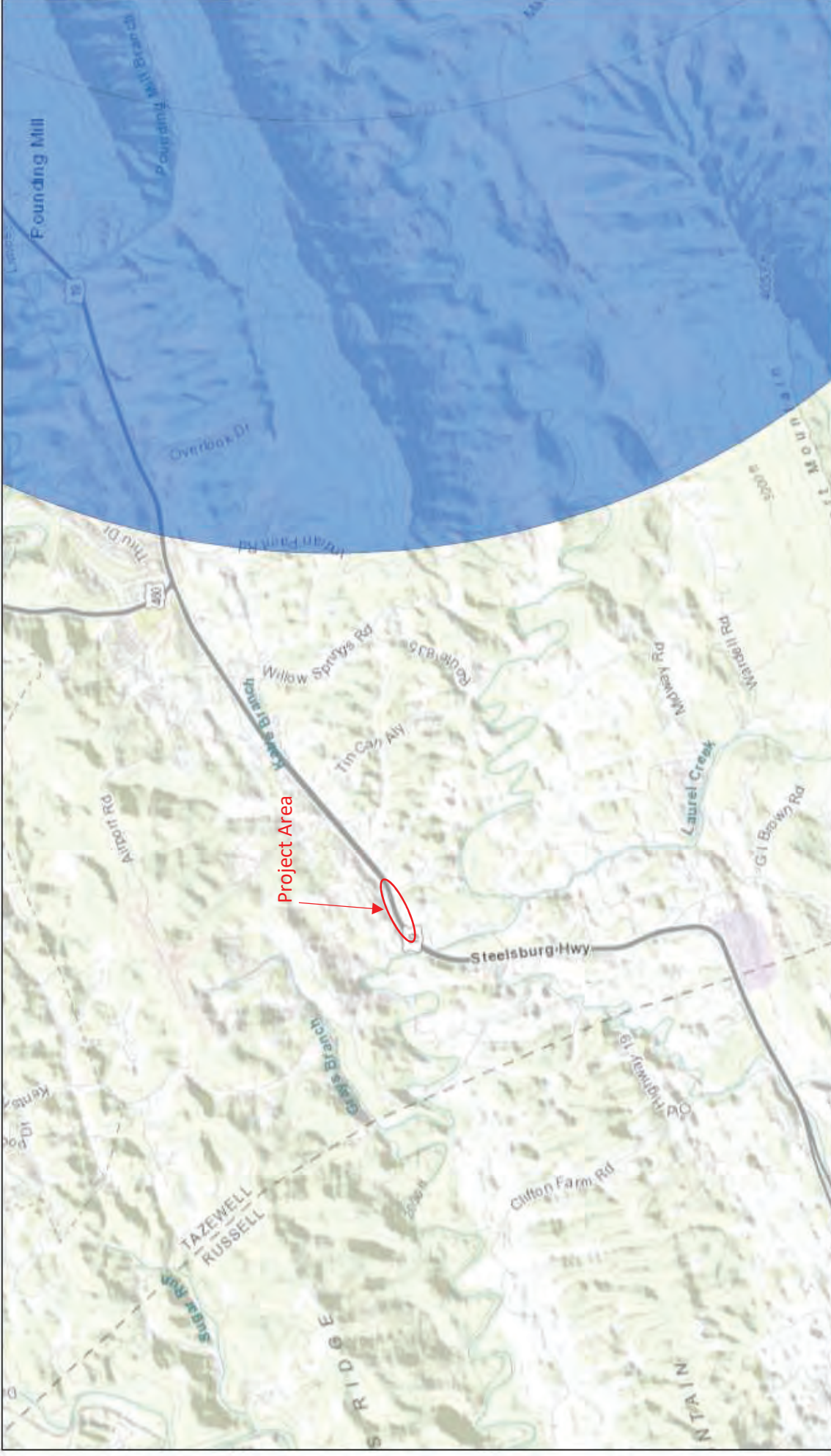
Virginia Critical Habitat (published)

1:36,112



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

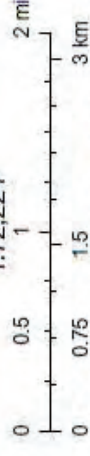
NLEB Locations and Roost Trees



8/23/2019, 1:45:38 PM

NLEB Hibernaculum 5.5 Mile Buffer

1:72,224



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA | VA Dept. Game & Inland Fisheries

Species Conclusions Table

Project Name: 19-769 Tazewell County Public Service Authority (TCP SA) Environmental Assessment for Drinking Water Capital Improvements Plan Phase 2 – Water Line Replacement, Tazewell, VA

Date: 09-10-2019

Note: The work associated with rehabilitating the eight pump stations would occur entirely on previously disturbed land and there would be no vegetation removal (including no tree removal). The pump station sites are developed with gravel surface. There is no natural vegetation or habitat within the pump station sites. Thus, an official species list was not requested for these sites. The determination of effects is based solely on the waterline portion of the proposed project.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Indiana Bat (<i>Myotis sodalis</i>)	No suitable habitat present.	No effect.	<p>Neither DCR nor VDGIF returned species observation records within a 2-mile radius of the action areas.</p> <p>No tree clearing is proposed within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action areas.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.</p> <p>The action area is located beyond the 0.25-mi radius of a known NLEB location according to the VDGIF NLEB Winter Habitat and Roost Trees Map.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action</p>
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	No suitable habitat present.	No effect.	

			area. According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.
Virginia Big-eared Bat (<i>Corynorhinus townsendii virginianus</i>)	No suitable habitat present.	No effect.	<p>According to VDGIF, this species is known to occur in three caves in Tazewell County during the summer, and five caves (Highland, Bland and Tazewell counties) in the winter. It is one of two Virginia bat species which roost in caves in the summer. They are found exclusively in limestone caves.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified</p>
Cumberland bean (<i>Villosa trahalis</i>)	No suitable habitat present.	No effect.	There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.

			<p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Fluted kidneyshell (<i>Ptychobranthus subtentum</i>)	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF</p>

			<p>database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Littlewing pearlymussel (<i>Pegias fabula</i>)</p>	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Oyster mussel (<i>Epioblasma capsaeformis</i>)</p>	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p>

			<p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented, in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Purple bean (<i>Villosa perpurpurea</i>)	No suitable habitat present.	No effect.	<p>The purple bean is found only in the Clinch River in Virginia and in Copper Creek, a tributary, where it occurs in low numbers within Tazewell County (Stansbery et al., 1986). Although known from Tazewell County and the Clinch River, it is not known from the action area streams. The DCR search did not identify this species in the subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Rough rabbitsfoot (<i>Quadrula cylindrica strigillata</i>)	No suitable habitat present.	No effect.	<p>The rough rabbitsfoot is rare in the Clinch River in Tazewell and Scott Counties. Although known from Tazewell County and the Clinch River, it is not known from the action area</p>

			<p>streams. The DCR search did not identify this species in the project subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Sheepnose mussel (<i>Plethobasus cyphus</i>)	No suitable habitat present.	No effect.	<p>In Virginia, this species is known only from the Clinch River near Dunganon, Scott County, and the Powell River from Flannary Bridge of Lee County (VDGIF 2009). This species is not known from the action area streams or subwatershed, or Tazewell County (VDGIF 2009, DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>

Shiny pigtoe (<i>Fusconaia cor</i>)	No suitable habitat present.	No effect.	<p>The shiny pigtoe occupies the Clinch, Powell and Elk Rivers in southwestern Virginia. Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Slabside Pearlymussel (<i>Pleuronaia dolabelloides</i>)	No suitable habitat present.	No effect.	<p>The slabside pearlymussel is found in the Clinch, Powell, Holston, Elk, Duck, and Buffalo Rivers in Virginia (Terwilliger, 1991). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance</p>

			with Virginia Erosion and Sedimentation Control Regulations.
Spectaclecase (mussel) (<i>Cumberlandia monodonta</i>)	No suitable habitat present.	No effect.	<p>The spectaclecase is known to only occur in the Clinch River in Scott County (Terwilliger, 1991). Although known from the Clinch River, this species is not known from action area streams, subwatershed, or Tazewell County (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Tan riffleshell (<i>Epioblasma florentina walkeri</i> (=e. walkeri))	No suitable habitat present.	No effect.	<p>Records in Virginia for this species exist only from the Clinch, South Fork Holston, and Middle Fork Holston Rivers; no confirmed species observations in action area streams, subwatershed, or Tazewell County, VA (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the</p>

				water line replacement. To minimize effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.
Critical Habitat		Critical habitat is present.	Not likely to adversely affect.	Waterline replacement action area intersections a critical habitat area for the Fluted Kidneyshell according to the Virginia Field Office Critical Habitat Map Tool. There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.

Site Location

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center

Base Map [Choices](#)

Topography ▼

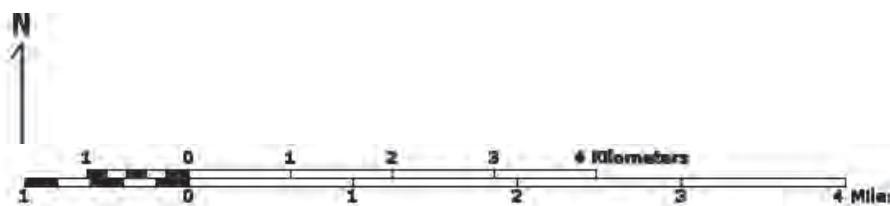
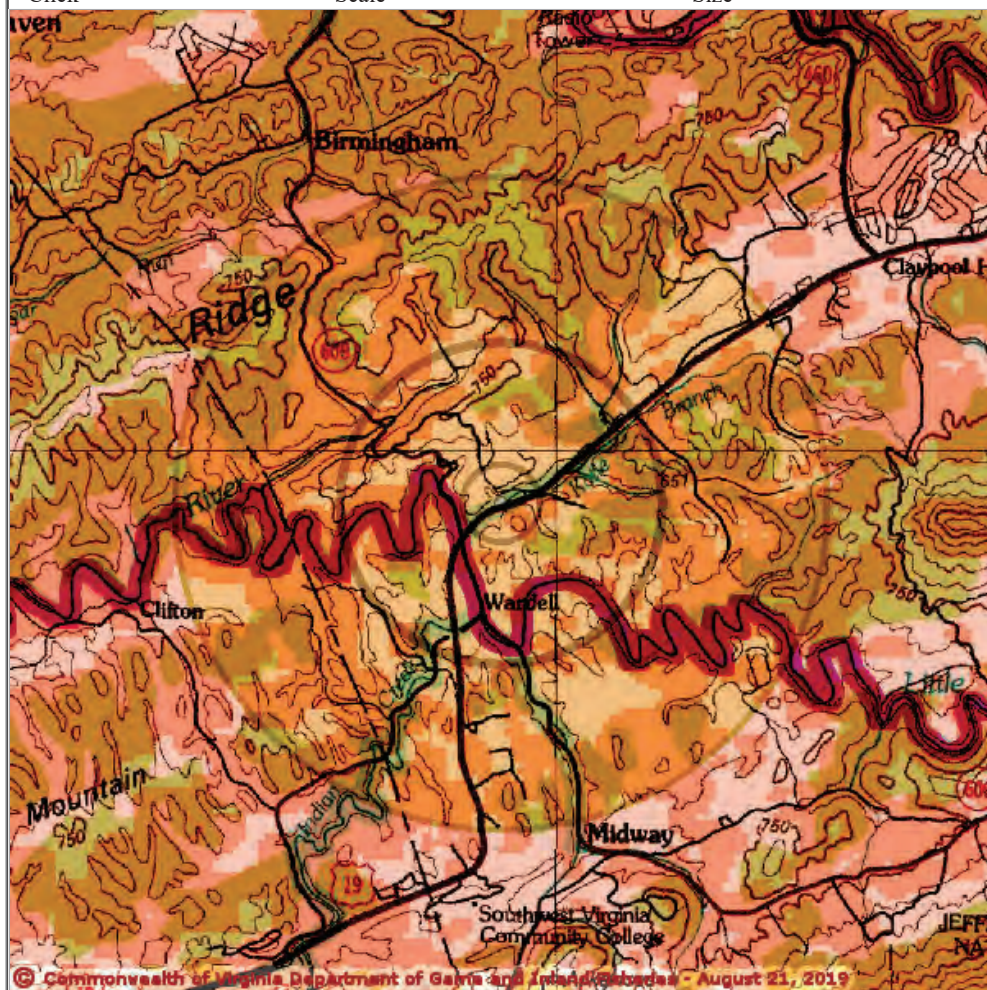
Map Overlay [Choices](#)

Current List: Position, Search,
BECAR, BAEANests,
TEWaters, TierII, Habitat,
Trout, Anadromous

Map Overlay Legend

Map Click **Pan** **Id** **M** Map Scale **In** **Zoom** **Out** Screen Size **Small** **Size** **Big** [Help](#)

[Refresh Browser Page](#)



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The



map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+- are from the United States Department of the Interior, United States Geological Survey. Color aerial photography acquired 2002 is from Virginia Base Mapping Program, Virginia Geographic Information Network.

Shaded topographic maps are from TOPO! ©2006 National Geographic

<http://www.national.geographic.com/topo>

All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2019-08-21 14:19:54 (qa/qc March 21, 2016 12:20 - tn=989500.0 dist=3218 I)

\$poi=37.0406760 -81.7925548

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VaFWIS Initial Project Assessment Report

Compiled on 8/21/2019, 2:21:16 PM

Known or likely to occur within a **2 mile radius around point 37.0406760 -81.7925548**
in **167 Russell County, 185 Tazewell County, VA**

[View Map of Site Location](#)

606 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 72) (72 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name	Confirmed	Database(s)
050023	FESE	Ia	Bat, Indiana	Myotis sodalis		BOVA
060147	FESE	Ia	Bean, Purple	Villosa perpurpurea		BOVA
060169	FESE	Ia	Bean, Tennessee	Venustaconcha trabalis		BOVA
060030	FESE	Ia	Combshell, Cumberlandian	Epioblasma brevidens		BOVA
060123	FESE	Ia	Monkeyface (pearlymussel), Cumberland	Theliderma intermedia		BOVA
060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	Yes	BOVA, TEWaters, Habitat
060035	FESE	Ia	Mussel, snuffbox	Epioblasma triquetra		BOVA
060020	FESE	Ia	Pearlymussel, birdwing	Lemiox rimosus		BOVA
060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	Yes	BOVA, TEWaters, Habitat
060052	FESE	Ia	Pigtoe, shiny	Fusconaia cor		BOVA
060122	FESE	Ia	Rabbitsfoot, rough	Theliderma cylindrica	Yes	BOVA, SppObs
060082	FESE	Ib	Pearlymussel, cracking	Hemistena lata		BOVA
060021	FESE	Ib	Spectaclecase	Margaritifera monodonta		BOVA, Habitat
060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	Yes	BOVA, TEWaters, Habitat, SppObs
050021	FESE	Ila	Bat, gray	Myotis grisescens		BOVA
050035	FESE	Ila	Bat, Virginia big-eared	Corynorhinus townsendii virginianus		BOVA
060146	FESE	Ila	Bean, Rayed	Villosa fabalis		BOVA
060121	FESE	Ila	Kidneyshell, fluted	Ptychobranhus subtentus	Yes	BOVA, Habitat, SppObs
060110	FESE	Ila	Mussel, sheepnose	Plethobasus cyphus		BOVA
060083	FESE	Ila	Pearlymussel, slabside	Pleuroaia dolabelloides		BOVA, Habitat
010331	FTST	Ia	Madtom, yellowfin	Noturus flavipinnis		BOVA
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis	Yes	BOVA, SppObs
010111	FTST	Ic	Chub, slender	Erimystax cahni		BOVA
050020	SE	Ia	Bat, little brown	Myotis lucifugus		BOVA
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus	Yes	BOVA, SppObs
010430	SE	Ib	Dace, Tennessee	Chrosomus tennesseensis		BOVA
060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes	BOVA, TEWaters, Habitat, SppObs
060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia		BOVA, Habitat
060174	SE	Ila	Pigtoe, pyramid	Pleurobema rubrum		BOVA
060139	SE	Ilc	Lilliput, purple	Toxolasma lividum		BOVA
060027	SE	IIla	Elephantear	Elliptio crassidens		BOVA
060168	SE	IIlb	Deertoe	Truncilla truncata		BOVA

2/4

		060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0258784)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0260082)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0260726)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261235)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261534)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0261660)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0262433)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0262692)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0263208)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0263849)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0265564)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0265792)	FESE	010342	ST	Ic	Darter, sickle	Percina williamsi	Yes
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060069	ST	IIla	Riversnail, spiny	Io fluvialis	
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0266056)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	
Little River (0266318)	FESE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060094	FESE	Ic	Pearllymussel, littlewing	Pegias fabula	

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 (6 Reaches) [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					
Indian Creek (60102051)	FESE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
Katie Branch (60102051)	SE	060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	Yes
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
Laurel Creek (60102051)	SE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
Little River (60102051)	FESE	010075		Ilc	Shiner, popeye	Notropis ariommmus	Yes
		010341		Ila	Logperch, blotchside	Percina burtoni	
		010342	ST	Ic	Darter, sickle	Percina williamsi	
		060007	SE	Ib	Mussel, slippershell	Alasmidonta viridis	
		060021	FESE	Ib	Spectaclecase	Margaritifera monodonta	
		060031	FESE	Ia	Mussel, oyster	Epioblasma capsaeformis	
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060051	FESE	Ia	Pigtoe, finereyed	Fusconaia cuneolus	
		060069	ST	IIla	Riversnail, spiny	Io fluviialis	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060083	FESE	Ila	Pearlymussel, slabside	Pleuironaia dolabelloides	
		060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
Little River (60102051)	FESE	010341		Ila	Logperch, blotchside	Percina burtoni	Yes
		060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	
		060094	FESE	Ic	Pearlymussel, littlewing	Pegias fabula	
		060121	FESE	Ila	Kidneyshell, fluted	Ptychobranchnus subtentus	
tributary (60102051)	SE	060050		Ila	Pigtoe, Tennessee	Pleuironaia barnesiana	Yes
		060080	SE	Ila	Heelsplitter, Tennessee	Lasmigona holstonia	

Habitat Predicted for Terrestrial WAP Tier I & II Species

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020011		Ila	Frog, mountain chorus	Pseudacris brachyphona	Yes

Public Holdings:

N/A

Compiled on 8/21/2019, 2:21:17 PM I989500.0 report=IPA searchType=R dist= 3218 poi= 37.0406760 -81.7925548
PixelSize=64, Anadromous=0.049983, BECAR=0.023824, Bats=0.023764, Buffer=0.096966, County=0.116298, Impediments=0.025264, Inlt=0.154176, PublicLands=0.047038, SppObs=0.332666, TEWaters=0.091465, TierReaches=0.113748, TierTerrestrial=0.179952, Total=1.449152, Tracking_BOVA=0.216038, Trout=0.04589

TE Waters Group Little River (0260082)

37,02,26.4 -81,47,33.2
is the Search Point

Display at center Item Location is not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles radius

Search Point is at map center

Base Map Choices

Topography

Map Overlay Choices

Current List: Position, Search, Observation

Map Overlay Legend

T & E Waters

Federal

Selected Federal

State

Selected State

Position Rings
1 mile and 1/4 mile at the Search Point

2 mile radius Search Area

Data Observation Site

Map Click

Pan To M

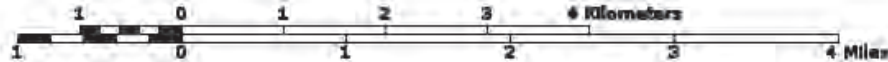
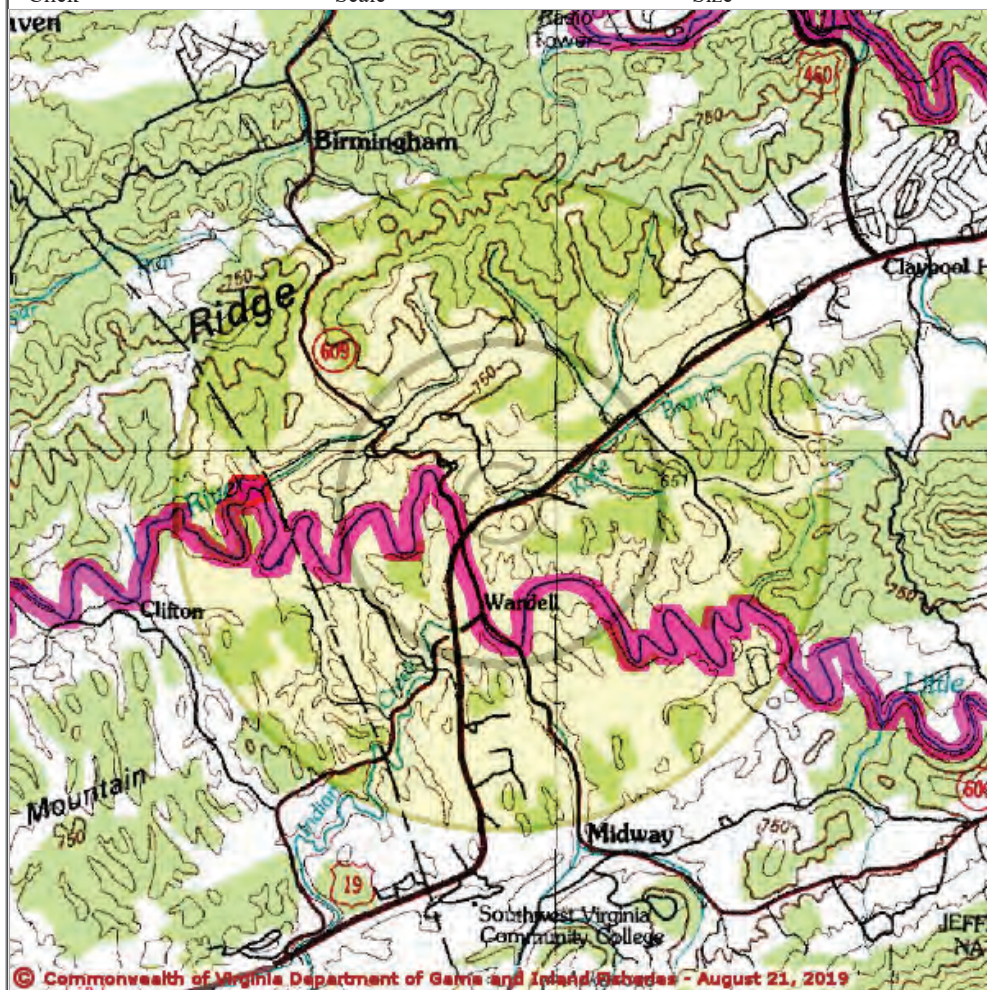
Map Scale

In Zoom Out

Screen Size

Small Size Big

Help



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2019-08-21 14:36:20 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)

\$poi=37.0406760 -81.7925548\$query=select Convert(varchar(10),floor((minx+maxx)/2)) + '' + Convert(varchar(10),floor((miny+maxy)/2)) from vafwis_tables.dbo.cvTEWaters where SEG_ID in (0257861)

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7 Species Observations where Kidneyshell, fluted (060121) observed

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center

Base Map [Choices](#)

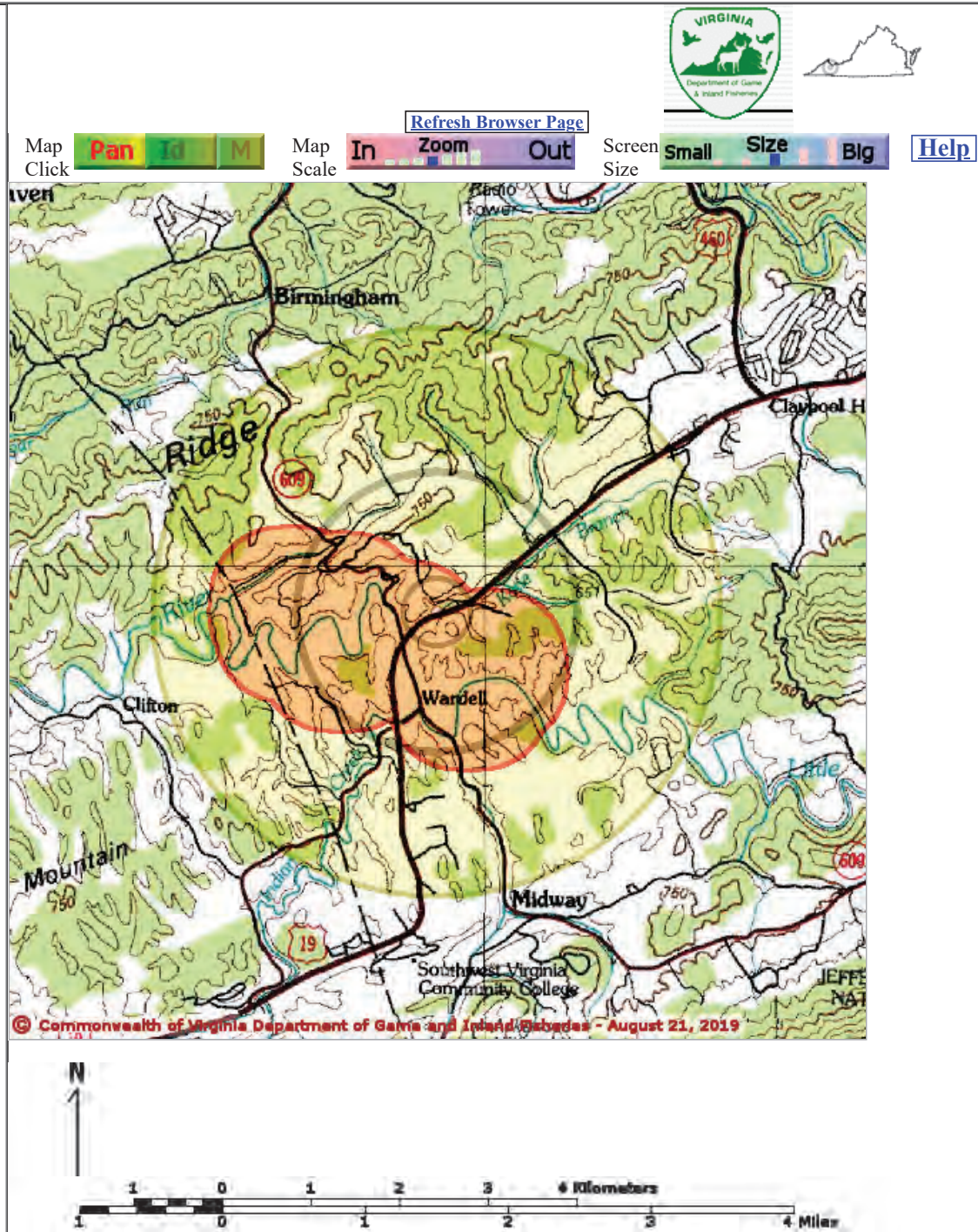
Topography ▼

Map Overlay [Choices](#)

Current List: Position, Search,
SppObs

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraser.com](https://microsoft.terraser.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

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\$poi=37.0406760 -81.7925548

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Species Observations where Rabbitsfoot, rough (060122) observed 611428

37,02,26.4 -81,47,33.2
is the Search Point

Display ☒ Item Location is
at center not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center




Base Map [Choices](#)

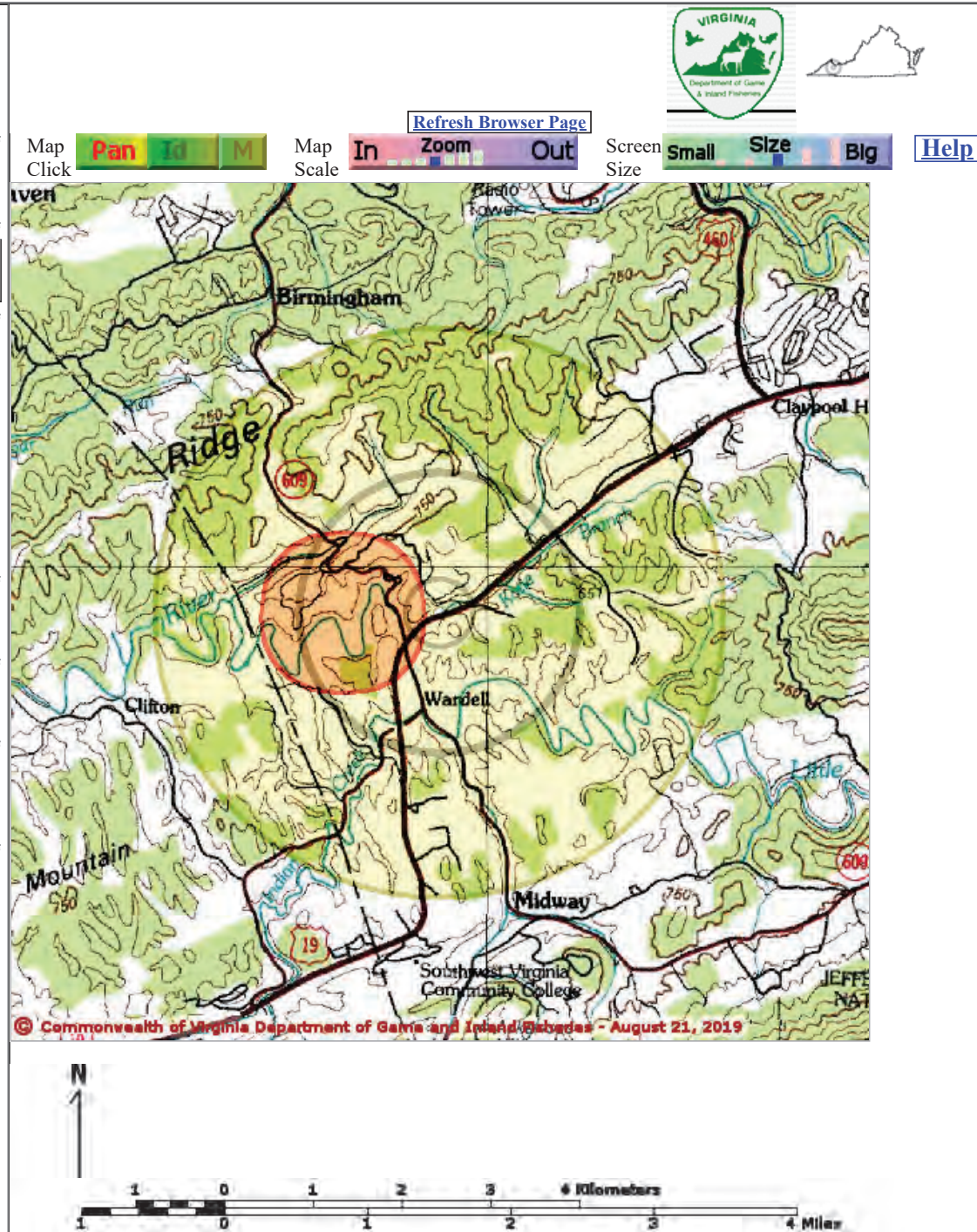
Topography ▼

Map Overlay [Choices](#)

Current List: Position, Search,
Observation

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserer-usa.com](https://microsoft.terraserer-usa.com) for details)

Map projection is UTM Zone 17 NAD 1983 with left 424721 and top 4104478. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The

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map assembled 2019-08-21 14:37:37 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)

\$poi=37.0406760 -81.7925548\$query=select xy.x,xy.y, xxvy256.Displace_X, xxvy256.Displace_Y, cc.High_TE, obs.FeatType from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs obs on obs.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSite256 s256 on s256.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSitexxvy256 xxvy256 on xxvy256.obsSite256 = s256.obsSite256 join vafwis_tables.dbo.cvSppObs_CC cc on cc.obsID = xy.obsID JOIN vafwis_tables.dbo.udf_List2Table('611428','') list on list.item = obs.obsID

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**Species Observations
where Bat, tri-colored
(050027) observed
230908**

37,02,26.4 -81,47,33.2
is the Search Point

Display Item Location is
at center not at map center

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center




Base Map Choices

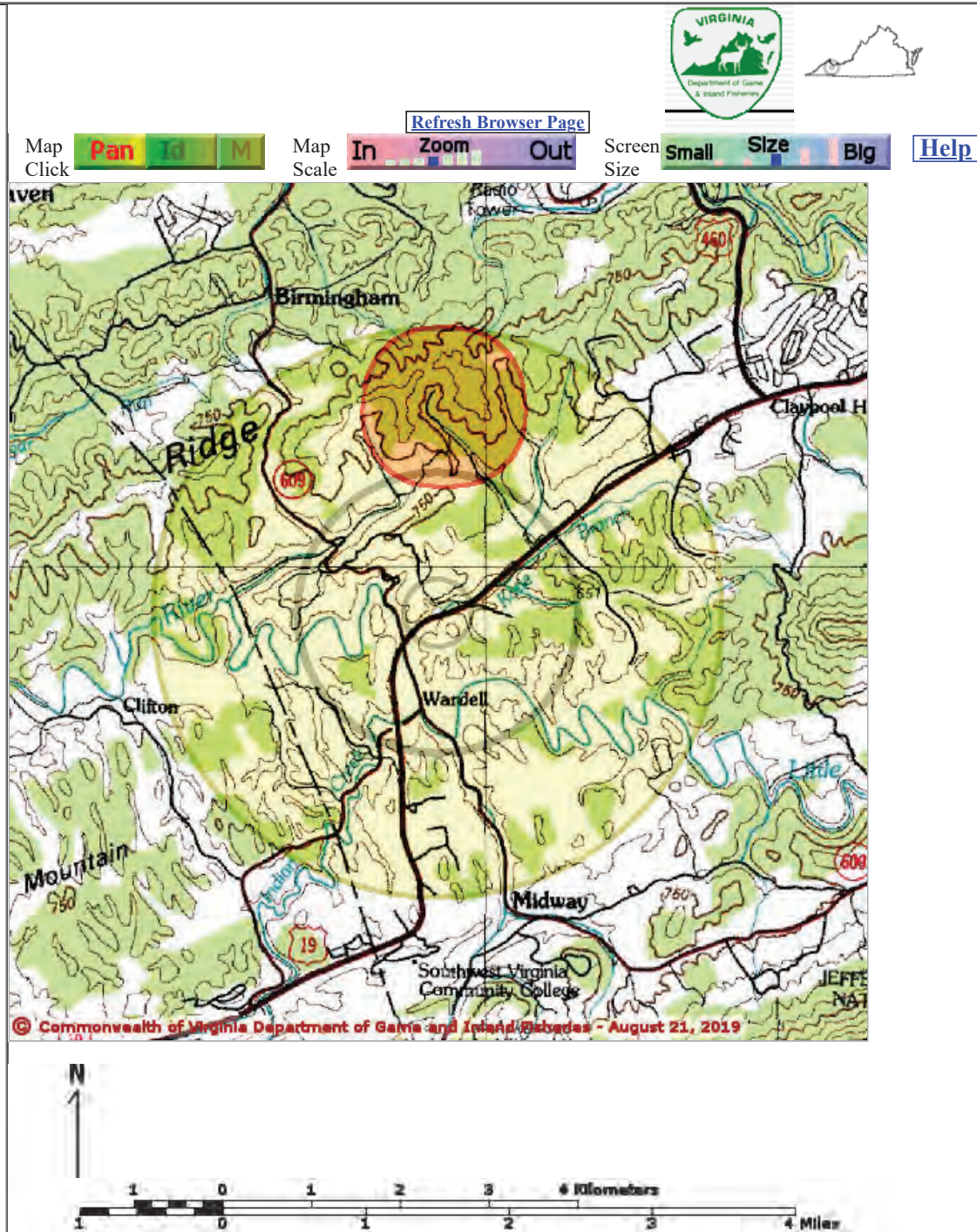
Topography ▼

Map Overlay Choices

Current List: Position, Search,
Observation

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System:** ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

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map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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map assembled 2019-08-21 14:39:47 (qa/qc March 21, 2016 12:20 - tn=989500.1 dist=3218 I)

\$poi=37.0406760 -81.7925548\$query=select xy.x,xy.y, xxvy256.Displace_X, xxvy256.Displace_Y, cc.High_TE, obs.FeatType from vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs obs on obs.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSite256 s256 on s256.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSitexxvy256 xxvy256 on xxvy256.obsSite256 = s256.obsSite256 join vafwis_tables.dbo.cvSppObs_CC cc on cc.obsID = xy.obsID JOIN vafwis_tables.dbo.udf_List2Table('230908',',') list on list.item = obs.obsID

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4 Species Observations where Bat, northern long-eared (050022) observed

37,02,26.4 -81,47,33.2
is the Search Point

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the
Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles
radius

Search Point is at
map center

Base Map [Choices](#)

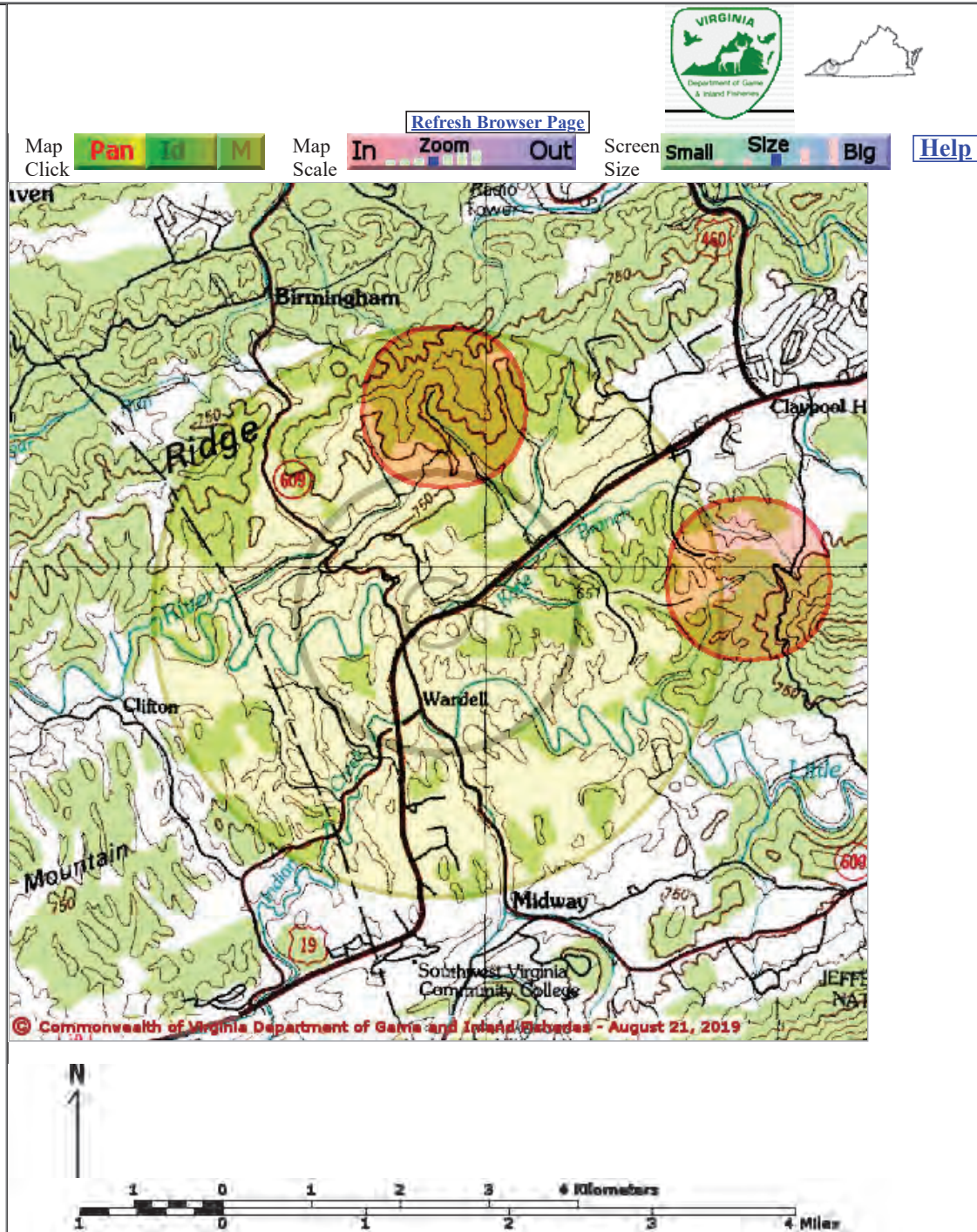
Topography ▼

Map Overlay [Choices](#)

Current List: Position, Search,
SppObs

Map Overlay Legend

-  **Position Rings**
1 mile and 1/4
mile at the
Search Point
-  **2 mile radius**
Search Area
-  **Data**
Observation Site



Point of Search 37,02,26.4 -81,47,33.2

Map Location 37,02,26.4 -81,47,33.2

Select **Coordinate System**: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraser.com](https://microsoft.terraser.com) for details)

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map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

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\$poi=37.0406760 -81.7925548

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Department of Conservation & Recreation

[CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES](#)

PROJECT INFORMATION

Web Project ID: WEB00000011533

Client Project Number: 19-769

TITLE: Tazewell County Public Service Authority Phase II of Virginia's Water System Capital Improvements Project

DESCRIPTION: The Tazewell County Public Service (TCPSPA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, installation of a diesel generator on a concrete pad at each site with additional fencing, and replacement of old telemetry to match the current telemetry system utilized by TCPSPA. Water transmitters would be installed in approximately 1,785 existing water service meter settings in order to extend the use of TCPSPA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSPA system. The 4,400 lf of new water line would be installed as close as possible to the current water line and within existing right-of-way. All proposed project sites have been previously disturbed. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

EXISTING SITE CONDITIONS: Developed

QUADRANGLES: Richlands

COUNTIES: Tazewell

Latitude/Longitude (DMS): 37° 2' 27.2084" N / 81° 47' 31.4306" W

Acreage: 4 acres

Comments:

REQUESTOR INFORMATION

Priority: N

Tier Level: Tier II

Tax ID:

Contact Name: Leah Potts

Company Name: EEE Consulting, Inc

Address: 201 Church St Suite C

City: Blacksburg

State: VA

Zip: 24060

Phone: 5408083273

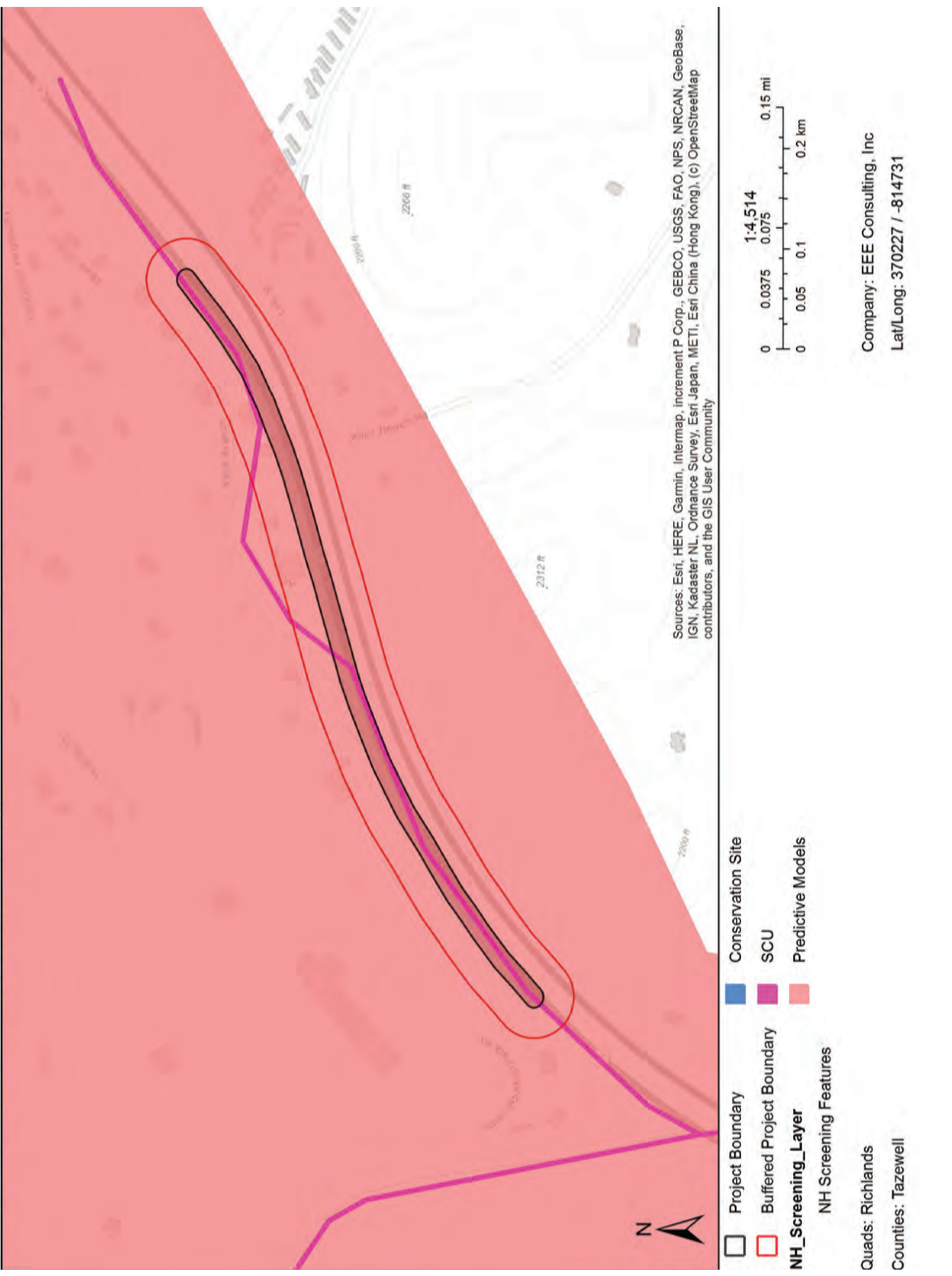
Fax:

Email: lpotts@eee-consulting.com

Conservation Site						
CLINCH RIVER - LITTLE RIVER SCU						
Natural Heritage Screening Features Intersecting Project Boundary						
	Site Type	Brank	Acreage	Listed Species	Presence	
	SCU	B2	1159		FL	

Site Name	Group Name	Common Name	Scientific Name	GRANK	SRANK	Fed Status	Species of Concern	State Status	EO Rank	Last Obs Date	Precision
Natural Heritage Resources Intersecting Project Boundary											

Intersecting Predictive Models											
Karst Bedrock											
Tennessee Heelsplitter											
Little Brown Bat											
Tricolored Bat											
Predictive Model Results											





COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

The project mapped as part of this report has been searched against the Department of Conservation and Recreation's Biotics Data System for occurrences of natural heritage resources from the area indicated for this project. Natural heritage resources are defined as the habitat of rare, threatened, or endangered plant and animal species, unique or exemplary natural communities, and significant geologic formations.

According to the information currently in Biotics files, NATURAL HERITAGE RESOURCES HAVE BEEN DOCUMENTED within the submitted project boundary including a 100 foot buffer and/or PREDICTED HABITAT MODELS FOR NATURAL HERITAGE RESOURCES intersect the project area.

You have submitted this project to DCR for a more detailed review for potential impacts to natural heritage resources. DCR will review the submitted project to identify the specific natural heritage resources within the proposed project area including a 100 foot buffer. Using the expertise of our biologists, DCR will evaluate whether your specific project is likely to impact these resources. DCR's response will indicate whether any negative impacts are likely and, if so, make recommendations to avoid, minimize and/or mitigate these impacts. If the potential negative impacts are to species that are state- or federally-listed as threatened or endangered, DCR will also recommend coordination with the appropriate regulatory agencies: the Virginia Department of Game and Inland Fisheries for state-listed animals, the Virginia Department of Agriculture and Consumer Services for state-listed plants and insects, and the United States Fish and Wildlife Service for federally listed plants and animals. If your project is expected to have positive impacts we will report those to you with recommendations for enhancing these benefits.

There will be a charge for this service for "for profit companies": \$60, plus an additional charge of \$35 for 1-5 occurrences and \$60 for 6 or more occurrences.

Please allow up to 30 calendar days for a response, unless you requested a priority response of 5 business days at an additional surcharge of \$500 or 15 calendar days at an additional surcharge of \$300. An invoice will be provided with your response.

We will review the project based on the information you included in the Project Info submittal form, which is included in this report. Also any additional information including photographs, survey documents, etc. attached during the project submittal process and/or sent via email referencing the project title (from the first page of this report).

Thank you for submitting your project for review to the Virginia Natural Heritage Program through the NH Data Explorer. Should you have any questions or concerns about DCR, the Data Explorer, or this report, please contact the Natural Heritage Project Review Unit at 804-371-2708.

Leah Potts

From: amy.ewing@dgif.virginia.gov on behalf of dgif-ESS Projects, rr
<essprojects@dgif.virginia.gov>
Sent: Monday, September 23, 2019 4:50 PM
To: Leah Potts
Subject: Re: Environmental Review Request: Proposed Water Line Replacement and Pump Rehabilitation in Tazewell County

Thank you for contacting us about your project. Due to staffing limitations, we are unable to review and provide comments on projects that are not currently involved in one of the regulatory review processes for which we are a formal consulting agency (see <https://www.dgif.virginia.gov/environmental-programs/>). If your project becomes involved in one of these review processes, we will review the project at that time and provide our comments to the requesting agency. In advance of that, we recommend that you conduct a preliminary desktop analysis to evaluate your project's potential impacts upon the Commonwealth's wildlife resources by accessing our online VAFWIS system and using the Geographic Search function to generate an Initial Project Assessment (IPA) report. We recommend the following steps:

1. [Subscribe](#) to the Virginia Fish and Wildlife Information Service (VAFWIS), an online database providing access to the most current and comprehensive information about Virginia's wildlife. A subscription to the VAFWIS allows you to perform an Initial Project Assessment (IPA) to evaluate the wildlife resources and VDGIF facilities that are located within 2 miles of your project site. We recommend this IPA be included in all project documentation and permit applications.
OR
Access the free Virginia Fish and Wildlife Information Service (VAFWIS) as a visitor. No subscription is necessary to use the [VAFWIS](#) as a visitor which allows one access to generate a list of wildlife species that may be documented within 3 miles of the project location.
2. Access the [NLEB Winter Habitat and Roost Trees](#) application and the [Little Brown Bat and Tri-colored Bat Winter Habitat and Roosts](#) applications to determine if your project may impact northern long-eared bats or state-listed bats.
3. Access the Center for Conservation Biology's [Eagle Nest Locator](#) to determine if any active eagle nests are known from the project area. If active bald eagle nests have been documented from the project area, we recommend that the project move forward in a manner consistent with [state and federal guidelines for protection of bald eagles](#); and coordination, as indicated, with the U.S. Fish and Wildlife Service regarding possible impacts upon bald eagles or the need for a federal bald eagle take permit.
4. Review the [VAFWIS Coordination Recommendations](#) to determine if you need to coordinate with VDGIF or other agencies regarding wildlife species and resources documented from your search area and perform the recommended coordination.
5. Access a list of links to additional resources including time of year restrictions, general BMPs, staff contacts and more at the bottom of the [Environmental Services Section](#) on our website

Thank you.

On Thu, Sep 12, 2019 at 10:58 AM Leah Potts <lpotts@eee-consulting.com> wrote:

Mr. Ray Fernald and VDGIF Staff:

Tazewell County Public Service Authority is preparing an Environmental Assessment for eight proposed pump rehabilitation sites and a proposed water line replacement. This email is to provide you with the attached project information and request your review and input on the proposed project. Please contact me with any questions.

Regards,

Leah

Leah M. Potts, EIT, CFM

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273

[LinkedIn](#)



EEE CONSULTING, INC.

201 Church Street, Suite C | Blacksburg, VA 24060

www.eee-consulting.com



"Per Title VI of the Civil Rights Act of 1964 and other non-discrimination statutes, EEE Consulting, Inc. will not discriminate on the grounds of race, color, national origin, sex, age, disability, or low income in the selection and retention of subconsultants, including procurement of materials and leases of equipment. EEE Consulting, Inc. will ensure that minorities will be afforded full opportunity to submit proposals and will not be discriminated against in consideration for an award."



Environmental Services

P 804.367.2211

Virginia Department of Game & Inland Fisheries

CONSERVE. CONNECT. PROTECT.

A 7870 Villa Park Drive, P.O. Box 90778, Henrico, VA 23228

www.dgif.virginia.gov



EEE Consulting, Inc.

Environmental, Engineering and Educational Solutions

September 12, 2019

Mr. Roger Kirchen, Director, Division of Review and Compliance, Archaeologist
Virginia Department of Historic Resources
2801 Kensington Avenue
Richmond, Virginia 23221

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan, Tazewell County, Virginia

Ref: EEE Consulting Project No. 19-769

Dear Mr. Kirchen:

The Tazewell County Public Service Authority (TCPSA) is conducting an environmental review pursuant to the National Environmental Policy Act (NEPA). The TCPSA is preparing this environmental review in accordance with the *Virginia Department of Health – Drinking Water Funding Environmental Review Procedural Guidelines, Revised October 11, 2016* to determine the potential environmental impacts associated with proposed public water service improvements throughout Tazewell County, Virginia. The project will be funded at least partially by the Virginia Department of Health (VDH) Drinking Water Funding Program. The project will be designed to comply with the latest edition of the VDH Waterworks Regulations and the American Water Works Association.

Project Description

The project includes improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas
- replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figures 2 and 3**)
- installation of water transmitters in approximately 1,785 existing water service meter settings
- installation of leak detection equipment

Rehabilitation of Eight Existing Pump Stations

The eight pump stations to be rehabilitated are:

- Panther Branch Pump Station No. 1
- Panther Branch Pump Station No. 2
- Panther Branch Pump Station No. 3
- Coaldan Pump Station No. 1
- Coaldan Pump Station No. 2
- Dailey's Chapel Pump Station
- Cavitt's Creek Pump Station
- College Estates Pump Station

One of the pump stations to be rehabilitated – the Dailey's Chapel pump station – is shown in Photograph 1 below. The following four stations look similar to the Dailey's Chapel pump station: Panther Branch Pump Station No. 1, Coaldan Pump Station No. 1, Cavitt's Creek Pump Station, and College Estates Pump Station.



Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coaldan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements will include existing pumps, motors, HVAC, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad will be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry will be replaced to match the current telemetry system used by TCPSA.

Replacement of Existing Waterline

Waterline replacement will occur in existing disturbed areas in Virginia Department of Transportation and/or TCPSA right-of-way in the location depicted in **Figures 5, 6, and 7**. Approximately 4,400 linear feet of 8-inch ductile iron water line will be replaced with new 10-inch PVC water line. This work will continue east from the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

Installation of Water Service Meter Transmitters and Leak Detection Equipment

Transmitters will be installed in approximately 1,785 existing water service meter settings to extend the use of the TCPSA's existing automated meter reading system. Leak detection equipment will be acquired and installed to identify potential problems throughout the TCPSA system.

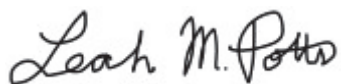
Historic Resources

The locations of the pump station rehabilitation and the replacement waterline would not result in new ground disturbance, nor would the project result in changes to the viewshed. Therefore, there would be no effects to archaeolgocial or architectural resources, and we respectfully request your concurrence that the ***proposed project will have no effect on historic properties.***

We would appreciate a response within 30 days. If you require any further information or wish to discuss the project, please contact me at (540) 953-0170 or lpotts@eee-consulting.com.

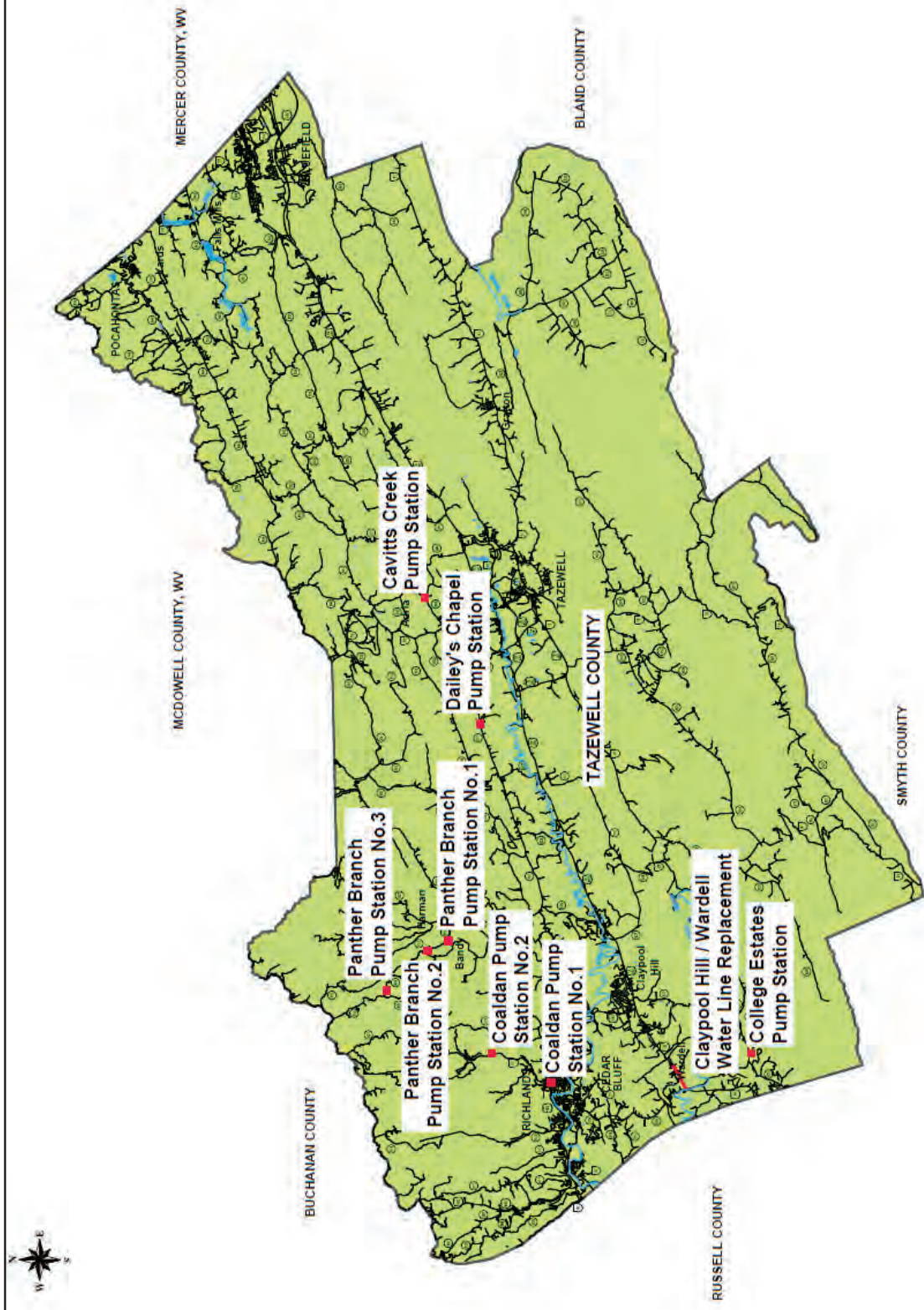
Sincerely,

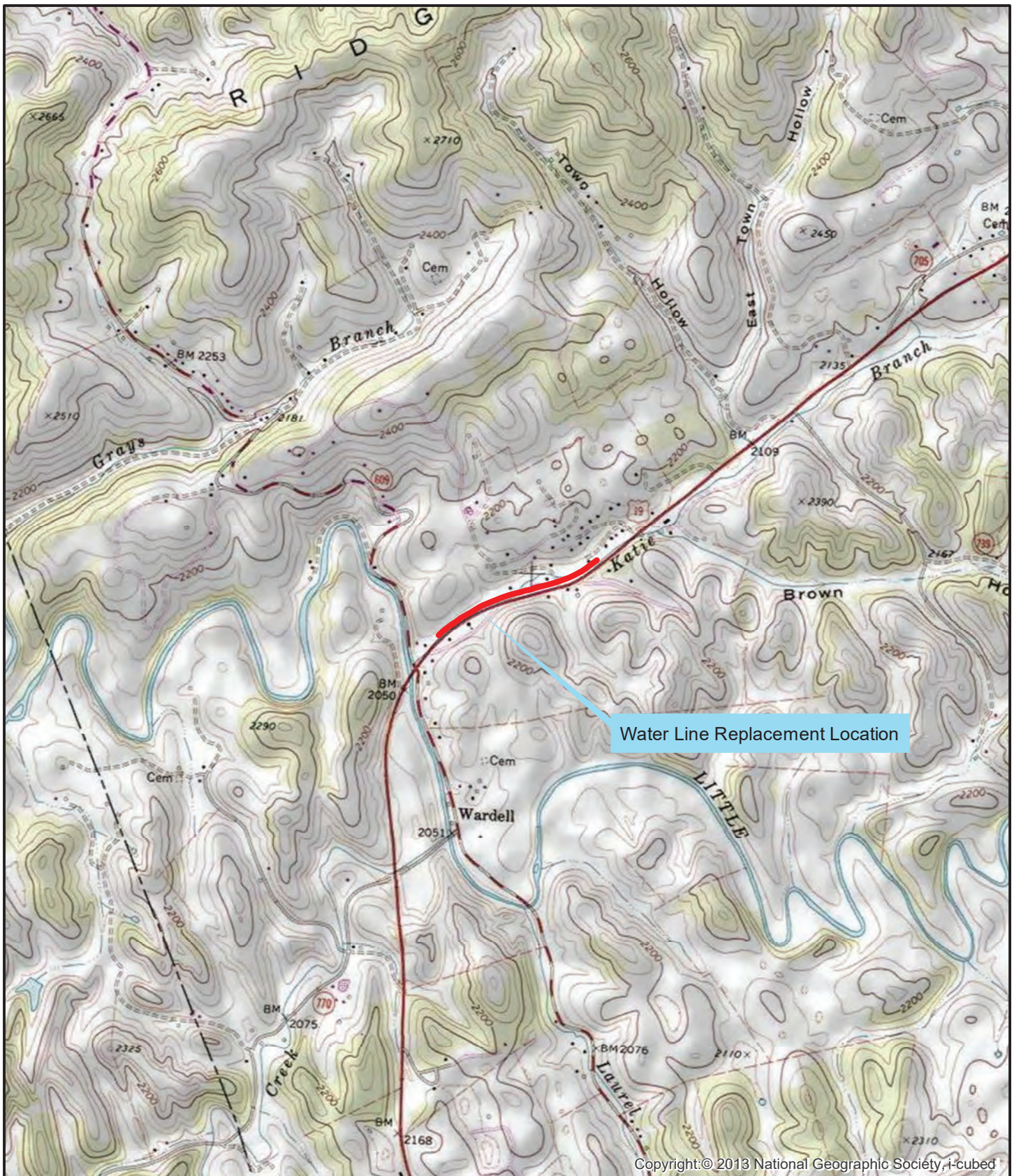
EEE Consulting, Inc.



Leah Potts, EIT

Attachments: Figures





EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions

Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502



FIGURE 3 WATER LINE REPLACEMENT TOPOGRAPHIC MAP

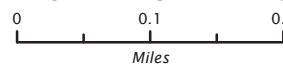
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 0.35 0.7
Miles
Tazewell, VA

1:24,000



FIGURE 4
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



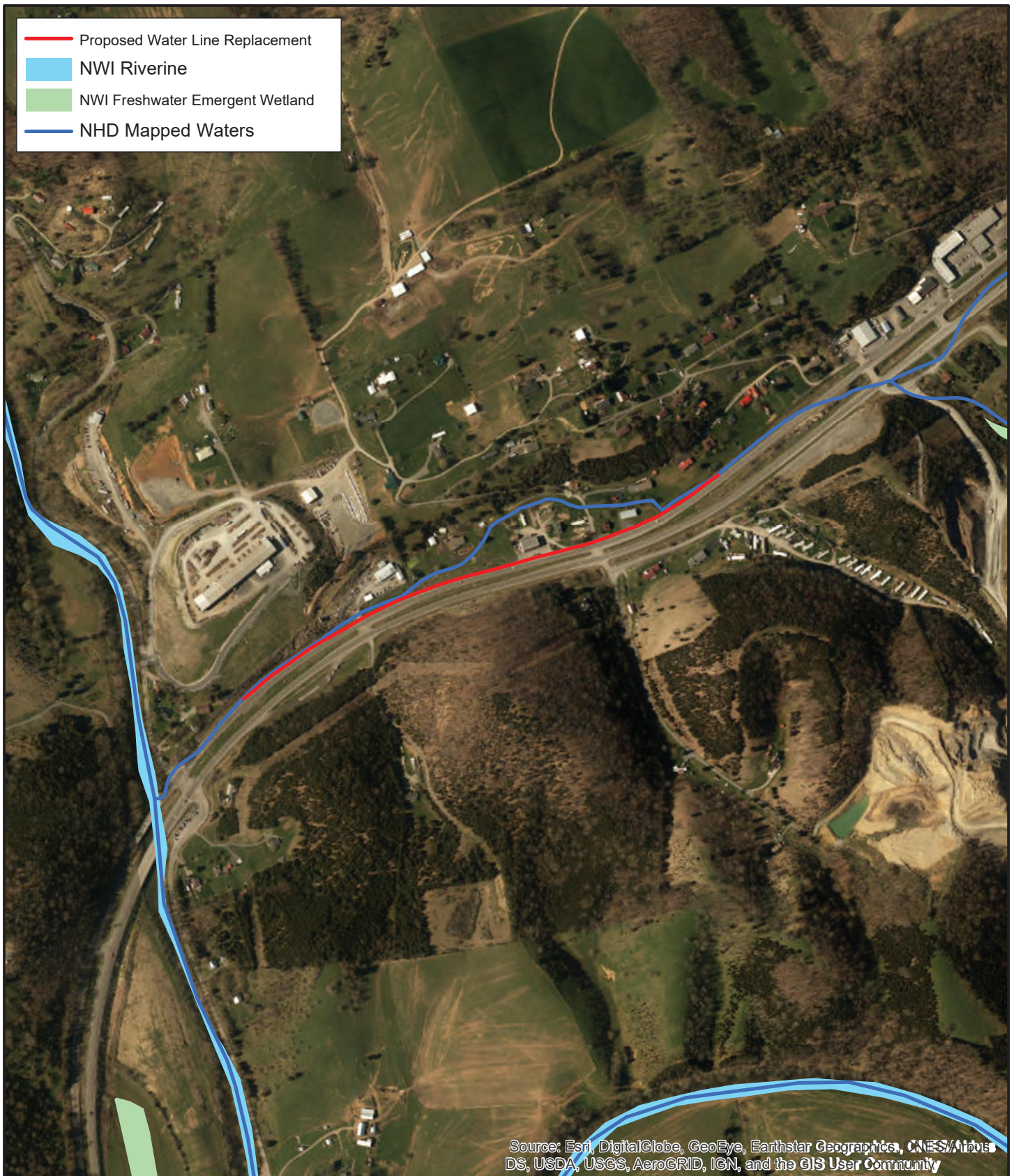
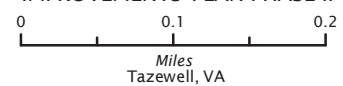
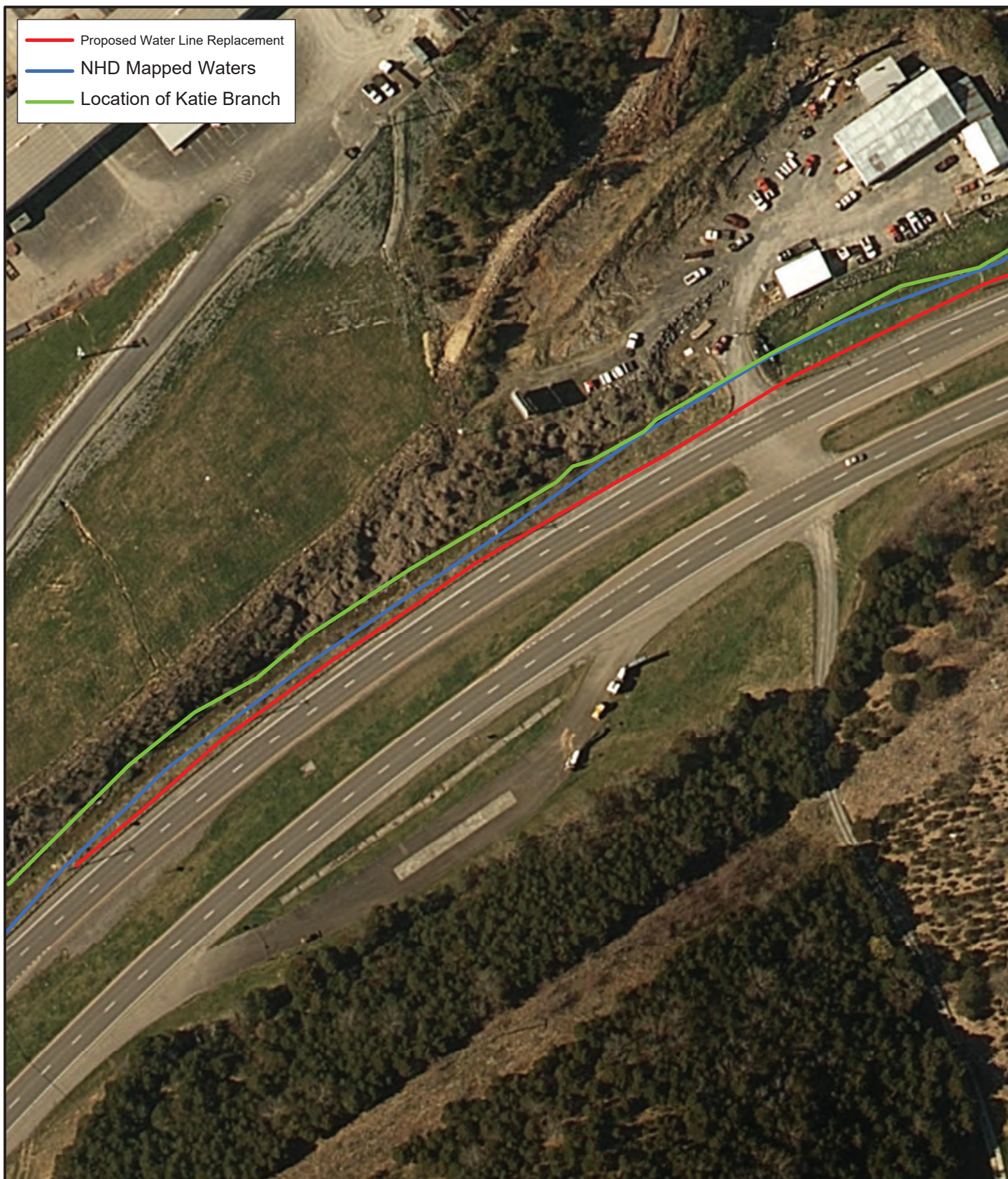


FIGURE 5
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



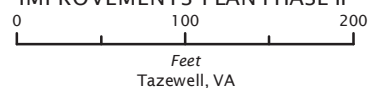


EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions



Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 6
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





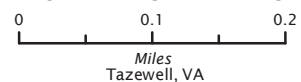
- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch



FIGURE 7
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
 TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II
 0 50 100
 Feet
 Tazewell, VA



FIGURE 8
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





COMMONWEALTH of VIRGINIA

Matthew Strickler
Secretary of Natural Resources

Department of Historic Resources
2801 Kensington Avenue, Richmond, Virginia 23221

Julie V. Langan
Director

Tel: (804) 367-2323
Fax: (804) 367-2391
TDD: (804) 367-2386
www.dhr.virginia.gov

October 9, 2019

Leah M Potts
EEE Consulting, Inc.

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan
Tazewell County, VA
DHR File No. 2019-0334

Dear Ms. Potts:

We have received your request for comments on the project referenced above. The undertaking, as submitted, consists of improvements to the Tazewell County Public Service Authority's existing water system. Our comments are provided as assistance to the Virginia Department of Health.

According to our database, there are no recorded resources that are listed or eligible for listing in the National Register of Historic Places located within the area of potential effects. Given the scale and scope of the project, impacts to intact, unrecorded resources are unlikely. Based on the information provided, we agree that a determination of no historic properties affected is appropriate for this undertaking. No further study or consultation is recommended at this time.

Thank you for seeking our comments on this project. If you have any questions at this time, please contact me at jennifer.bellville-marrion@dhr.virginia.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "J. Bellville-Marrion", written over a light blue rectangular background.

Jenny Bellville-Marrion, Project Review Archaeologist
Review and Compliance Division

Western Region Office
962 Kime Lane
Salem, VA 24153
Tel: (540) 387-5443
Fax: (540) 387-5446

Northern Region Office
5357 Main Street
PO Box 519
Stephens City, VA 22655
Tel: (540) 868-7029
Fax: (540) 868-7033

Eastern Region Office
2801 Kensington Avenue
Richmond, VA 23221
Tel: (804) 367-2323
Fax: (804) 367-2391



DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
FORT NORFOLK, 803 FRONT STREET
NORFOLK, VIRGINIA 23510-1096

December 2, 2019

REPLY TO
ATTENTION OF:

Western Virginia Regulatory Section
NAO-2019-01911 (06010205)

Leah M. Potts
EEE Consulting, Inc
201 Church Street
Blacksburg, Virginia 24060

RE: Tazewell County Public Service Authority, Pump Rehabilitation and Water Line Replacement -
Scoping Response

Dear Ms. Potts

This is in regard to your request for environmental review of the referenced proposal. The proposed project is located at multiple locations in Tazewell County, Virginia.

Your proposal entails upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas, replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line, installation of water transmitters in approximately 1,785 existing water service meter settings, and installation of leak detection equipment.

The U.S. Army Corps of Engineers has jurisdiction over certain activities undertaken in waters and/or wetlands regulated under Section 10 of the Rivers and Harbors Act of 1899 (33 USC 403) and/or Section 404 of the Clean Water Act of 1977. Any work in jurisdictional areas which is considered structure, fill (dirt, concrete, rock, etc.), dredging and/or excavations under current regulation may require a Department of the Army permit and possibly authorization from local authorities.

Detailed project plans along with site specific information is needed to determine if a proposed activity is within our jurisdiction. In addition, work in these areas may require a Virginia Water Protection Permit from the Virginia Department of Environmental Quality (DEQ) and/or a permit from the Virginia Marine Resources Commission (VRMC) as well as authorization from your local authority.

You may obtain a Joint Permit Application online at <http://www.nao.usace.army.mil/Missions/Regulatory/JPA.aspx> or from any of the agency offices. Please obtain all federal, state, and local permits before beginning work in any jurisdictional areas. Please reference Corps project number NAO-2019-01911 for any further correspondence for this project.

If you have any questions, please contact Claire Trent at (276) 206-8347 or Claire.Trent@usace.army.mil.

Sincerely,

/s/ G. Claire Trent
Project Manager, Virginia Highlands Field Office



EEE Consulting, Inc.

Environmental, Engineering and Educational Solutions

September 12, 2019

Mr. Tom Walker, Director, Regulatory Branch Chief
U.S. Army Corps of Engineers
803 Front Street
Norfolk, Virginia 23510
Via email to: CENAO.REG_ROD@usace.army.mil

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan, Tazewell County, Virginia
Ref: EEE Consulting Project No. 19-769

Dear Mr. Walker:

The Tazewell County Public Service Authority (TCPSA) is conducting an environmental review pursuant to the National Environmental Policy Act (NEPA). The TCPSA is preparing this environmental review in accordance with the *Virginia Department of Health – Drinking Water Funding Environmental Review Procedural Guidelines, Revised October 11, 2016* to determine the potential environmental impacts associated with proposed public water service improvements throughout Tazewell County, Virginia. The project will be funded at least partially by the Virginia Department of Health (VDH) Drinking Water Funding Program. The project will be designed to comply with the latest edition of the VDH Waterworks Regulations and the American Water Works Association.

Project Description

The project includes improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas
- replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figures 2 and 3**)
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Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coaldan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements will include existing pumps, motors, HVAC, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad will be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry will be replaced to match the current telemetry system used by TCPSA.

Replacement of Existing Waterline

Waterline replacement will occur in existing disturbed areas in Virginia Department of Transportation and/or TCPSA right-of-way in the location depicted in **Figures 5, 6, and 7**. Approximately 4,400 linear feet of 8-inch ductile iron water line will be replaced with new 10-inch PVC water line. This work will continue east from the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

Installation of Water Service Meter Transmitters and Leak Detection Equipment

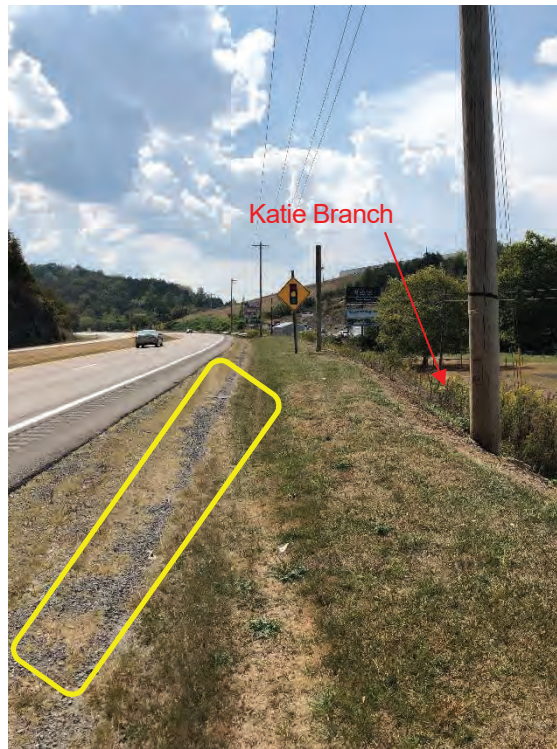
Transmitters will be installed in approximately 1,785 existing water service meter settings to extend the use of the TCPSA's existing automated meter reading system. Leak detection equipment will be acquired and installed to identify potential problems throughout the TCPSA system.

Water Resources

Katie Branch, a tributary to Little River, is shown near the proposed water line replacement area by the National Hydrographic Dataset; however, the National Hydrographic Dataset does not accurately follow the stream channel (**Figure 5**). **Figures 6 and 7** show the actual location of Katie Branch where the channel is within close proximity (approximately 25 to 50 feet) of the proposed water line replacement. According to the 2016 National Wetlands Inventory Dataset, no wetlands are located near the proposed water line replacement area (**Figure 5**). According to FEMA floodplain data, no portions of the proposed project area lie in a floodplain (**Figure 8**).

All pump station rehabilitation work will occur entirely within previously disturbed areas. The water line replacement will be located according to the following parameters:

- Off the edged of the paved shoulder, where there are no obstructions such as guardrail and electrical poles (**Photographs 4 and 5**)
- At guardrail locations, it will be installed on the backside of guardrail where there are no obstructions such as electrical poles (**Photographs 6 and 7**)
- Where there are guardrail or electrical pole obstructions, it will be installed in the paved shoulder (**Photograph 8**)



Photograph 4. Water line installation area (yellow) on edge of paved shoulder



Photograph 5. Water line installation area (yellow) on edge of paved shoulder



Photograph 6. Water line installation are (yellow) on backside of guardrail



Photograph 7. Water line installation area (yellow) on backside of guardrail



Photograph 8. Water line installation area (yellow) in paved shoulder

No in-water work will be performed, nor are there any planned crossings of Katie Branch. Thus, no Clean Water Act permits are anticipated. All equipment will be staged on the road-side through a lane closure. No equipment will be staged on the stream side of the water line replacement. Strict measures will be implemented at pump rehabilitation sites and water line replacement area in compliance with Virginia Erosion and Sedimentation Control Regulations.

Please review the proposed project and provide any recommendations that you may have regarding construction. We would appreciate a response within 30 days. If you require any further information or wish to discuss the project, please contact me at (540) 953-0170 or lpotts@eee-consulting.com.

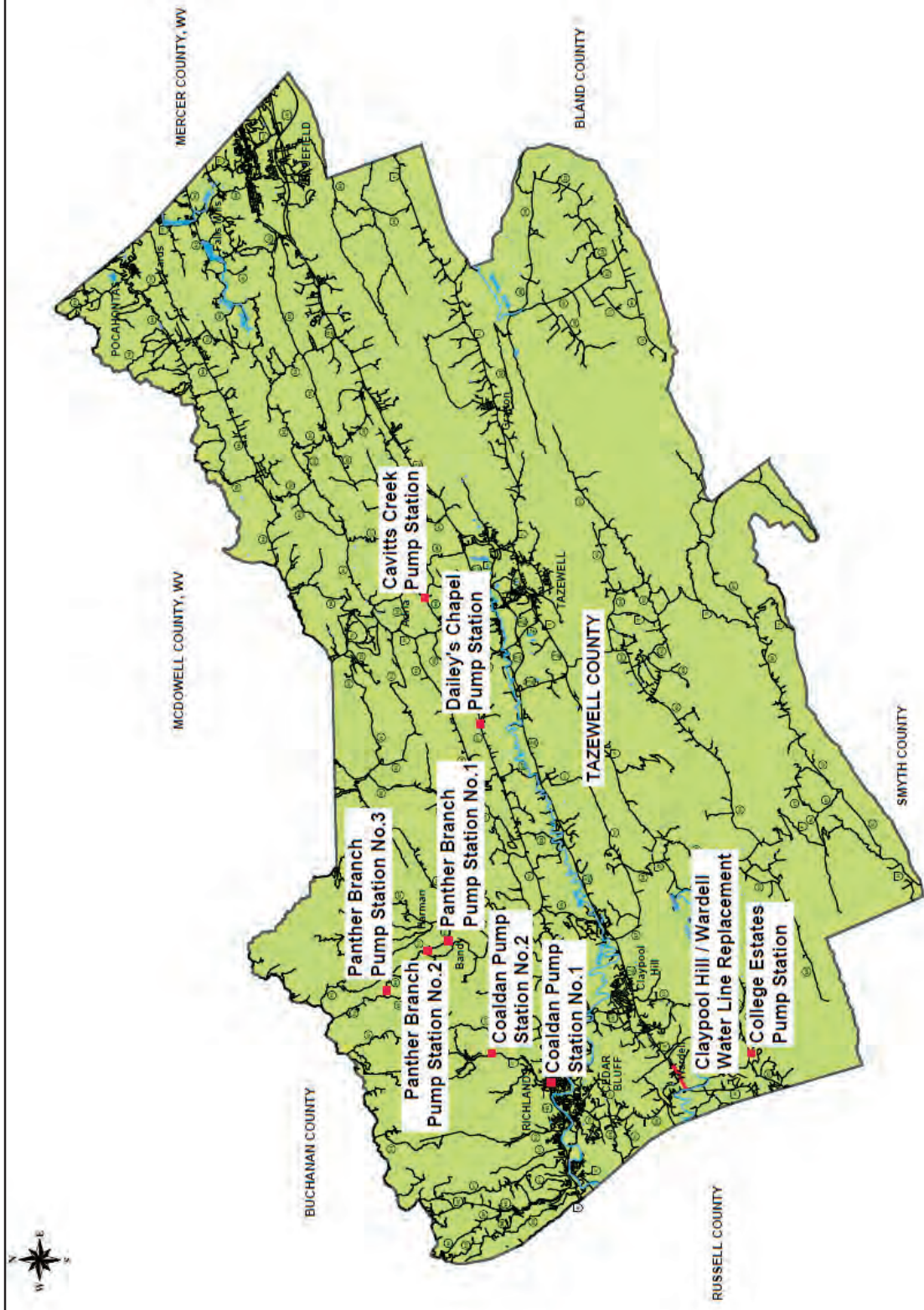
Sincerely,

EEE Consulting, Inc.

Leah M. Potts

Leah Potts, EIT

Attachments: Figures



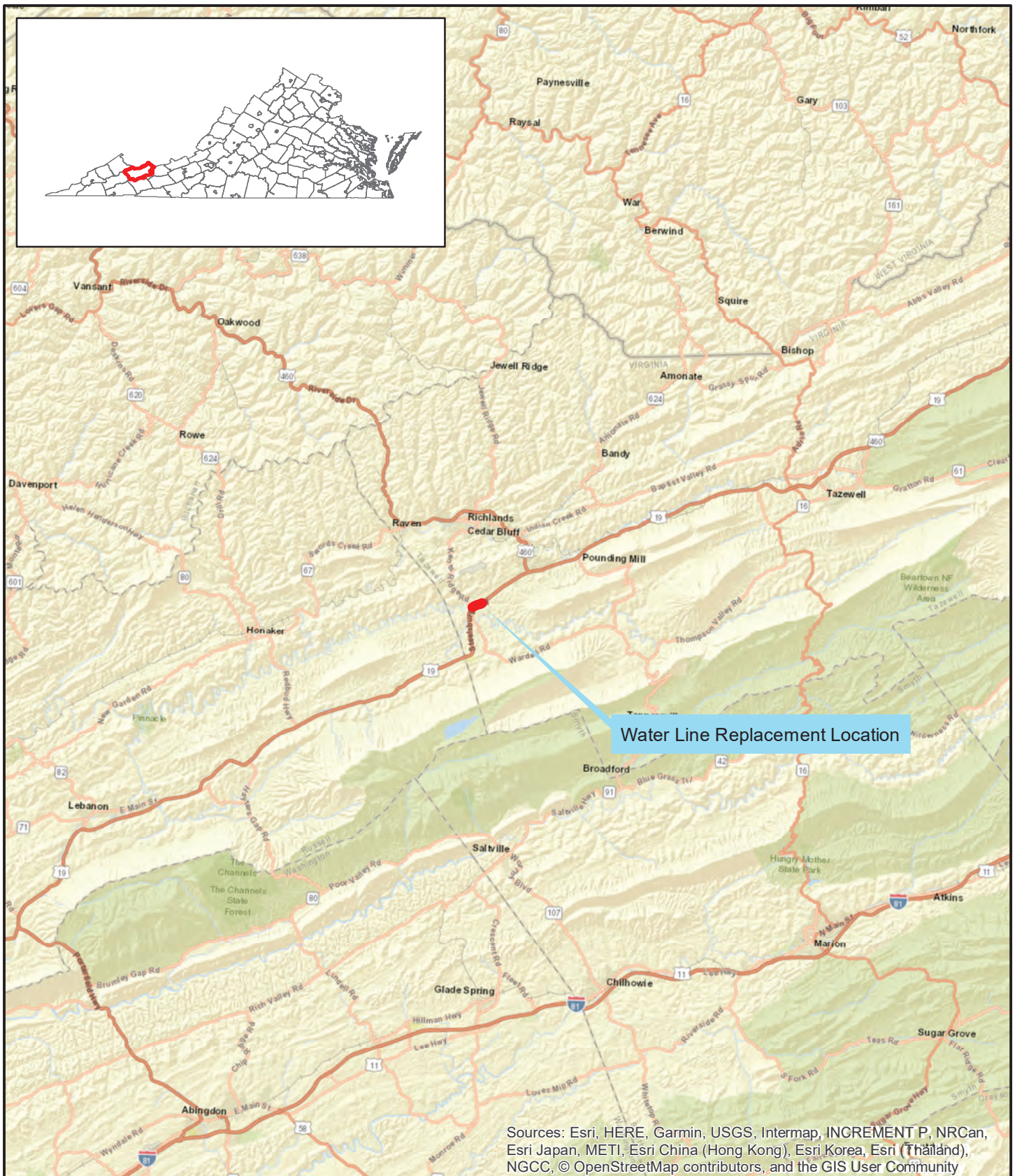
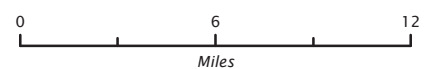


FIGURE 2
WATER LINE REPLACEMENT LOCATION
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



Tazewell, VA

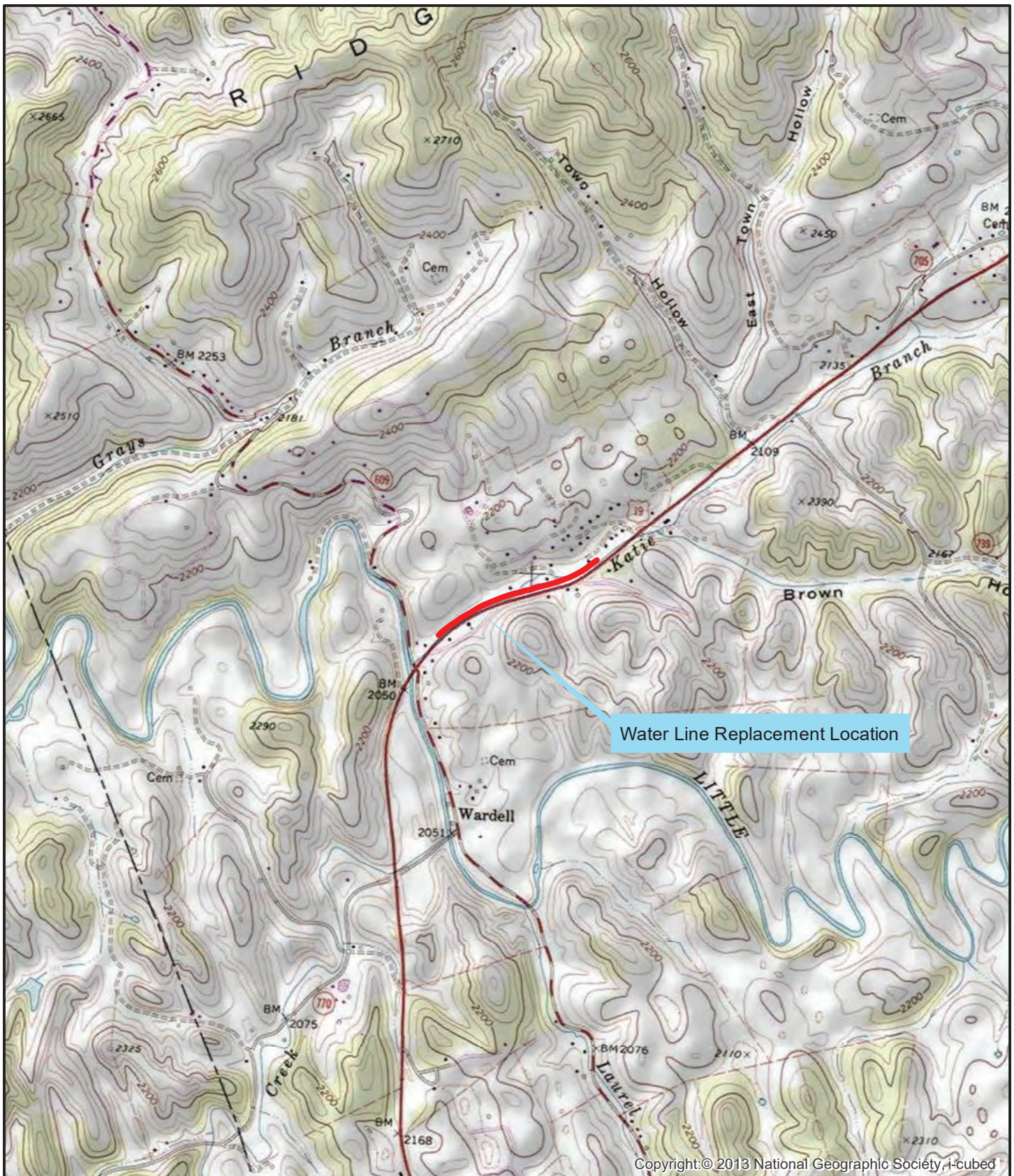


FIGURE 3
WATER LINE REPLACEMENT
TOPOGRAPHIC MAP

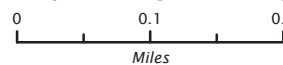
TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II

0 0.35 0.7
 Miles
 Tazewell, VA

1:24,000



FIGURE 4
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



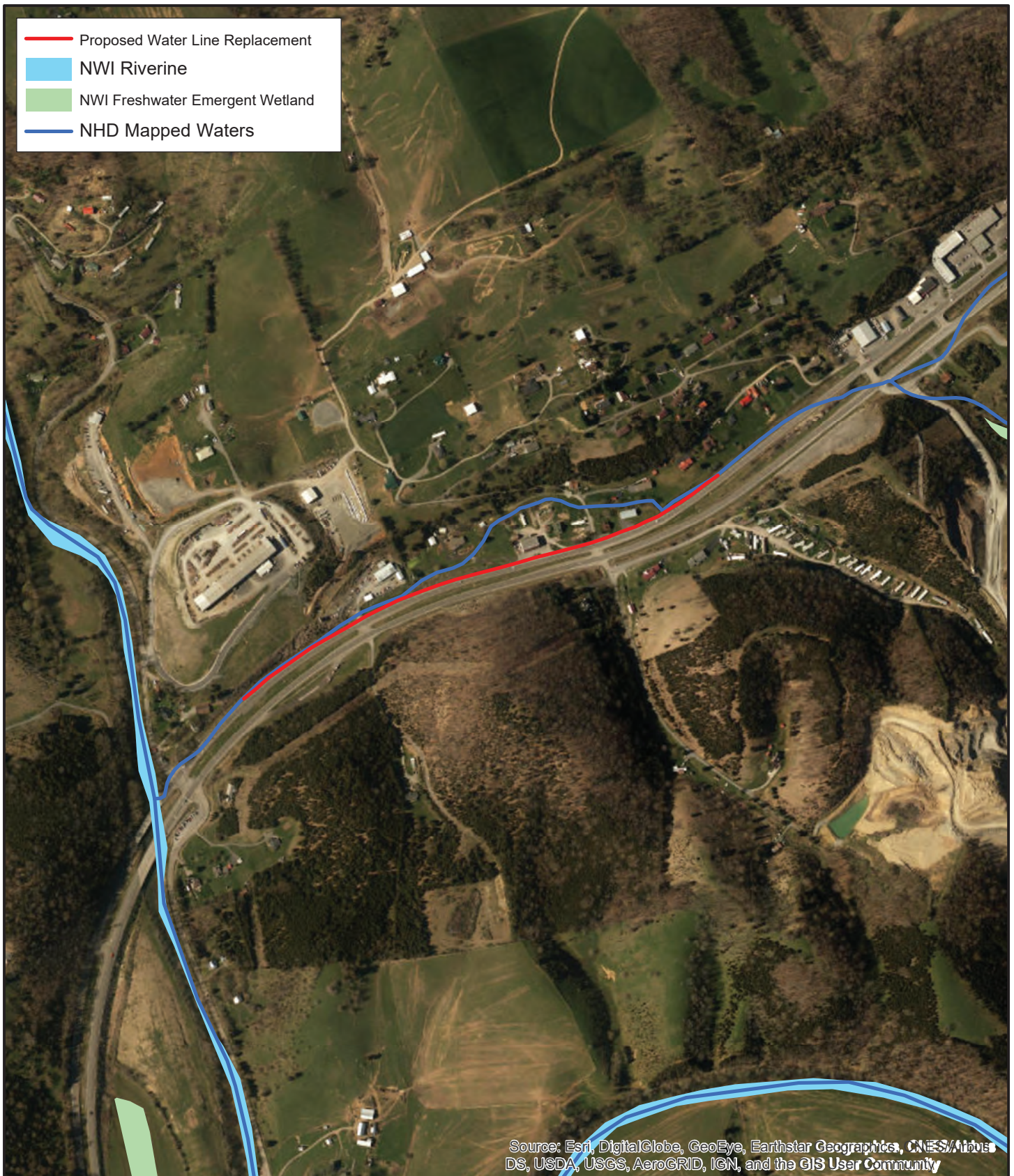
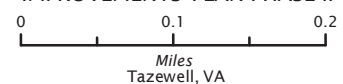
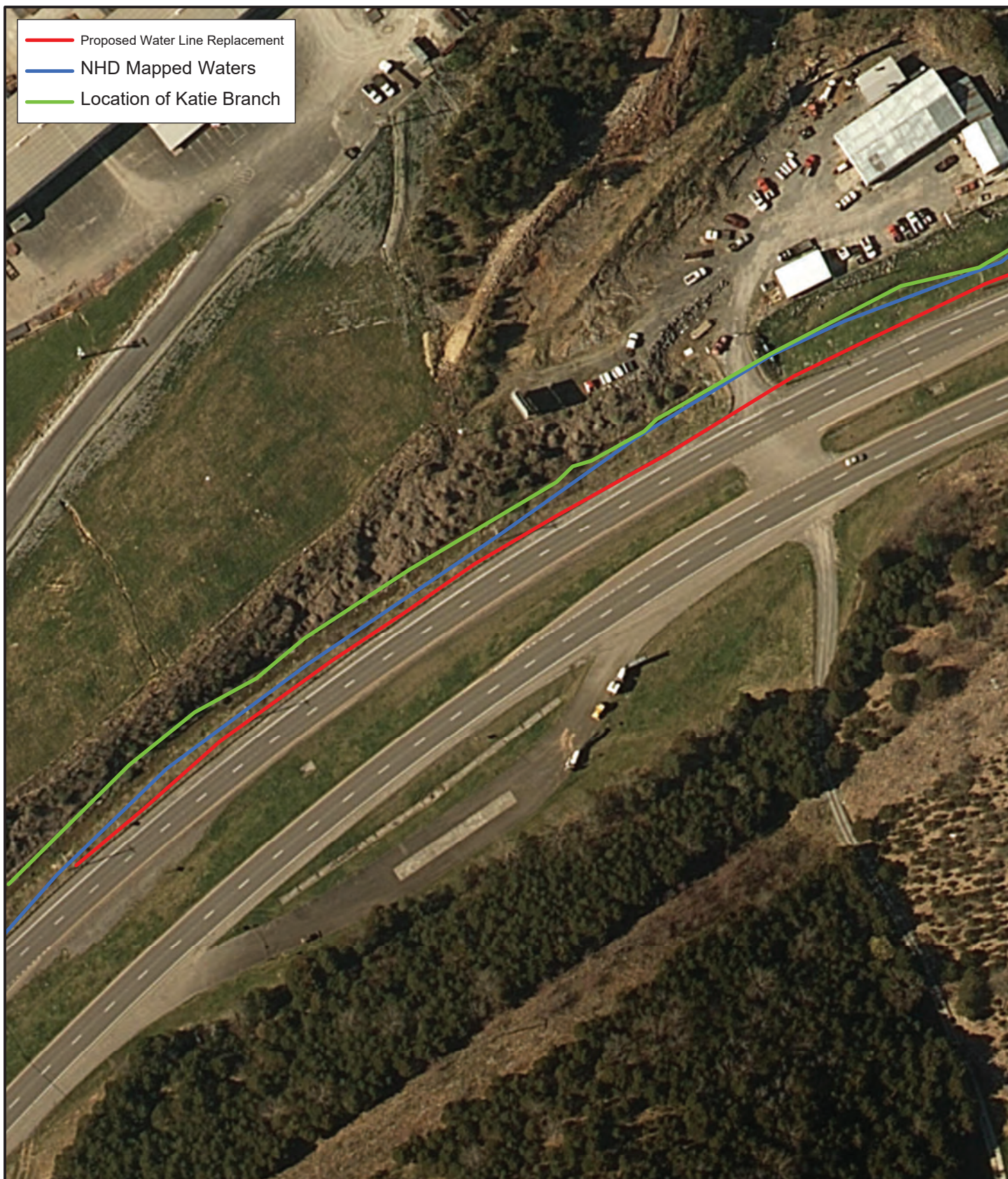


FIGURE 5
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





EEE Consulting, Inc.
Environmental, Engineering and Educational Solutions



Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 6
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

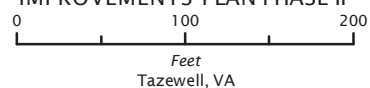


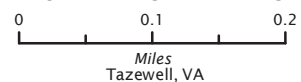


FIGURE 7
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
 TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II

0 50 100
 Feet
 Tazewell, VA



FIGURE 8
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





United States Department of the Interior

FISH AND WILDLIFE SERVICE



Virginia Field Office
6669 Short Lane
Gloucester, VA 23061

Date: 8/23/19

Self-Certification Letter

Project Name: TCPSA EA for Drinking Water Capital Improvements Plan Phase 2

Dear Applicant:

Thank you for using the U.S. Fish and Wildlife Service (Service) Virginia Ecological Services online project review process. By printing this letter in conjunction with your project review package, you are certifying that you have completed the online project review process for the project named above in accordance with all instructions provided, using the best available information to reach your conclusions. This letter, and the enclosed project review package, completes the review of your project in accordance with the Endangered Species Act of 1973 (16 U.S.C. 1531-1544, 87 Stat. 884), as amended (ESA). This letter also provides information for your project review under the National Environmental Policy Act of 1969 (P.L. 91-190, 42 U.S.C. 4321-4347, 83 Stat. 852), as amended. A copy of this letter and the project review package must be submitted to this office for this certification to be valid. This letter and the project review package will be maintained in our records.

The species conclusions table in the enclosed project review package summarizes your ESA conclusions. These conclusions resulted in:

- “no effect” determinations for proposed/listed species and/or proposed/designated critical habitat; and/or
- Action may affect the northern long-eared bat; however, any take that may occur as a result of the Action is not prohibited under the ESA Section 4(d) rule adopted for this species at 50 CFR § 17.40(o) [as determined through the Information, Planning, and Consultation System (IPaC) northern long-eared bat assisted determination key]; and/or
- “may affect, not likely to adversely affect” determinations for proposed/listed species and/or proposed/designated critical habitat.

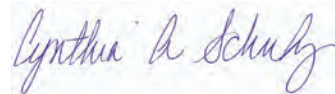
We certify that use of the online project review process in strict accordance with the instructions provided as documented in the enclosed project review package results in reaching the appropriate determinations. Therefore, we concur with the “no effect” or “may affect, not likely to adversely affect” determinations for proposed and listed species and proposed and designated critical habitat. Additional coordination with this office is not needed.

Candidate species are not legally protected pursuant to the ESA. However, the Service encourages consideration of these species by avoiding adverse impacts to them. Please contact this office for additional coordination if your project action area contains candidate species.

Should project plans change or if additional information on the distribution of proposed or listed species, proposed or designated critical habitat becomes available, this determination may be reconsidered. This certification letter is valid for 1 year.

Information about the online project review process including instructions and use, species information, and other information regarding project reviews within Virginia is available at our website http://www.fws.gov/northeast/virginiafield/endspecies/project_reviews.html. If you have any questions, please contact Troy Andersen of this office at (804) 824-2428.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia A. Schulz". The signature is written in a cursive style.

Cindy Schulz
Field Supervisor
Virginia Ecological Services

Enclosures - project review package



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

Phone: (804) 693-6694 Fax: (804) 693-9032

<http://www.fws.gov/northeast/virginiafield/>



In Reply Refer To:

August 22, 2019

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.). Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to

utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Virginia Ecological Services Field Office
6669 Short Lane
Gloucester, VA 23061-4410
(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2019-SLI-5952

Event Code: 05E2VA00-2019-E-14916

Project Name: Tazewell County Public Service Authority Phase 2 of Drinking Water Capital Improvements Plan

Project Type: WATER SUPPLY / DELIVERY

Project Description: The Tazewell County Public Service (TCPSA) Authority Phase 2 Capital Improvements Plan proposes the rehabilitation of eight existing water distribution pump stations, installation of water service meter transmitters, installation of leak detection equipment, and replacement of approximately 4,400 linear feet (lf) of 8-inch ductile iron water line with new 10-inch PVC water line. These updates are necessary given the remaining useful life of the assets, their likelihood for failure, and how critical they are to the overall system infrastructure. Proposed work at each pump station would include interior replacement of existing equipment, replacement of old telemetry to match the current telemetry system used by TCPSA, installation of a new diesel generator to serve as backup power, and a new approximately 10 foot by 20 foot concrete pad. Because the generators at some stations would be placed in the area outside of the existing fence, TCPSA would remove part of the existing perimeter fencing and install new fencing to surround the concrete pad and new generator. TCPSA would build fence at stations where there currently is none to provide security for the new generator. TCPSA would install water transmitters in approximately 1,785 existing water service meter settings to extend the use of TCPSA's existing automated meter reading system. Leak detection equipment would be acquired to identify potential problems throughout the TCPSA system. The 4,400 lf of new water line would be installed immediately adjacent to the current water line and within existing TCPSA right-of-way. All proposed project actions, including all work at the pump stations (including the areas outside of existing fencing), and the new water line would occur on previously disturbed land. The project is receiving funding from the Virginia Department of Health (VDH) Drinking Water Funding Program, which requires an Environmental Review of all projects receiving loan assistance from the fund. Thus, the potential environmental effects of the proposed action are being evaluated in an Environmental Assessment under the National Environmental Policy Act.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.040698412976724N81.79277725728076W>



Counties: Tazewell, VA

Endangered Species Act Species

There is a total of 15 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened
Virginia Big-eared Bat <i>Corynorhinus (=Plecotus) townsendii virginianus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8369	Endangered

Clams

NAME	STATUS
Cumberland Bean (pearlymussel) <i>Villosa trabalis</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6061	Endangered
Finerayed Pigtoe <i>Fusconaia cuneolus</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3038	Endangered
Fluted Kidneyshell <i>Ptychobranthus subtentum</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1397	Endangered
Littlewing Pearlymussel <i>Pegias fabula</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2572	Endangered
Oyster Mussel <i>Epioblasma capsaeformis</i> Population: Wherever found; Except where listed as Experimental Populations There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2099	Endangered
Purple Bean <i>Villosa perpurpurea</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4125	Endangered
Rough Rabbitsfoot <i>Quadrula cylindrica strigillata</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5629	Endangered
Sheepnose Mussel <i>Plethobasus cyphus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/6903	Endangered
Shiny Pigtoe <i>Fusconaia cor</i> Population: Wherever found; Except where listed as Experimental Populations No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2573	Endangered
Slabside Pearlymussel <i>Pleuroaia dolabelloides</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1518	Endangered
Spectaclecase (mussel) <i>Cumberlandia monodonta</i> No critical habitat has been designated for this species.	Endangered

NAME	STATUS
Species profile: https://ecos.fws.gov/ecp/species/7867	
Tan Riffleshell <i>Epioblasma florentina walkeri</i> (= <i>E. walkeri</i>)	Endangered
No critical habitat has been designated for this species.	
Species profile: https://ecos.fws.gov/ecp/species/1247	

Critical habitats

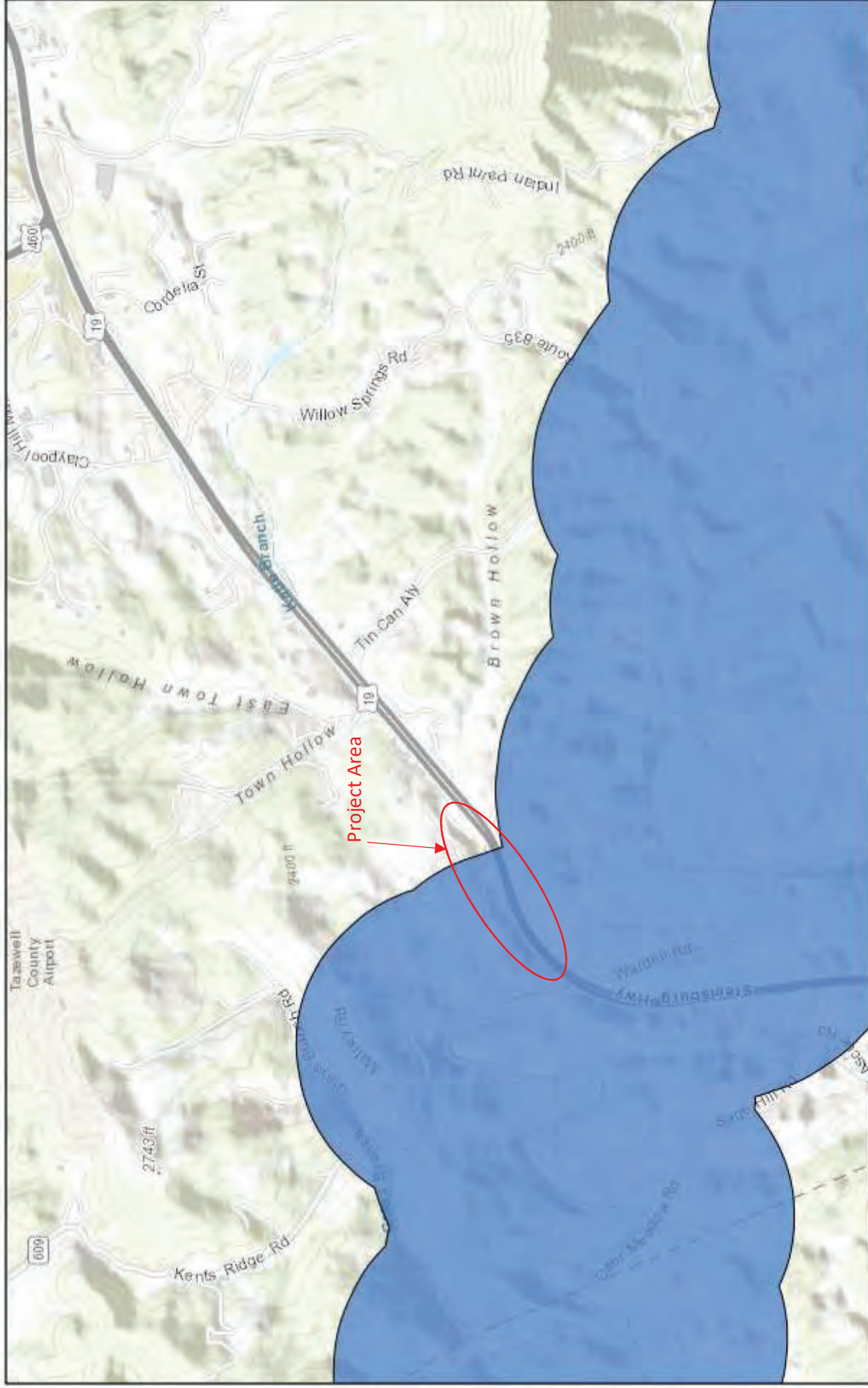
THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

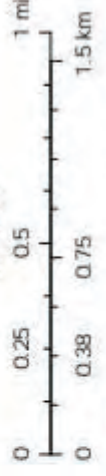
TCPSA Waterline Replacement



August 23, 2019

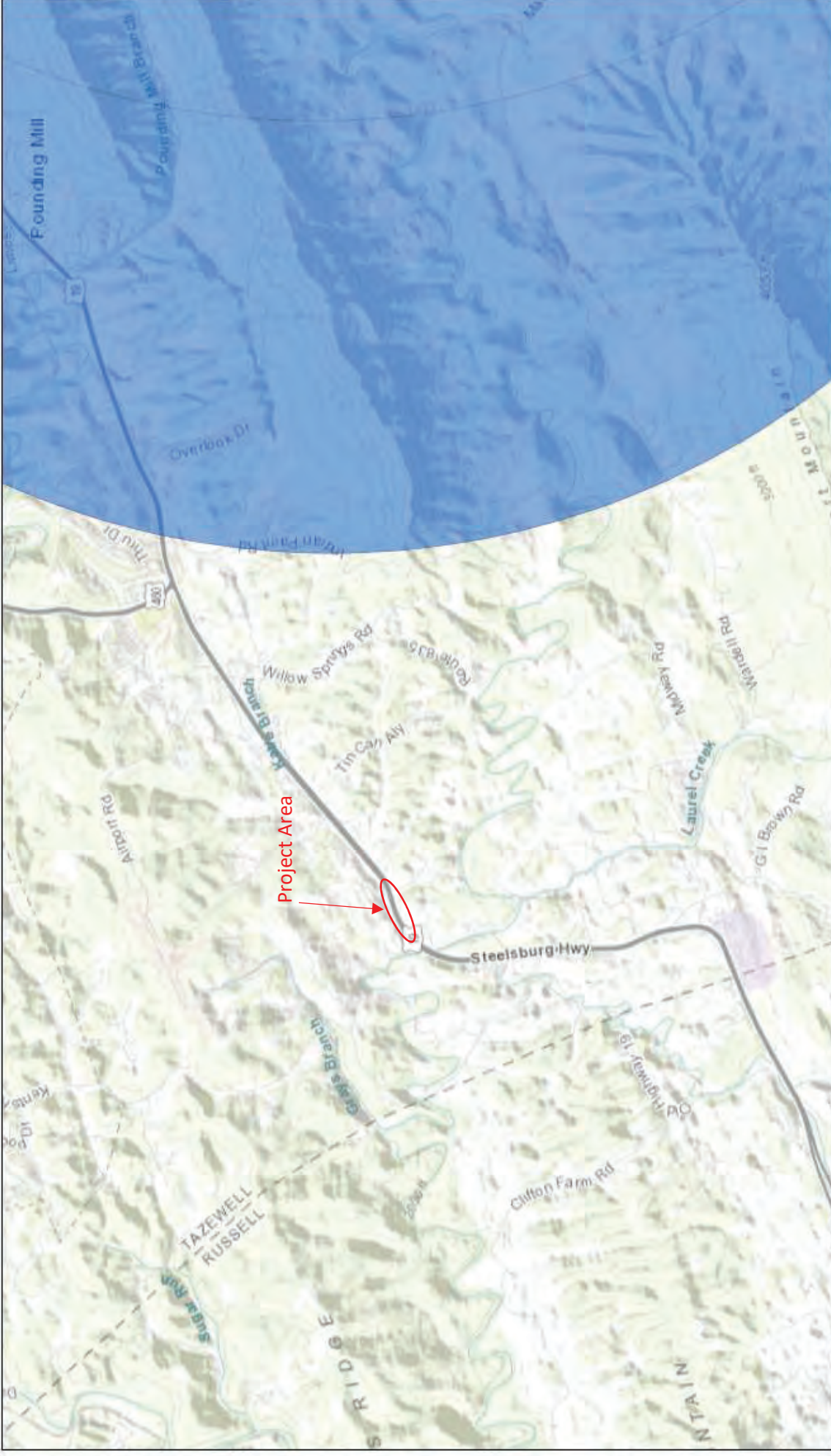
Virginia Critical Habitat (published)

1:36,112



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS,

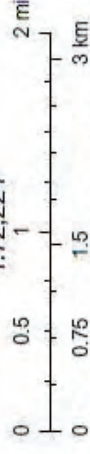
NLEB Locations and Roost Trees



8/23/2019, 1:45:38 PM

NLEB Hibernaculum 5.5 Mile Buffer

1:72,224



Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeBCo, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community

VITA, Esri, HERE, Garmin, INCREMENT P, USGS, METINASA, NGA, EPA, USDA | VA Dept. Game & Inland Fisheries

Species Conclusions Table

Project Name: 19-769 Tazewell County Public Service Authority (TCP&SA) Environmental Assessment for Drinking Water Capital Improvements Plan Phase 2 – Water Line Replacement, Tazewell, VA

Date: 09-10-2019

Note: The work associated with rehabilitating the eight pump stations would occur entirely on previously disturbed land and there would be no vegetation removal (including no tree removal). The pump station sites are developed with gravel surface. There is no natural vegetation or habitat within the pump station sites. Thus, an official species list was not requested for these sites. The determination of effects is based solely on the waterline portion of the proposed project.

Species / Resource Name	Conclusion	ESA Section 7	Notes / Documentation
Indiana Bat (<i>Myotis sodalis</i>)	No suitable habitat present.	No effect.	<p>Neither DCR nor VDGIF returned species observation records within a 2-mile radius of the action areas.</p> <p>No tree clearing is proposed within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action areas.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.</p> <p>The action area is located beyond the 0.25-mi radius of a known NLEB location according to the VDGIF NLEB Winter Habitat and Roost Trees Map.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action</p>
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	No suitable habitat present.	No effect.	

			area. According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified.
Virginia Big-eared Bat (<i>Corynorhinus townsendii virginianus</i>)	No suitable habitat present.	No effect.	<p>According to VDGIF, this species is known to occur in three caves in Tazewell County during the summer, and five caves (Highland, Bland and Tazewell counties) in the winter. It is one of two Virginia bat species which roost in caves in the summer. They are found exclusively in limestone caves.</p> <p>No tree clearing is proposed within the action areas. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>According to the DCR Karst Bedrock Predictive Model, the waterline replacement area lies within karst. Care will be taken to avoid and minimize adverse impacts to karst features during project planning and construction. No filling or “improvement” of sinkholes or cave openings is proposed. If karst is encountered during construction, DCR will be notified</p>
Cumberland bean (<i>Villosa trahalis</i>)	No suitable habitat present.	No effect.	There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.

			<p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Finerayed pigtoe (<i>Fusconaia cuneolus</i>)	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Fluted kidneyshell (<i>Ptychobranthus subtentum</i>)	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF</p>

			<p>database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Littlewing pearl mussel (<i>Pegias fabula</i>)</p>	No suitable habitat present.	No effect.	<p>There are no confirmed observations of this species in the action area subwatershed, Little River-Katie Branch. This subwatershed is within the Upper Clinch watershed. Federally endangered mussels are known to occur in the Clinch River.</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
<p>Oyster mussel (<i>Epioblasma capsaeformis</i>)</p>	No suitable habitat present.	No effect.	<p>This species is known to occur in the Clinch River from the Virginia-Tennessee border to Cedar Bluff, Tazewell County (VDGIF 2009). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p>

			<p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented, in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Purple bean (<i>Villosa perpurpurea</i>)	No suitable habitat present.	No effect.	<p>The purple bean is found only in the Clinch River in Virginia and in Copper Creek, a tributary, where it occurs in low numbers within Tazewell County (Stansbery et al., 1986). Although known from Tazewell County and the Clinch River, it is not known from the action area streams. The DCR search did not identify this species in the subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Rough rabbitsfoot (<i>Quadrula cylindrica strigillata</i>)	No suitable habitat present.	No effect.	<p>The rough rabbitsfoot is rare in the Clinch River in Tazewell and Scott Counties. Although known from Tazewell County and the Clinch River, it is not known from the action area</p>

			<p>streams. The DCR search did not identify this species in the project subwatershed (DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. The VDGIF database search identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Sheepnose mussel (<i>Plethobasus cyphus</i>)	No suitable habitat present.	No effect.	<p>In Virginia, this species is known only from the Clinch River near Dunganon, Scott County, and the Powell River from Flannary Bridge of Lee County (VDGIF 2009). This species is not known from the action area streams or subwatershed, or Tazewell County (VDGIF 2009, DCR 2016).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>

Shiny pigtoe (<i>Fusconaia cor</i>)	No suitable habitat present.	No effect.	<p>The shiny pigtoe occupies the Clinch, Powell and Elk Rivers in southwestern Virginia. Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Slabside Pearlymussel (<i>Pleuronaia dolabelloides</i>)	No suitable habitat present.	No effect.	<p>The slabside pearlymussel is found in the Clinch, Powell, Holston, Elk, Duck, and Buffalo Rivers in Virginia (Terwilliger, 1991). Although known from Tazewell County and the Clinch River, it is not known from the action area streams or subwatershed (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance</p>

			with Virginia Erosion and Sedimentation Control Regulations.
Spectaclecase (mussel) (<i>Cumberlandia monodonta</i>)	No suitable habitat present.	No effect.	<p>The spectaclecase is known to only occur in the Clinch River in Scott County (Terwilliger, 1991). Although known from the Clinch River, this species is not known from action area streams, subwatershed, or Tazewell County (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.</p>
Tan riffleshell (<i>Epioblasma florentina walkeri</i> (=e. walkeri))	No suitable habitat present.	No effect.	<p>Records in Virginia for this species exist only from the Clinch, South Fork Holston, and Middle Fork Holston Rivers; no confirmed species observations in action area streams, subwatershed, or Tazewell County, VA (VDGIF 2009, DCR 2015).</p> <p>No confirmed observations of this species are present within the action area. Neither DCR nor VDGIF database searches identified confirmed records of this species within a 2-mile radius of the action area.</p> <p>There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the</p>

				water line replacement. To minimize effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.
Critical Habitat		Critical habitat is present.	Not likely to adversely affect.	Waterline replacement action area intersections a critical habitat area for the Fluted Kidneyshell according to the Virginia Field Office Critical Habitat Map Tool. There is no in-stream work proposed, and there are no crossings of Katie Branch involved in the water line replacement. To minimize indirect effects to the aquatic ecosystem, strict measures will be implemented in compliance with Virginia Erosion and Sedimentation Control Regulations.

Leah Potts

From: Agbalog, Rose <rose_agbalog@fws.gov>
Sent: Friday, October 18, 2019 2:58 PM
To: Leah Potts
Subject: Re: [EXTERNAL] Emailing: Self Certification, TCPSA Water Line Replacement and Pump Rehabilitation

Hi Leah,

Thanks for the additional information, I have no further comments on this project. Please notify me if the project description or scope changes.

Rose Agbalog
U.S. Fish and Wildlife Service
330 Cummings St. Suite C, Abingdon, VA 24210
276-623-1233 x 25
rose_agbalog@fws.gov

On Fri, Oct 18, 2019 at 2:00 PM Leah Potts <lpotts@eee-consulting.com> wrote:

Hi Rose,

Please find maps for each pump station attached. The generator would be located inside the red polygon on each map. Spill containment measures in accordance with DEQ and Virginia regulations would be located at each diesel generator. A map of the water line replacement is also attached, along with blow-ups showing the actual location of Katie Branch in relation to the work area.

Please let me know if you need anything else.

Thank you,

Leah

Leah M. Potts, EIT, CFM

Environmental Engineer

540.953.0170 ext. 304



EEE CONSULTING, INC.

From: Agbalog, Rose <rose_agbalog@fws.gov>

Sent: Tuesday, October 15, 2019 11:51 AM

To: Leah Potts <lpotts@eee-consulting.com>

Subject: Re: [EXTERNAL] Emailing: Self Certification, TCPSA Water Line Replacement and Pump Rehabilitation

Hi Leah,

Thank you for submitting a project review package for the referenced project. Can you please provide a map that includes the waterline, pump stations and locations of the generators? Additionally, are there containment areas for the diesel generators or anything onsite to contain spills if there is an accident?

Thank you,

Rose Agbalog

U.S. Fish and Wildlife Service
330 Cummings St. Suite C, Abingdon, VA 24210
276-623-1233 x 25

rose_agbalog@fws.gov

On Tue, Oct 15, 2019 at 11:44 AM Southwest Virginia FO, FW5 <svfo@fws.gov> wrote:

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

From: **Virginia Field Office, FW5** <virginiafieldoffice@fws.gov>

Date: Thu, Sep 12, 2019 at 3:08 PM

Subject: Fwd: [EXTERNAL] Emailing: Self Certification, TCPSA Water Line Replacement and Pump Rehabilitation
To: FW5 Southwest Virginia FO <svfo@fws.gov>

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

From: **Leah Potts** <lpotts@eee-consulting.com>

Date: Thu, Sep 12, 2019 at 10:44 AM

Subject: [EXTERNAL] Emailing: Self Certification, TCPSA Water Line Replacement and Pump Rehabilitation

To: VirginiaFieldOffice@fws.gov <VirginiaFieldOffice@fws.gov>

Cc: Suzie Richert <srichert@eee-consulting.com>

Dear Virginia Field Office Staff:

On behalf of Tazewell County Public Service Authority, EEE Consulting is requesting project review for the proposed water line replacement and pump rehabilitation located in Tazewell County, Virginia.

Consultation Code: 05E2VA00-2019-SLI-5952; Event Code: 05E2VA00-2019-E-14916

Attached is the IPaC project review package, including self-certification letter for the proposed action in accordance with the procedures provided on the VAFO website.

Sincerely,

Leah

Leah M. Potts, EIT, CFM

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273



EEE CONSULTING, INC.

201 Church Street, Suite C | Blacksburg, VA 24060

www.eee-consulting.com



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EEE Consulting, Inc.

Environmental, Engineering and Educational Solutions

September 12, 2019

Doris Bush
Environmental Manager, Bristol District
Virginia Department of Transportation
Via email to: Doris.Bush@vdot.virginia.gov

Re: Tazewell County Public Service Authority Phase 2 (2019) Capital Improvements Plan, Tazewell County, Virginia
Ref: EEE Consulting Project No. 19-769

Dear Ms. Bush:

The Tazewell County Public Service Authority (TCPSA) is conducting an environmental review pursuant to the National Environmental Policy Act (NEPA). The TCPSA is preparing this environmental review in accordance with the *Virginia Department of Health – Drinking Water Funding Environmental Review Procedural Guidelines, Revised October 11, 2016* to determine the potential environmental impacts associated with proposed public water service improvements throughout Tazewell County, Virginia. The project will be funded at least partially by the Virginia Department of Health (VDH) Drinking Water Funding Program. The project will be designed to comply with the latest edition of the VDH Waterworks Regulations and the American Water Works Association.

Project Description

The project includes improvements to TCPSA's existing water system under the Phase 2 Capital Improvements Plan at various locations throughout Tazewell County (**Figure 1**). The proposed improvements are listed below. Each improvement can be completed independently.

- upgrades to eight existing pump stations, which will occur entirely within existing disturbed areas
- replacement of approximately 4,400 linear feet of 8-inch iron water line with 10-inch PVC water line (**Figures 2 and 3**)
- installation of water transmitters in approximately 1,785 existing water service meter settings
- installation of leak detection equipment

Rehabilitation of Eight Existing Pump Stations

The eight pump stations to be rehabilitated are:

- Panther Branch Pump Station No. 1
- Panther Branch Pump Station No. 2
- Panther Branch Pump Station No. 3
- Coaldan Pump Station No. 1
- Coaldan Pump Station No. 2
- Dailey's Chapel Pump Station
- Cavitt's Creed Pump Station
- College Estates Pump Station

One of the pump stations to be rehabilitated – the Dailey's Chapel pump station – is shown in Photograph 1 below. The following four stations look similar to the Dailey's Chapel pump station: Panther Branch Pump Station No. 1, Coaldan Pump Station No. 1, Cavitt's Creek Pump Station, and College Estates Pump Station.



Photograph 1. TCPSA Dailey's Chapel Pump Station

Two of the pump stations to be rehabilitated, Panther Branch Pump Station No. 2 and No. 3, are submersible pump stations like that shown in Photograph 2.



Photograph 2. TCPSA Panther Branch Pump Station No. 3

The final pump station, Coaldan Pump Station No. 2, is located in an insulated enclosure shown in Photograph 3.



Photograph 3. Coaldan Pump Station No. 2

Work at each of these eight pump stations is described below.

- Interior replacements will include existing pumps, motors, HVAC, piping, valves, pressure gauges, and electrical.
- A diesel generator on a reinforced concrete pad will be installed with additional fencing if necessary.
- Exterior lighting to be added where needed to provide visibility at each pump station entrance.
- Old telemetry will be replaced to match the current telemetry system used by TCPSA.

Replacement of Existing Waterline

Waterline replacement will occur in existing disturbed areas in Virginia Department of Transportation and/or TCPSA right-of-way in the location depicted in **Figures 5, 6, and 7**. Approximately 4,400 linear feet of 8-inch ductile iron water line will be replaced with new 10-inch PVC water line. This work will continue east from the water line replacement that occurred in Phase 1 of the Capital Improvements Plan.

Installation of Water Service Meter Transmitters and Leak Detection Equipment

Transmitters will be installed in approximately 1,785 existing water service meter settings to extend the use of the TCPSA's existing automated meter reading system. Leak detection equipment will be acquired and installed to identify potential problems throughout the TCPSA system.

Analysis

The proposed project would occur on municipal property or within established right-of-way including work close to and along U.S. Route 19. The water line replacement will be located according to the following parameters:

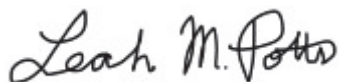
- Off the edged of the paved shoulder, where there are no obstructions such as guardrail and electrical poles
- At guardrail locations, it will be installed on the backside of guardrail where there are no obstructions such as electrical poles
- Where there are guardrail or electrical pole obstructions, it will be installed in the paved shoulder

Traffic management would be implemented during construction of portions of the water line adjacent to U.S. Route 19 (e.g. temporarily closing a shoulder). The presence of additional traffic on local roads from construction vehicles associated with the project would result in short-term minor impacts to traffic during the construction.

We would appreciate a response within 30 days. If you require any further information or wish to discuss the project, please contact me at (540) 953-0170 or lpotts@eee-consulting.com.

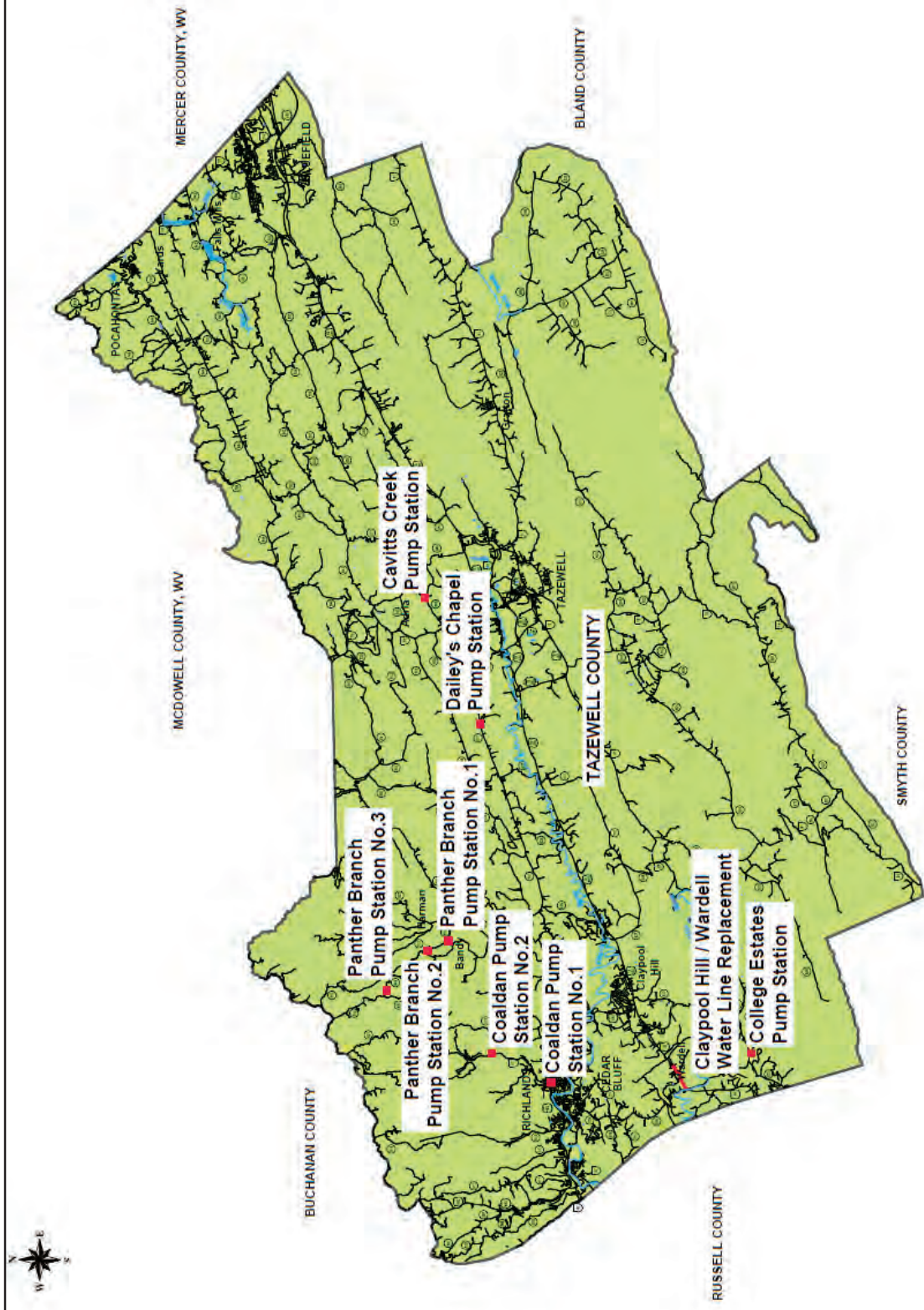
Sincerely,

EEE Consulting, Inc.



Leah Potts, EIT

Attachments: Figures



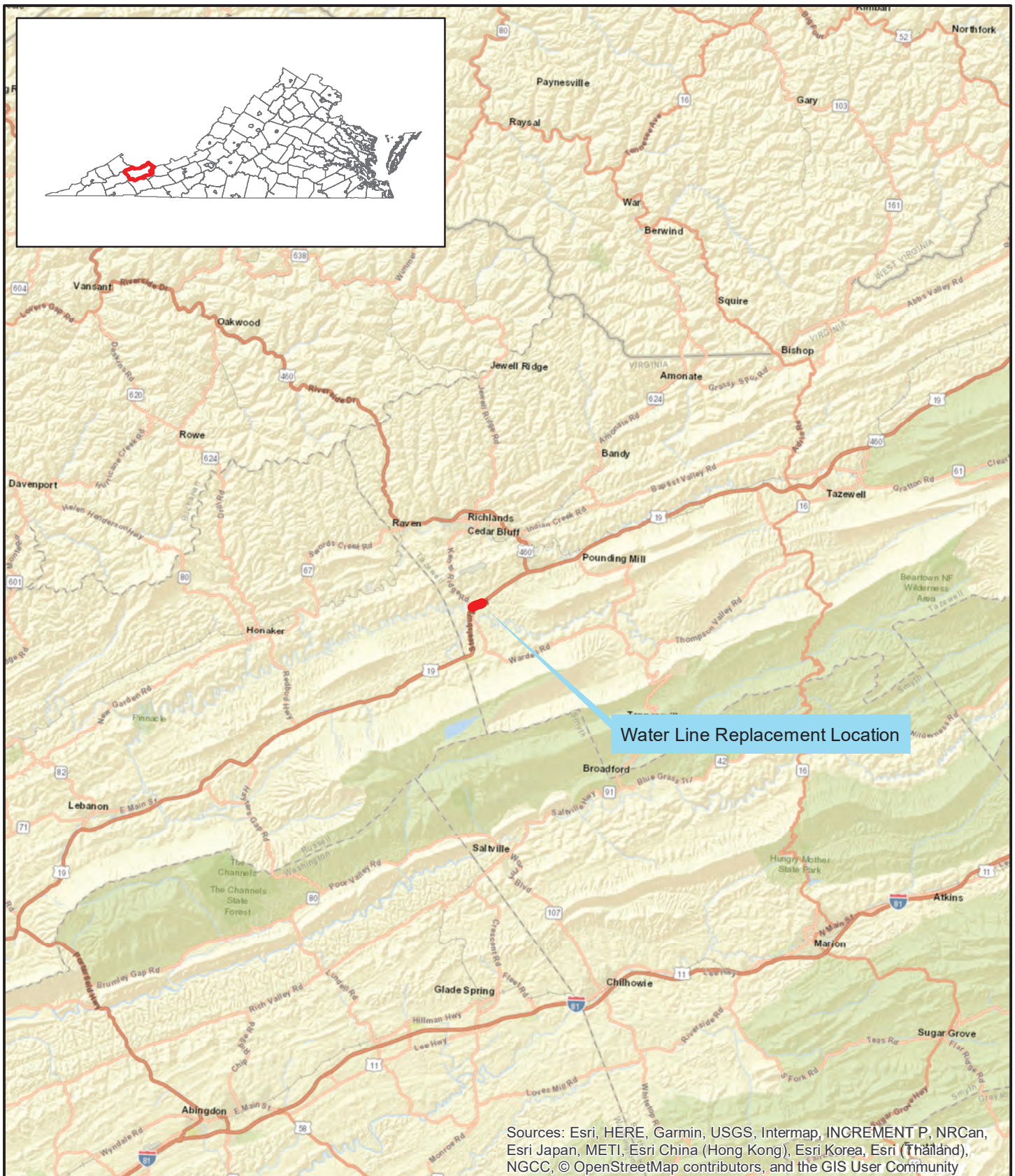


FIGURE 2
WATER LINE REPLACEMENT LOCATION
 TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II

0 6 12
 Miles

Tazewell, VA



Prepared by L. Potts, 08/21/2019
 Sources: ESRI Basemaps
 Projection: NAD 1927 StatePlane Virginia South FIPS 4502

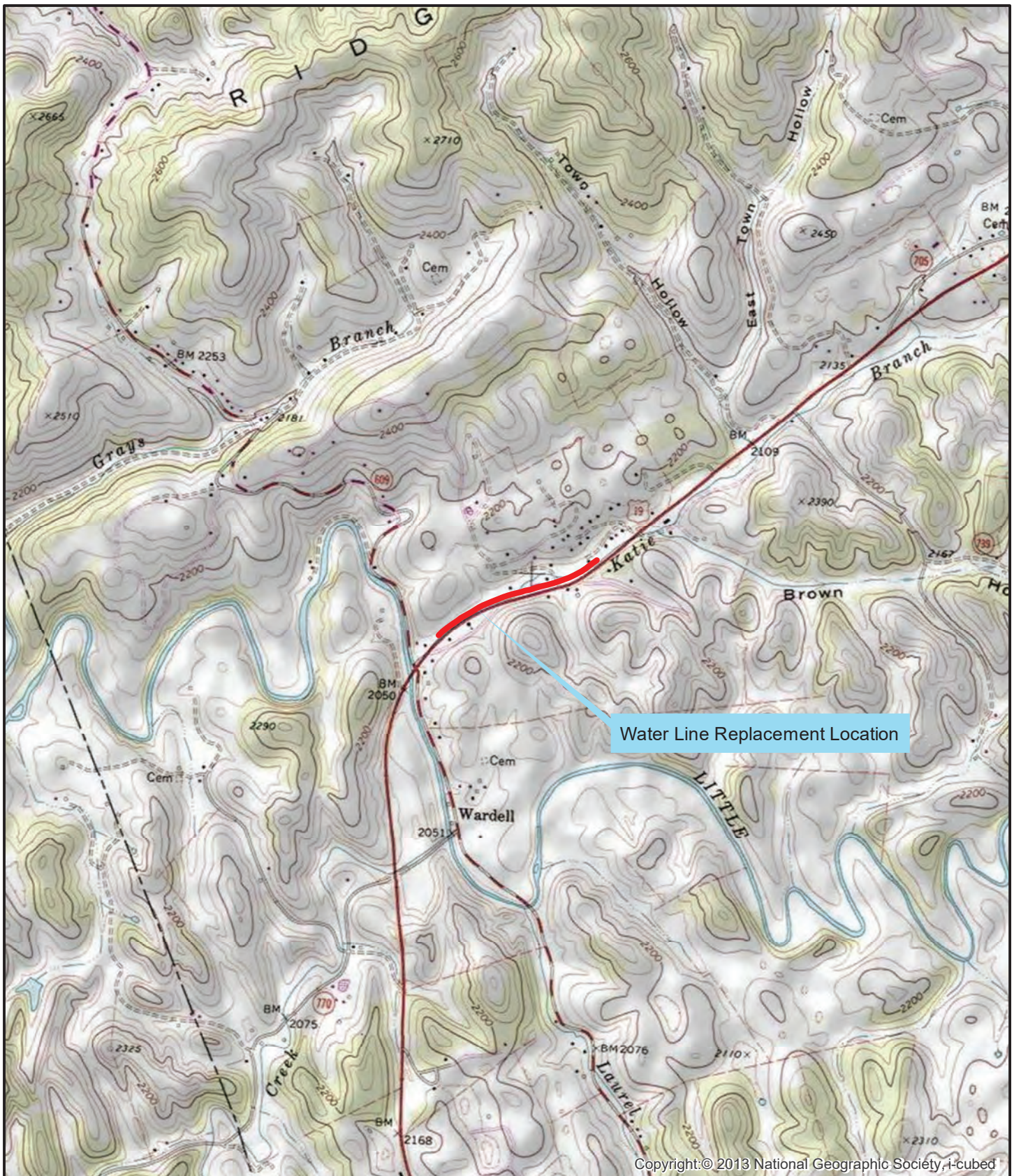


FIGURE 3
WATER LINE REPLACEMENT
TOPOGRAPHIC MAP

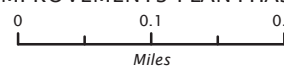
TCPSA DRINKING WATER CAPITAL
 IMPROVEMENTS PLAN PHASE II

0 0.35 0.7
 Miles
 Tazewell, VA

1:24,000



FIGURE 4
WATER LINE REPLACEMENT AERIAL
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



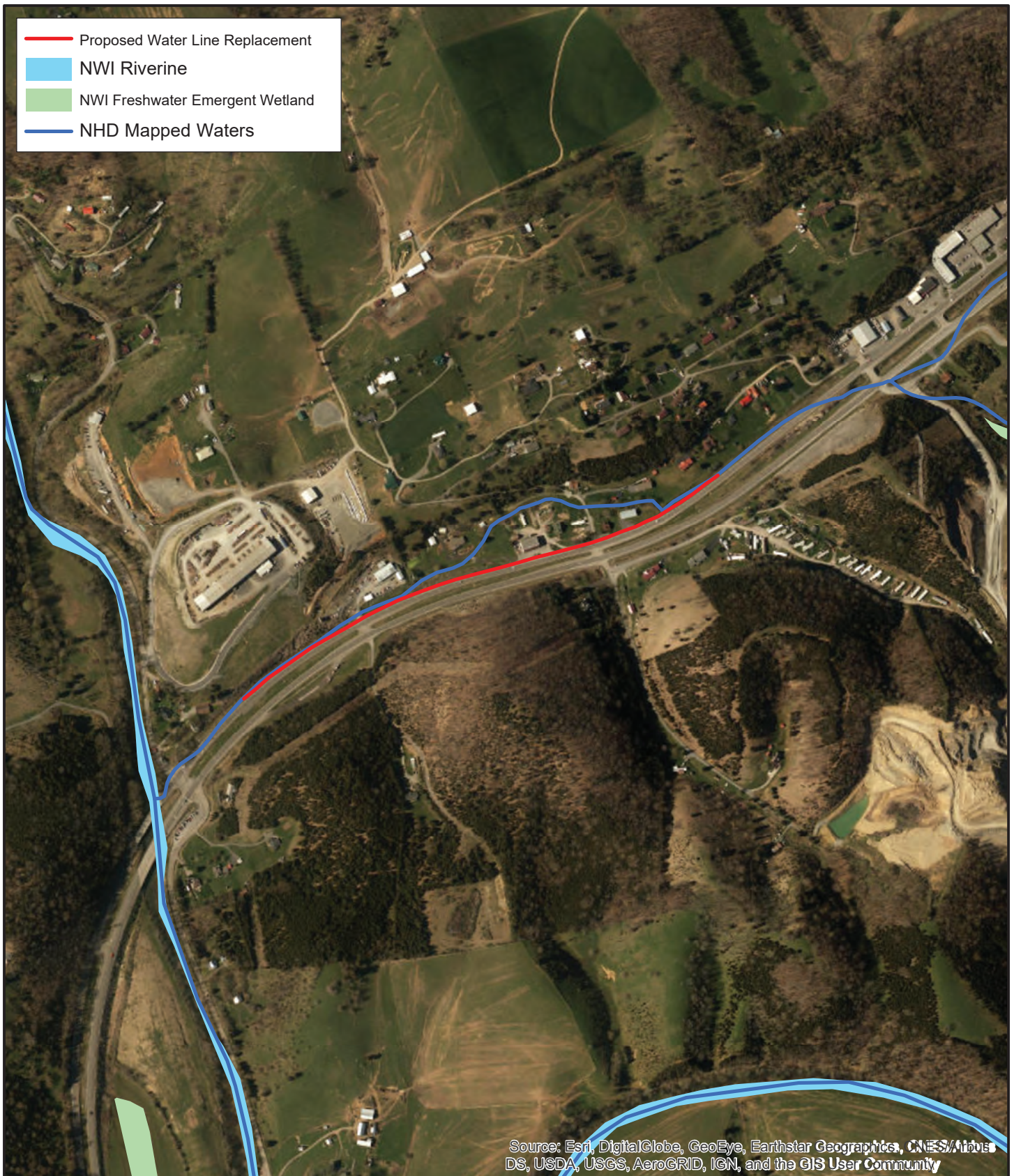
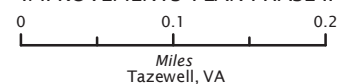
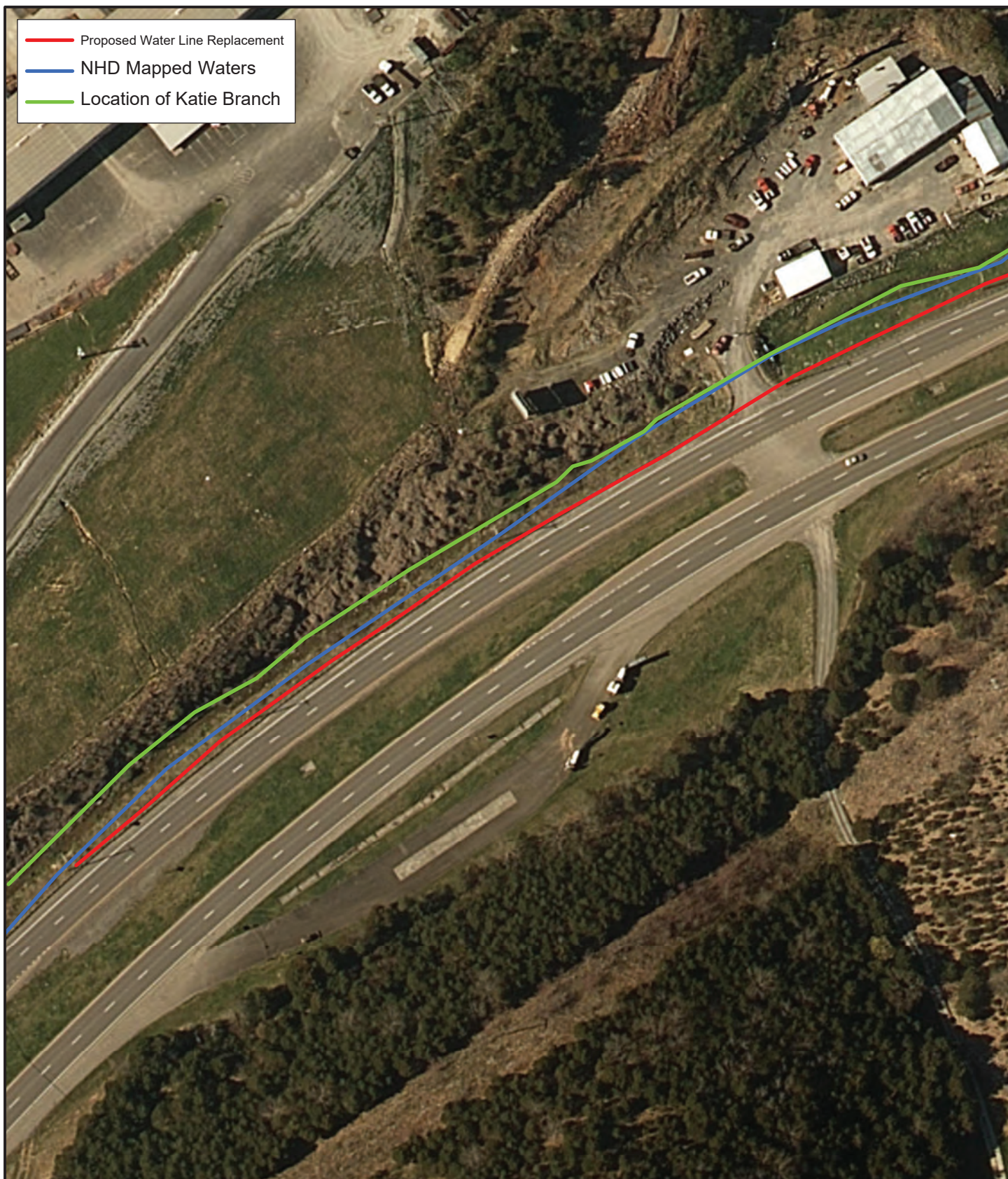


FIGURE 5
WATER LINE REPLACEMENT WITH
OVERVIEW OF WATER RESOURCES
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



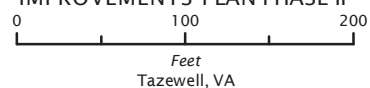


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Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 6
WESTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II





- Proposed Water Line Replacement
- NHD Mapped Waters
- Location of Katie Branch



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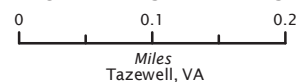
Prepared by L. Potts, 08/21/2019
Sources: ESRI Basemaps
Projection: NAD 1927 StatePlane Virginia South FIPS 4502

FIGURE 7
EASTERN WATER LINE REPLACEMENT
AREA WITH NHD DATASET
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II

0 50 100
Feet
Tazewell, VA



FIGURE 8
WATER LINE REPLACEMENT WITH
100 YEAR FLOODPLAIN
TCPSA DRINKING WATER CAPITAL
IMPROVEMENTS PLAN PHASE II



Leah Potts

From: Bush, Doris <doris.bush@vdot.virginia.gov>
Sent: Wednesday, September 18, 2019 1:45 PM
To: John Watson; Leah Potts
Subject: Fwd: Environmental Review Request: TCPSA pump rehabilitation and water line replacement
Attachments: TCPSA EA Ph II - VDOT - 20190912 - Final.pdf; VDOT Attachments Combined 20190912.pdf

Bristol Environmental has no issues with this work provided environmental resources within VDOT's existing rights of way are not impacted.

John, if you have further comments or concerns please respond to Ms Potts.

If I can be of further assistance please let me know. Thank you.

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

From: **Leah Potts** <lpotts@eee-consulting.com>
Date: Thu, Sep 12, 2019 at 2:15 PM
Subject: Environmental Review Request: TCPSA pump rehabilitation and water line replacement
To: doris.bush@vdot.virginia.gov <doris.bush@vdot.virginia.gov>
Cc: Suzie Richert <srichert@eee-consulting.com>

Dear Ms. Bush,

Tazewell County Public Service Authority is preparing an Environmental Assessment for eight proposed pump rehabilitation sites and a proposed water line replacement. This email is to provide you with the attached project information and request your review and input on the proposed project. Please contact me with any questions.

Regards,

Leah

Leah M. Potts, EIT, CFM

Environmental Engineer

540.953.0170 ext. 304

Cell: 540.808.3273

[LinkedIn](#)



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