

14-0343



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March 18, 2020

By Email

Mr. Steven VanderPloeg
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Norfolk District, Western Virginia Regulatory Section
9100 Arboretum Parkway, Suite 235
Richmond, VA 23236

Re: James River Water Supply Project (NAO-2014-00708) - Supplemental Information Package

Dear Mr. Vanderploeg:

On behalf of the James River Water Authority (JRWA), Timmons Group is pleased to submit this Supplemental Information Package for the proposed James River Water Supply Project (NAO-2014-00708). These materials are being provided to facilitate the U.S. Army Corps of Engineers' review of JRWA's pending permit application. This information is intended to supplement, and in some cases update or revise, the information provided in the Joint Permit Application submitted on March 12, 2014.

The package is being provided in electronic format for download from the Timmons file transfer protocol system. We would be happy to provide paper copies upon your request.

Should you have any questions or require additional information regarding this project, please contact JRWA's counsel, Mr. Justin Curtis (justin@aqualaw.com), or Mr. Eli Wright (eli.wright@timmons.com) at your earliest convenience. Thank you for your attention to this project.

Sincerely,
Timmons Group

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Principal

Enclosure (as stated)

Cc: Ms. Jennifer Frye, U.S. Army Corps of Engineers
Mr. Tom Walker, U.S. Army Corps of Engineers
Mr. Roger Kirchen, Virginia Department of Historic Resources
Mr. Randy Owen, Virginia Marine Resources Commission
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**James River Water Supply Project
Supplemental Information Package
NAO-2014-0070**

March 2020

PREPARED BY:

TIMMONS GROUP 

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EXECUTIVE SUMMARY

This Supplemental Information Package is provided as additional material in association with the permit authorization request for the proposed James River Water Supply Project (NAO-2014-00708 or 'Project'). These materials are being submitted on behalf of the James River Water Authority (JRWA or 'Applicant') in response to the U.S. Army Corps of Engineers' (USACE) discretionary decision that the standard individual permit process should be followed to further evaluate the proposed project. This information is intended to supplement, and in some cases update or revise, the information provided in the Joint Permit Application (JPA) submitted on March 12, 2014.

The purpose of the proposed project is to provide a new and reliable raw water supply of sufficient quantity to meet the short and long-term needs of Fluvanna and Louisa Counties for delivery to an agreed-upon T interconnection point planned for use by Fluvanna and Louisa Counties. The proposed project is necessary to meet the near-term and long-term water demands associated with the Counties of Fluvanna and Louisa (Counties).

The need for a new joint water supply was first identified in the mid-1990's and ultimately compelled the Counties to form the JRWA to construct and operate the James River Water System for the mutual benefit of communities in both jurisdictions. JRWA was given responsibility by the Counties to provide a convenient fixed delivery point for a water supply to the Counties. This was to be achieved through the construction, operation, and maintenance of a raw water intake on the James River and conveyance of the water to an agreed-upon interconnection point located west of Columbia and north of Route 6.

The initial 2014 JPA was submitted to regulatory agencies seeking water withdrawal authorization for a water intake structure on the north bank of the James River at a site just upstream of its confluence with the Rivanna River. The JPA included a request for Rivers and Harbors Act of 1899 (RHA) § 10 and Clean Water Act (CWA) § 404 authorization from the USACE under Nationwide Permit (NWP) 12, Section 401/Virginia Water Protection (VWP) permit authorization from the Virginia Department of Environmental Quality (DEQ), and state-owned bottomlands impact authorization from the Virginia Marine Resources Commission (VMRC) for an intake structure and associated raw water transmission line to the agreed-upon T interconnection point at Route 6.

On November 20, 2015, DEQ issued an Individual Permit for the Project (VWP Individual Permit No 14-0343) and issued subsequent permit modifications on October 25, 2016 and October 30, 2017. A third minor modification request to the DEQ permit was submitted January 31, 2018 and remains pending. On March 14, 2017 VMRC issued a permit for the encroachment on state-owned bottomlands in association with the Project (VMRC Permit No. 2014-0343).

Since the submission of the JPA in March 2014, the USACE, in cooperation with the Applicant, has been in ongoing coordination with the Virginia Department of Historic Resources (DHR), and Section 106 consulting parties to work through the National Historical Preservation Act (NHPA) Section 106 consultation process. On September 10, 2019 USACE issued a letter acknowledging parties' concerns and uncertainty regarding the proposed Project's impacts to historic properties. The USACE determined further analysis of the public interest was necessary.

JRWA has developed this package to supply the USACE with supplemental information necessary to review the project in accordance with the standard individual CWA § 404 permit

process. JRWA also has taken this opportunity to update and revise information that had been included in the original 2014 JPA.

The Project is proposed to be located in Fluvanna County immediately southwest of Columbia, Virginia within an area known as 'Point of Fork'. The project area is surrounded and crossed by modern man-made improvements including Old Columbia Road (State Road 624), a CSX rail line, Dominion Power easement, dual Colonial Gas pipelines, agricultural/silviculture fields, legacy canal features, and residential structures. The proposed water withdrawal structure and pump station would be located on the north bank of the James River just upstream of the confluence with the Rivanna River. The pump station would be built on a JRWA-owned parcel (tax parcel 61-A-4A) which will be accessed via Old Columbia Road. The proposed raw water transmission line will generally traverse agriculture and silviculture lands northwest of the pump station and pass under a CSX rail line and right-of-way. North of the CSX rail line, the project alignment will generally follow Dominion Power and Colonial Gas pipeline easements eventually passing under the Rivanna River adjacent to an existing Dominion and Colonial Gas Pipeline crossing. The project area will terminate at Route 6 in the vicinity of a Colonial Gas pipeline-owned substation. The infrastructure associated with this project includes a pump station, raw water intake, wetwell influent pipe, pump station wetwell, pump, piping and valve equipment, electrical and pump control equipment, a raw water main, and improvements to an existing access road.

The proposed Project has been reevaluated and designed to avoid and minimize impacts to aquatic resources to the maximum extent practicable. As proposed, the Project would result in unavoidable impacts to aquatic resources including 1,015 square feet (0.023 acres) of permanent wetland impacts, 248 square feet (0.006 acres) of permanent conversion impacts, 663 square feet (0.015 acres) of temporary wetland impacts, 148 linear feet (3,638 square feet) of permanent stream impacts, and 796 linear feet (64,135 square feet) of temporary stream impacts. Compensatory mitigation for unavoidable permanent impacts is proposed through the purchase of off-site mitigation credits from wetland and stream mitigation banks at standard mitigation ratios.

A review pursuant to 33 C.F.R. § 320.4(a) indicates that the public interest review factors weigh overwhelmingly in favor of authorizing the proposed Project. The Project has been designed to have a de minimis impact on environmental resources. The long-term aesthetic impacts of the Project on the landscape are limited to the modest pump station structure designed to blend into the landscape and be shielded from public view and recreational users of the James River. The land disturbed for installation of the water main will be completely restored following construction. Water quality and aquatic life will be protected during the construction and long-term operation of the water supply project through compliance with various state regulations and permits that have been previously obtained by JRWA. The most prominent potential detrimental effect of the Project will be on historic properties. The Applicant has been actively engaged in the NHPA Section 106 consultation process and comments and concerns of the USACE, DHR, and consulting parties have been expressed and will be addressed in a forthcoming revision to the treatment plan. A robust package of mitigation measures is being developed that will minimize these impacts below the level of significance. However, even if the proposed mitigation does not neutralize all detrimental effects to historic properties, they pale in comparison to the demonstrable public benefits of this necessary water supply project.

This Project will provide a much-needed short and long-term public water supply for the Counties. The land use and planning goals embodied in Fluvanna and Louisa Counties' respective

comprehensive plans cannot be fulfilled absent the ability of these local government entities to provide a source of public water to growth areas that presently have overtaxed or nonexistent public water supplies. Although the Project will have a detrimental effect on historic resources, those impacts can be mitigated and are far outweighed by the long-term public benefits of the Project. Those potential detrimental effects (to the extent they cannot be fully neutralized through mitigation) are unavoidable because the proposed Project is the only practicable alternative that fulfills the project purpose and need. Fulfilling that Project purpose and need through the proposed Project is unquestionably in the public interest.

Finally, in accordance with the CWA § 404(b)(1) guidelines, the Applicant has prepared an alternatives analysis to determine if the proposed Project is the Least Environmentally Damaging Practicable Alternative (LEDPA). This analysis evaluated a reasonable range of alternatives that could potentially accomplish the purpose and need of the proposed Project. The alternatives analysis includes evaluation of alternative water supply sources, build alternatives, and the no-action/no-permit alternative.

The five evaluated alternative water sources include the Rivanna River, Lake Anna, Cobbs Creek Reservoir, groundwater, and purchased water from neighboring communities. However, each of these potential alternative water sources have readily apparent drawbacks that eliminate them from consideration as practicable alternatives.

Evaluated Build Alternatives include six alternative raw water intake locations, with twelve different routing sub-alternatives, including the site of the proposed Project. The alternative intake locations extended along the James River from just west of the Route 15 bridge near Brems Bluff in Fluvanna County to east of Columbia past the Fluvanna County/Goochland County border along Route 6. For each Build Alternative, one or more water main route variations were evaluated as sub-alternatives. Build Alternatives and routing sub-alternative were evaluated for practicability by taking existing technology, logistics and costs into consideration. A detailed review of constructability, site suitability, and an analysis of project costs through the life of the project were considered. Build Alternatives were also reviewed for their ability to meet the project purpose and need. Finally, the environmental impacts were considered, including impacts to aquatic resources, federally recognized threatened and endangered species, and cultural resources.

Based on the alternatives analysis it is determined that Alternative 6, the proposed Project, is the only practicable alternative that meets the Project purpose and need while minimizing environmental impacts to the greatest extent practicable. The proposed Project offers convenient access to James River for the JRWA water supply project. By locating the withdrawal structure in Fluvanna County, the Applicant can realize increased distribution efficiency, as communities in Fluvanna County and Louisa County are the intended users. Additionally, the specific location on the Hammond Parcel owned by JRWA provides the water quality and quantity needed for the Project. After consideration of available alternatives to meet the needs of the Project, the Preferred Alternative as proposed, is considered the LEDPA.

**JAMES RIVER WATER SUPPLY PROJECT
SUPPLEMENTAL INFORMATION PACKAGE**

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<i>Appendix K-1</i>	Public Notice - Central Virginia Newspapers Review Order Confirmation
<i>Appendix K-2</i>	Public Meeting PowerPoint: James River Water Authority – Water Withdrawal Permit Relocation 02/04/2014
<i>Appendix K-3</i>	Louisa County James River Water Authority Public Information Meeting PowerPoint 12/16/2014
<i>Appendix K-4</i>	Louisa County James River Water Authority Public Information Meeting PowerPoint 04/07/2015
<i>Appendix K-5</i>	Public Notice VMRC and DEQ in Richmond Times-Dispatch 05/07/2015 (actual size on 11x17)
<i>Appendix K-6</i>	Public Notice VMRC and DEQ in Richmond Times-Dispatch 05/07/2015 (200% size on 8.5x11)
<i>Appendix K-7</i>	DEQ Public Notice – Environmental Permit
<i>Appendix K-8</i>	County of Fluvanna Notice of Public Hearing: Public Hearing on SUP 15:08
<i>Appendix K-9</i>	Notice of Public Hearing James River Water Authority
<i>Appendix K-10</i>	Commonwealth of Virginia Marine Resource Commission Notice of Public Hearing
<i>Appendix K-11</i>	James River Water Authority Project Brief PowerPoint 08/2018

APPENDIX L SECTION 7 DOCUMENTS

<i>Appendix L-1</i>	IPaC Official Species List
<i>Appendix L-2</i>	NLEB Consistency Letter
<i>Appendix L-3</i>	Species Conclusion Table

APPENDIX M SECTION 106 DOCUMENTS

<i>Appendix M-1</i>	NHPA § 110(K) JRWA Response
<i>Appendix M-1-1</i>	JRWA Compliance with Section 110(k) of the National Historic Preservation Act Letter
<i>Appendix M-1-2</i>	Counsel Report on Eric Mai Declaration

ACRONYMS AND ABBREVIATIONS

AC	Acres
ACHP	Advisory Council on Historical Preservation
ACS	American Community Survey
APE	Area of Potential Effect
Applicant	James River Water Authority
BMP	Best Management Practices
CCR	Cobbs Creek Reservoir
CFR	Code of Federal Regulations
CFS	Cubic Feet per Second
CMU	Concrete Masonry Units
Counties	Louisa County and Fluvanna County
CR	Compensation Requirement
CWA	Clean Water Act
CZMA	Coastal Zone Management Act
DEQ	Virginia Department of Environmental Quality
DHR	Virginia Department of Historic Resources
DIP	Ductile Iron Pipe
Dominion	Dominion Energy, Dominion Virginia Power, Virginia Power and Electric Company or any other previous name utilized by Dominion Energy
ECS	Erosion and Sediment Control
ECTI	East Coast Transmission, Inc
EJ	Environmental Justice
EJSCREEN	Environmental Justice Screening Tool
EPA	Environmental Protection Agency
FESE	Federally Endangered/State Endangered

FT	Federally Threatened
FTST	Federally Threatened/State Threatened
FPS	Feet per Second
FT	Feet
GPD	Gallons per Day
HDD	Horizontal Directional Drilling
IF	Impact Factor
IPaC	Information, Planning, and Consultation System
JD	Jurisdictional Determination
JPA	Joint Permit Application
JRWA	James River Water Authority
LEDPA	Least Environmentally Damaging Practicable Alternative
LF	Linear Feet
MGD	Million Gallons per Day
MOA	Memorandum of Agreement
NHD	National Hydrography Dataset
NHL	Virginia's National Historic Landmarks
NHPA	National Historical Preservation Act
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
O&M	Operations and Maintenance
OPPC	Opinion of Probable Project Cost
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetlands

POW	Palustrine Open Water
PSS	Palustrine Scrub-Shrub Wetland
PJD	Preliminary Jurisdiction Determination
Project	James River Water System Project
Proposed Action	Build Alternative 6/ Preferred Alternative/ Hammond 1
R3	Perennial Stream Channel
RCI	Reach Condition Index
RHA	Rivers and Harbors Act of 1899
Route 624	Point of Fork Road
Route 656	Bremo Road
RWSA	Rivanna Water & Sewer Authority
R/W or ROW	Right-of-Way
RWPS	Raw Water Pump Stations
SHPO	State Historic Preservation Office
SQ FT	Square Feet
SQ MI	Square Miles
ST	State Threatened
T&E Species	Threatened and Endangered Species
USACE	US Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	US Fish and Wildlife Service
USGS	United States Geological Survey
USM	United Stream Methodology
VaFWIS	Virginia Fish and Wildlife Information Service
VCRIS	Virginia Cultural Resources Information System

VDGIF	Virginia Department of Game and Inland Fisheries
VDH	Virginia Department of Health
VDOT	Virginia Department of Transportation
VESCL	Virginia Erosion & Sediment Control Law
VESCR	Virginia Erosion & Sediment Control Regulations
VGIN	Virginia Geographic Information Network
VLR	Virginia Landmarks Register
VMRC	Virginia Marine Resources Commission
VPDES	Virginia Pollutant Discharge System
VWP	Virginia Water Protection
WERMS	Wildlife Environmental Review Map Service
WOTUS	Waters of the United States
WSWG	Water Supply Working Group
WTP	Water Treatment Plant

1.0 INTRODUCTION

This Supplemental Information Package is submitted on behalf of the James River Water Authority (JRWA or 'Applicant'), a political subdivision of the Commonwealth of Virginia and a water authority created under the Virginia Water and Waste Authorities Act, Va. Code §§ 15.2-5100 et seq. This information is provided as additional material in association with the permit authorization request for the proposed James River Water System Project to be located near Columbia, Virginia (NAO-2014-00708 or 'Project'). The information in this package is provided in response to the U.S. Army Corps of Engineers (USACE) determination that the standard individual permit process is warranted to further evaluate the proposed project as stated in a letter received by the Applicant and dated September 10, 2019 (see [Appendix D-10](#)). The information provided herein is intended to supplement, and in some cases update or revise, the information provided in the Joint Permit Application submitted on March 12, 2014.

In accordance with 33 CFR § 325.1(c) the Applicant has prepared the standard application form (see [Appendix A: ENG Form 4345](#)). Additional supplementary material is provided throughout this support document and attachments. Per 33 CFR § 325.1(f), the Applicant will provide permit fees should the district engineer determine they are required. Please refer to [Appendix B: Regulatory Compliance Checklist](#) for a complete listing of applicable regulatory requirements addressed in this Supplemental Information Package.

The Supplemental Information and Alternatives Analysis have been developed using the best available information and field visits to confirm site conditions where feasible and practicable at the time of this submission. Timmons Group in conjunction with our Project Team Members, GAI Consultants, Faulconer Construction and MEB, have utilized this factual information along with best professional judgment to develop the basis of evaluation for this report and believe any other consultants or contractors with similar background and experience coupled with access to the same information would reach the same reasonable conclusions as presented in this supplemental information package.

2.0 PROJECT INFORMATION

The details in the Project Information section is provided per 33 CFR § 325.1 (d) (1).

2.1 Project History

2.1.1 Initial Efforts by Fluvanna and Louisa Counties to Coordinate Long-Term Water Supply Needs

The need for additional water supplies for the Counties of Louisa and Fluvanna (Counties) was first identified in the mid-1990's following completion of a *Water Resources Study for the Zion Crossroads Area* (1996) commissioned jointly by the Counties. In 2002, the Water Supply Working Group (WSWG) was commissioned by the Counties to prepare an agreement for the development of a framework for a joint water supply project to meet the needs of the Counties. That same year, a statewide drought led then-Governor Mark Warner to issue Executive Order 39 (the Virginia Water Supply Initiative), which mandated statewide long-range water supply planning to ensure growth projections could be met. In 2003, the WSWG drafted a *Memorandum of Understanding between the Fluvanna County Board of Supervisors and the Louisa County Board of Supervisors Concerning Provision of Public Water Service*. The agreement outlined the potential framework for a shared water system now known as the James River Water System Project. On March 30, 2004 the Counties officially executed the Memorandum (see [Appendix C-1](#)).

On April 2, 2004 Fluvanna County, acting on behalf of the Counties, submitted a Joint Permit Application (JPA) for three permits necessary to construct the Project: (1) Authorization under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act of 1899 (RHA) from the USACE via Nationwide Permit (NWP) 12; (2) CWA Section 401 authorization from the Virginia Department of Environmental Quality (DEQ) via the Virginia Water Protection (VWP) Program for water withdrawal and impacts to waters under state jurisdiction; (3) and authorization to use state-owned bottomlands from the Virginia Marine Resources Commission (VMRC).

These authorization requests initially proposed a water intake structure to be located on the north bank of the James River at Brems Bluff, at the end of Route 657, off Route 15 in Fluvanna County. At the time, it was anticipated Fluvanna and Louisa Counties would be able to partner with Dominion to utilize their existing intake structure and contract with East Coast Transmission, Inc. (ECTI) to utilize their existing raw water main that runs to the Tenaska Power Plant located in Fluvanna County. On March 16, 2006 the USACE issued a concurrence letter stating the project satisfied the conditions of NWP 12 (USACE Project Number 04-V0805) and on June 9, 2006 DEQ issued a VWP water withdrawal permit (DEQ VWP Permit #04-0805) for the Brems Bluff site.

2.1.2 JRWA Formed to Construct and Operate James River Water System

Between 2008 and 2009 several public meetings and a Joint Board of Supervisor's meeting were held in order to identify details of the project, costs, and potential ownership structures. Following these meetings, JRWA was formed pursuant to the Virginia Water and Waste Authorities Act and a certificate of incorporation was issued by the State Corporation Commission on April 21, 2009. On January 7, 2010 the DEQ VWP water withdrawal permit was formally transferred from Fluvanna County to the JRWA.

Between 2009 and 2010, the Counties worked on several issues regarding the formation and financing of the James River Water System Project. However, by late 2010 JRWA went dormant and ceased to meet due to issues with the economic downturn of 2009, project financing, and legal challenges.

In 2012, JRWA meetings resumed. During this time, the Bremono Bluff location was removed from consideration due to several contributing factors. After the original Bremono Bluff permit was issued, ECTI notified the Counties that they would only be able to provide "firm" capacity (ability to utilize the joint pipe 24 hours per day) in the shared water main of 1.5 million gallons per day (MGD), which was insufficient to meet the Counties' needs. Furthermore, Dominion transitioned the Bremono powerplant from a coal-fired plant to a natural gas plant and later, subsequently shut the plant down. In addition, Fluvanna County determined that the County could not afford their half of the project as it was proposed at the time and therefore left Louisa County in a position where they would need to pay for a majority of the proposed system. The infeasible costs were due, in large part, to the fact that the Bremono Bluff location would have increased the length of water main needed to nearly 10 miles, which would have significantly increased the associated disturbance, cost, and resource impacts.

Thereafter, Louisa and Fluvanna started discussions in earnest to come up with a solution that would give both Counties the ability to provide raw water to their citizens and allow the Counties to develop their own independent utility systems and use of the raw water as they saw fit. Louisa evaluated options to develop a water system that would centrally serve the County. It was determined that a water treatment plant located in the Ferncliff area could treat raw water and supply finished water to their designated growth areas. These growth areas include Zion Crossroads, Ferncliff, Shannon Hill, Gum Springs, Town of Louisa, and Town of Mineral and Lake Anna (see [Appendix G-2](#)). Louisa also determined that the shortest route to the James River would be to co-locate within or adjacent to an existing utility corridor with multiple utility easements (Central Virginia Electric Cooperative and Colonial Gas Pipeline) that route along the east side of Fluvanna County.

A Draft Project Plan and routing option was prepared and presented to the Counties in Spring 2013. In October 2013 an Interjurisdictional Agreement was signed by Fluvanna, Louisa, JRWA, and the Louisa County Water Authority (see [Appendix C-2](#)). This agreement outlined the responsibilities of the interested parties and new project routing, which moved the water withdrawal facility from the Bremono Bluff area downstream to the Columbia area, with the final project location to be determined at a later date based on engineering, planning, legal, and other considerations.

The October 2013 agreement charted the major elements of the Project, which are embodied in this pending application. It assigned JRWA responsibility for constructing, operating, and maintaining a raw water intake on the James River and associated infrastructure necessary to convey that water to a planned connection at a location to be determined west or north of Columbia near Route 6. The agreement explains that the purpose of JRWA constructing the Project up to the connection and valves is to provide a convenient fixed delivery point for Fluvanna and Louisa Counties (acting through the Louisa County Water Authority) to construct their own water mains to tap into the planned JRWA system to meet their respective long-term water supply needs. Louisa County had the more immediate need, and the agreement contemplates that Louisa would be the first to construct, at its own expense, a water main leading from the connection to a final point north. Fluvanna County would construct its own water main to connect to the JRWA system at such time as it became necessary to meet its growing water supply needs. Under the agreement, JRWA is the sole owner of the raw water intake and the water main from the James River to the agreed-upon delivery point. Each County is solely responsible for constructing, operating, and maintaining its respective water mains and associated infrastructure to connect to and receive water from the JRWA system. All relevant collected interjurisdictional agreements can be found in Appendix C: Collected Interjurisdictional Agreements.

2.1.3 JRWA Obtains DEQ and VMRC Permits for James River Water System

On December 18, 2013 staff from Louisa County, Fluvanna County, and JRWA's engineering consultant, Timmons Group, met with Virginia DEQ staff (Scott Kudlas, Director of the Office Water Supply) during an informal meeting to seek guidance from DEQ staff regarding the need to find a new location for the intake. In order to seek public input regarding the proposed Project, JRWA placed a public notice in The Daily Progress newspaper from January 13, 2014 through January 19, 2014. This public notice specifically identified the new location as being in the immediate vicinity of the currently proposed Project. Additionally, on February 4, 2014, the Applicant hosted a Public Informational Meeting during which a presentation of the proposed Project was given and a request for written comments was made. No comments were received during the meeting, during the following seven-day comment period, or during the Public Notice period advertised in the Daily Progress.

In March 2014, a JPA was submitted to regulatory agencies on behalf of the JRWA seeking to rescind the previously issued Bremo Bluff water withdrawal authorizations and to reissue the permits for a water intake structure on the north bank James River at a site near Columbia, just upstream of the confluence with the Rivanna River. This JPA included a request for RHA § 10 and CWA § 404 authorization from the USACE under NWP 12, Section 401/VWP permit authorization from DEQ, and state-owned bottomlands impact authorization from the VMRC for an intake structure and associated raw water transmission line to the agreed-upon T interconnection point at Route 6.

As part of the new application review process, DEQ contacted the appropriate state regulatory agencies, reviewed public comments received during the regulatory Public Involvement process, and reviewed considerations of the Project purpose and needs and alternative sites considered. On November 20, 2015, DEQ issued an Individual Permit for the Project (VWP Individual Permit No 14-0343), which included DEQ's determination that the proposed project was the Least

Environmentally Damaging Practicable Alternative (LEDPA) under the analogous VWP regulation. Details of DEQ's interagency coordination, reviews, and findings are provided in the VWP Project Fact Sheet dated November 20, 2015 (see [Appendices D-1-1 \(VWP Permit\) and D-1-2 \(Fact Sheet\)](#)). On October 25, 2016 DEQ authorized a minor modification of their permit. This modification authorized: (1) relocation of the proposed intake structure and pump station 200 feet upstream from the previously proposed location; (2) relocation of a portion of the permitted raw water transmission line; and (3) extension of the raw water transmission line from Route 6 to the location of a proposed new water treatment plant near the Ferncliff community in Louisa County. Details of DEQ's reviews and findings are provided in the VWP Project Fact Sheet dated October 25, 2016 (see [Appendices D-1-3 \(VWP Permit\) and D-1-4 \(Fact Sheet\)](#)). On October 30, 2017 DEQ issued a second minor modification to the VWP permit. This modification authorized multiple changes including: (1) a reduction in impacts to make the VWP permit consistent with USACE NWP 12 authorization for the raw water transmission line north of Route 6 (NAO-2016-1198); (2) revisions to make the permit consistent with updates to the VWP regulations made effective in 2016; and (3) correction of clerical errors in the initial modification (see [Appendices D-1-5 \(VWP Permit\) and D-1-6 \(Fact Sheet\)](#)). A third minor modification was submitted January 31, 2018 and remains pending (See [Appendix D-1-7](#)). This minor modification seeks authorization for two additional wetland impacts and two additional stream impacts along the access road that are necessary to provide safe access to the pump station site for construction and service vehicles. Additionally, an in-depth analysis of the project area conducted for the individual permitting process led to de minimis revisions and updates to currently permitted impacts. This minor modification also seeks authorization for the revisions to currently permitted impacts. Cumulatively, this minor modification requests the authorization of additional impacts totaling 84 linear feet of permanent stream impact, 468 square feet of temporary wetland impacts, and 1,008 square feet of permanent wetland impacts. In addition, there is a reduction of 246 linear feet of temporary stream impacts. JRWA will continue to coordinate with DEQ to ensure consistency with the materials provided in this supplement package and expects to receive the minor modification approval in due course. The Applicant will transmit the same to the USACE to verify the Project's full compliance with 33 CFR § 325.2(b)(1).

On March 14, 2017, VMRC issued a permit for the encroachment on state-owned bottomlands in association with the Project (VMRC permit number 2014-0343). This permit authorized the installation of the raw water intake adjacent to the north bank of the James River and a submerged line beneath the Rivanna River (see [Appendix D-2-1](#)). On April 8, 2019, VMRC issued an extension of the permit through June 30, 2022 (see [Appendix D-2-2](#)).

2.1.4 JRWA Revises Pending Application in Response to USACE Letter

Since the submission of the JPA in March 2014, the USACE, in cooperation with the Applicant, has been in ongoing coordination with the Virginia Department of Historic Resources (DHR), and Section 106 consulting parties to work through the National Historic Preservation Act (NHPA) Section 106 process with the objective of developing and executing a Memorandum of Agreement to resolve adverse impacts to historical resources. The Advisory Council on

Historical Preservation (ACHP) signaled its intent to engage in the project coordination in July 2019 and subsequently attended the August 9, 2019, Consulting Party meeting hosted by the USACE.

On September 10, 2019, USACE issued a letter (NAO-2014-00708) acknowledging parties' concerns and uncertainty regarding the proposed Project's impacts to historic properties. The USACE determined further analysis supporting public interest was necessary (see [Appendix D-10](#)). It therefore exercised discretionary authority under 33 C.F.R. § 330.4(3) to require that this pending application be processed through the standard individual permit process rather than under the NWP program. The letter further noted that the USACE could restore authorization under an NWP at any time if warranted by the circumstances. JRWA has developed this package to supply the USACE with supplemental information necessary to review the Project in accordance with the standard individual CWA § 404 permit process. JRWA also has taken this opportunity to update and revise information that had been included in the original 2014 JPA.

2.2 Project Authorizations

A list of all authorizations by federal, interstate, and local agencies for the work, including all approvals received or denials made is summarized in Table 1 below. For all pertinent documents please see [Appendix D: Project Authorizations/ Agency Decisions](#). Summaries of the status of the relevant authorizations and approvals listed in 33 CFR §§ 320.3 and 325.2(b) follows the table.

Table 1. Project Authorizations as Required by Federal, Interstate, State, and Local Agencies.

Document	Authorization/Approval/Concurrence	Regulatory Agency	Document/Project Number:	Date Issued/ Date Denied:	Notes	Appendix
DEQ Virginia Water Protection (VWP) Individual Permit Number 14-0343	Water Intake & CWA § 401 Authorization	DEQ	VWP IP 14-0343	11/20/2015	Modified 10/25/2016 & 10/30/2017 as noted above. Minor modification submitted [January 31, 2018] remains pending.	D-1-1 (Permit), D-1-2 (Fact Sheet), D-1-3 (Mod 1 Permit), D-1-4 (Mod 1 Fact Sheet), D-1-5 (Mod 2 Permit), D-1-6 (Mod 2 Fact Sheet), D-1-7 (Pending Mod)
CZMA Consistency Determination	CZMA Consistency Determination	DEQ	Email Correspondence	1/10/2020	The Project is not likely to have effects on Virginia's coastal resources or uses and federal consistency review is not required	D-3
Preliminary Jurisdictional Determination	Wetland Delineation Concurrence	USACE	NAO-2014-0708	6/11/2014	Issued on 6/11/2014; Reconfirmed 8/29/2016	D-4-1 (2014) D-4-2 (2016)
VMRC Permit	State-owned Bottomlands Impact Authorization	VMRC	VMRC 2014-0343	3/14/2017	James River Intake & Fluvanna Crossing	D-2-1 (Permit) D-2-2 (Extension)
Anticipatory Burial Permit	Anticipatory Burial Permit	DHR	DHR File No 2015-0984	10/4/2017	For Phase I/II archaeological study	D-5
NWP 12 Authorization	§404 CWA/ §10 RHA Authorization	USACE	NAO-2014-00708	9/10/2019	USACE determination that the standard individual permit process is necessary to further evaluate the proposed project	D-10
Memorandum of Agreement	NHPA Section 106 Consulting Party Agreement	USACE	NAO-2014-0708	Pending	(proposed pending revision)	
Anticipatory Burial Permit	Anticipatory Burial Permit	DHR	DHR File No 2015-0984	Pending	For planned Phase III archeological study; Intend to submit revised application following approval of Treatment Plan.	n/a
Special Use Permit	Local Zoning Approval	Fluvanna County Board of Supervisors	SUP 15:11	1/20/2016		D-6
Floodplain Permit	Local Zoning Approval	Fluvanna County	SUP 15:11	1/20/2016	Addressed during the site plan review with the County as part of Special Use Permit	
VPDES Construction General Permit Authorization/ Stormwater Management Plans	Construction Stormwater Discharges	DEQ	VRO-17-181	Pending	Previous application deemed approvable pending issuance of permit authorization from USACE; will submit new registration statement to comply with permit reissued July 1, 2019.	D-7
Site Development Plan	Site Development Plan Approval	Fluvanna County	SDP 17:08	November 20, 2018.	Revised plans to be provided to County for final approval.	D-8
Land Disturbing Permit	Erosion and Sediment Control Plan Approval	Fluvanna County	TBD	Pending	Contractor is responsible for obtaining the land disturbance permit prior to construction once bond is posted and construction commences.	
VDOT Land Use Permit	Construction and Utilities Installation across VDOT Jurisdiction	VDOT	TBD	Pending	Initial review provided as part of Site Development Plan. Contractor is responsible for obtaining the VDOT Land Use Permit prior to construction once bond is posted and construction commences.	
VDH Waterworks Construction Permit	Waterworks Permit	VDH	TBD	Pending	Project 1C (Raw Waterline) was approved for construction by VDH on 12/12/2018. Final plans for Projects 1A and 1B (Raw Water Intake and Pump Station) will be resubmitted to VDH for review and approval once the structural design is completed pending a decision on the site excavation method to be used.	D-9
Building Permit	Building Permit	Fluvanna County	TBD	Pending	Contractor is responsible for obtaining the Building Permit prior to construction once bond is posted and construction commences.	

2.2.1 Coastal Zone Management Act Consistency

The proposed activity is well outside Virginia's designated coastal resources management area and is not reasonably or likely to affect coastal uses or resources of Virginia's designated coastal resources management area. However, the Applicant submitted a formal request to the DEQ CZMA State Coastal Management Program on January 3, 2020, requesting a formal determination of CZMA applicability for the proposed Project.

A response was received on January 10, 2020, from the DEQ CZMA State Coastal Management Program Manager (Ms. Bettina Rayfield) stating the proposed Project is 'not likely to have effects on Virginia's coastal resources or uses' and 'a federal consistency review is not required.' Therefore, the requirements of the CZMA are not applicable to the proposed Project (see [Appendix D-3](#))

2.2.2 Clean Water Act § 401 Water Quality Certification

The Virginia Code provides that "[i]ssuance of a Virginia Water Protection Permit shall constitute the certification required under § 401 of the Clean Water Act." Va. Code § 62.1-44.15:20.D. As noted above, the Project issued a VWP permit by DEQ on November 20, 2015 (see [Appendices D-1-1](#) and [D-1-2](#)). Two minor modifications of that permit were approved on October 25, 2016 and October 30, 2017, respectively (see [Appendices D-1-3 through D-1-6](#)). The Project's VWP permit, as amended, provides the Commonwealth's water quality certification for the majority of the Project's impacts.

A third minor modification was submitted to DEQ on January 31, 2018 for three minor impacts that were inadvertently excluded from the prior permit (see [Appendix D-1-7](#)). This minor modification sought authorization for two additional wetland impacts and two stream impacts along the access road that are necessary to provide safe access to the pump station site for construction and service vehicles, as well as an additional updates and a temporary impacts to a stream that were omitted due to a clerical error. Through the development of information for this submittal, including a detailed review of additional avoidance and minimization measures, the project team has identified the need to update the pending third minor modification. That update will be submitted to DEQ in conjunction with this information package. JRWA will continue to coordinate with DEQ to ensure consistency with the materials provided in this supplement package and expects to receive the minor modification approval in due course, a copy of which will be transmitted to the USACE for the permit file.

2.2.3 Section 106 of National Historic Preservation Act Consultation

The NHPA § 106 consultation process was initiated in early 2016 and remains in progress. Although informal consultation commenced at an earlier date, the USACE formally invited interested federal- and state-recognized tribes and other interested parties to become

consulting parties in June 2017. Three federally recognized tribes, four organizations, and three individuals have become consulting parties. The ACHP expressed its intention to participate in consultation in July 2019.

A consolidated Phase I archeological survey and Phase II evaluation commenced within the USACE-defined Area of Potential Effect in April 2017 in accordance with a work plan approved by DHR and the USACE. Work was suspended in May 2017 until an Anticipatory Burial Permit could be issued by DHR, in consultation with interested tribes, for deep test trenching planned for the evaluation. The Phase I/II study resumed in October 2017 with issuance of the permit (see [Appendix D-5](#)) and was completed in January 2018. A report of the study, *Phase I and Phase II Cultural Resources Survey and Excavations of the James River Water Authority (JRWA) Intake, Pump Station, and Pipeline Project Located in Fluvanna County, Virginia*, was issued in draft form for review and comment and then finalized in May 2018.

An additional Phase II evaluation was conducted for Site 44FV0269 between January and March 2019 in response to a comment from DHR. The findings of the evaluation were summarized in a report titled, *Phase II Archeological Evaluation of Site 44FV0269 Within the Area of Potential Effect, James River Water Supply Pump Station and Pipeline Alignment*, circulated in April 2019. Revisions to that report are presently underway to address comments provided by DHR.

The USACE made eligibility and adverse effects determinations in a letter to DHR dated May 30, 2018. DHR responded in a letter dated June 29, 2018. The USACE issued a revised determination for Site 44FV0269 on June 5, 2019.

JRWA provided a Proposed Memorandum of Agreement to the USACE on August 27, 2018, with revised versions provided on November 21, 2018, and January 11, 2019, to respond to comments made by DHR and consulting parties. A proposed Treatment Plan was provided to the USACE by JRWA on August 2, 2018. A revised Treatment Plan was provided on March 21, 2019, to address comments received in on the prior version. Comments were received from various parties on the most recent versions of the Memorandum of Agreement and Treatment Plan. JRWA engaged a new archeological consultant in October 2019 who is presently reviewing and revising those documents to address the comments. JRWA expects to provide the revised documents to the USACE in the near future.

Although not a requirement of Section 106 per se, JRWA submitted an application to DHR for a second Anticipatory Burial Permit on March 22, 2019, to prepare for any unanticipated discovery of human remains during the planned Phase III archeological study of the Project area. As a result of further consultation with DHR, JRWA intends to submit a revised application at a later date.

A consulting party provided a letter to the USACE on October 21, 2019, arguing that the Project is ineligible to receive a permit by operation of NHPA § 110(k). Although the letter misstates the applicable law and relies on specious allegations, JRWA prepared a response for the purpose of clarifying the record. That response is provided in [Appendix M-1](#).

Additional information on the lengthy Section 106 consultation process to date is provided in Section 7.6.

2.2.4 Section 7 of the Endangered Species Act

It is the understanding of the Applicant that the USACE initiated Section 7 Consultation in 2014 during the initial permit application review. Updated Section 7 information is provided in [Appendix L: Section 7 Documents](#) and is summarized below.

An Official Species List was obtained from U.S. Fish and Wildlife Service (USFWS) IPaC Trust Resource List database and reviewed for likely populations of federal T&E species within the project vicinity (see [Appendix L-1](#)). Based on the IPAC results of the database findings, three (3) federally protected species have known occurrences and/or the potential to exist within the vicinity of the Project Area. These species include:

- 1) Northern Long-eared Bat (*Myotis septentrionalis*) – Federally Threatened
- 2) Atlantic Pigtoe (*Fusconaia masoni*) - Proposed Federally Threatened
- 3) James Spiny mussel (*Parvaspina collina*) – Federally Endangered

A USFWS Consistency Letter for the NLEB has been generated ([Appendix L-2](#)). Approximately 1.24 acres of forested vegetation will be cleared in association with this project (see [Section 5.1.3](#)).

To determine if any threatened or endangered mussel species will be affected by the proposed Project, the Applicant has committed to conducting mussel surveys in impact locations 1, 2 & 8 prior to construction as outlined in the previously issued permits from DEQ and VMRC.

A completed Species Conclusion Table, species list reports, and maps are attached for review (see [Appendix L-3](#)).

2.2.5 Inapplicable Authorizations and Approvals

The following authorizations, approvals, or consultation requirements listed in 33 CFR §§ 320.3 and 325.2(b) as potentially relevant are inapplicable here:

- Section 302 of the Marine Protection, Research, and Sanctuaries Act – the Project is not the vicinity of a designated marine sanctuary.

- Fish and Wildlife Coordination Act – the Project does not involve the control or modification of any body of water.
- Federal Power Act – Water projects are not regulated by the Federal Energy Regulatory Agency.
- Interstate Land Sales Full Disclosure Act – the Project does not involve the sale or lease of land.
- Deepwater Port Act of 1974 and Ocean Thermal Energy Conversion Act – the Project is not located in or beyond the territorial seas.
- Marine Mammal Protection Act of 1972 – the Project is not expected to affect any marine mammals.
- Wild and Scenic Rivers Act – The Commonwealth of Virginia has no designated Wild and Scenic Rivers.

2.3 Project Location

The proposed Project is primarily located in Fluvanna County immediately southwest of Columbia, Virginia within an area known as ‘Point of Fork’ (Figure 1) and lies within the Rivanna and Middle James – Buffalo watersheds (Hydrologic Unit Codes 02080204 and 02080203 respectively) (Figure 2. Hydrologic Unit Code Map). The project area is surrounded and crossed by modern man-made improvements including Old Columbia Road (State Road 624), a CSX rail line, Dominion Power easement, dual Colonial Gas pipeline, agricultural/silviculture fields, legacy canal features, and residential structures (Figure 3. Existing Conditions Map)

The proposed location of the Project is currently on and around Point of Fork. The proposed pump station site is located in a field that has been in agricultural use for at least 40 years. The water main corridor is in an area where significant previous activity and disturbance has occurred over the years, to include installation of the Colonial Gas Pipelines, Dominion Power electrical transmission lines, CSX rail line, a former state road (Old Columbia Road), and agricultural activities. Approximately 60% of the water main is located within existing easements and about 30% of the water main is located in fields that have been in agricultural use for many years. Although portions of the water main route are forested, these areas contain relatively recent growth as aerial photographs show the entire corridor either under agricultural use or in use as utility right-of-way as recently as the 1950’s (see [Appendix E-1](#)).

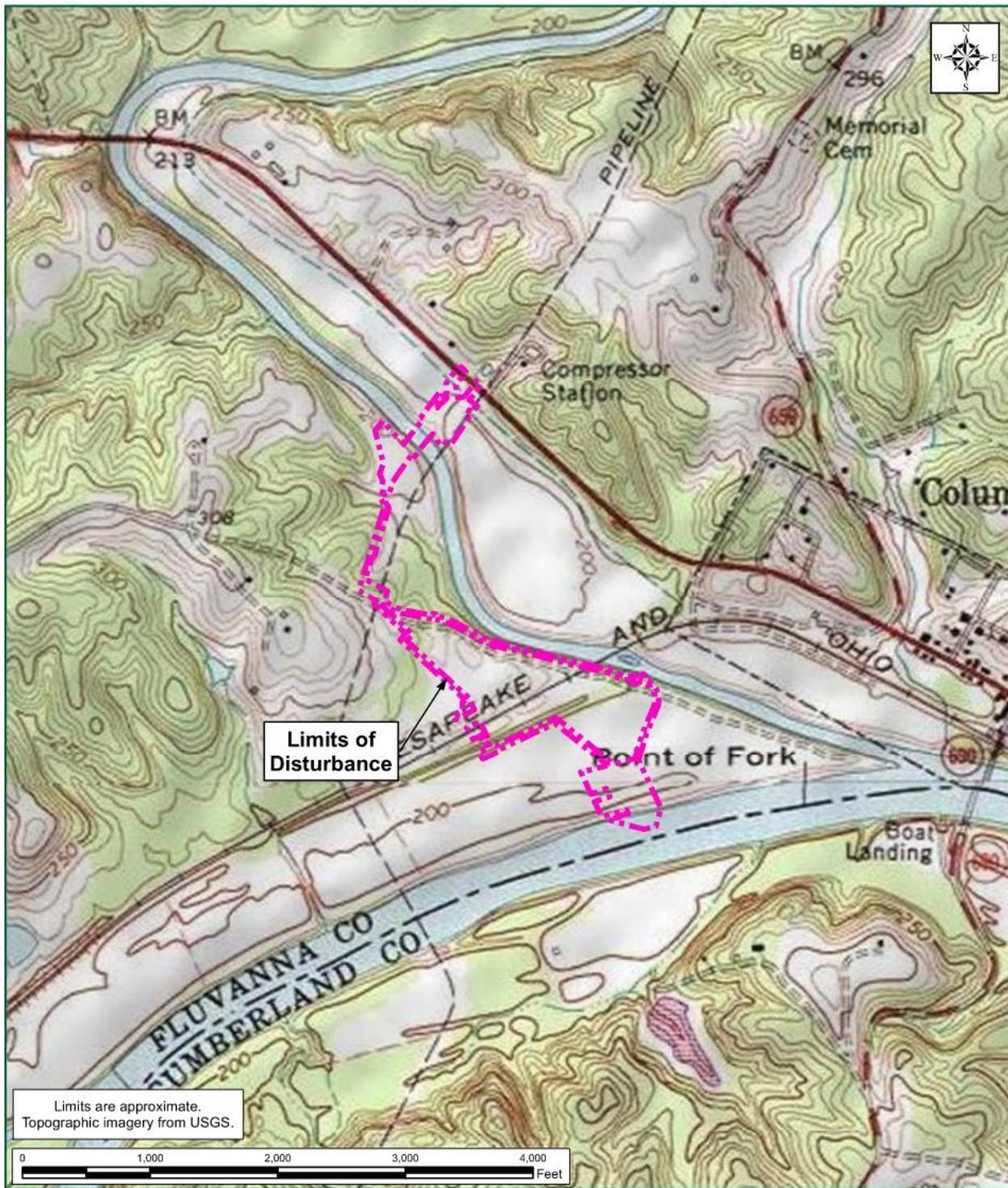


Figure 1. Vicinity Map

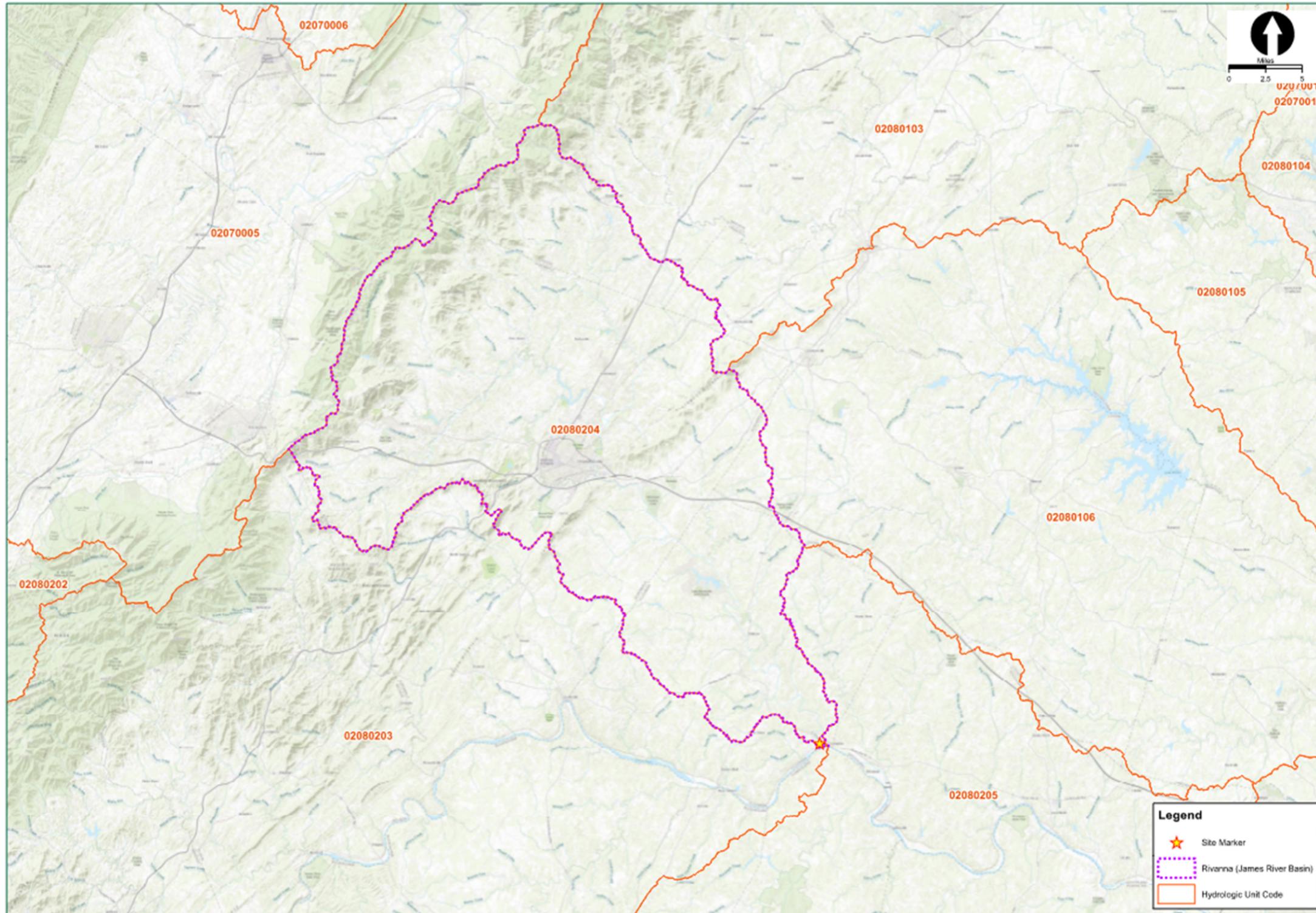


Figure 2. Hydrologic Unit Code Map

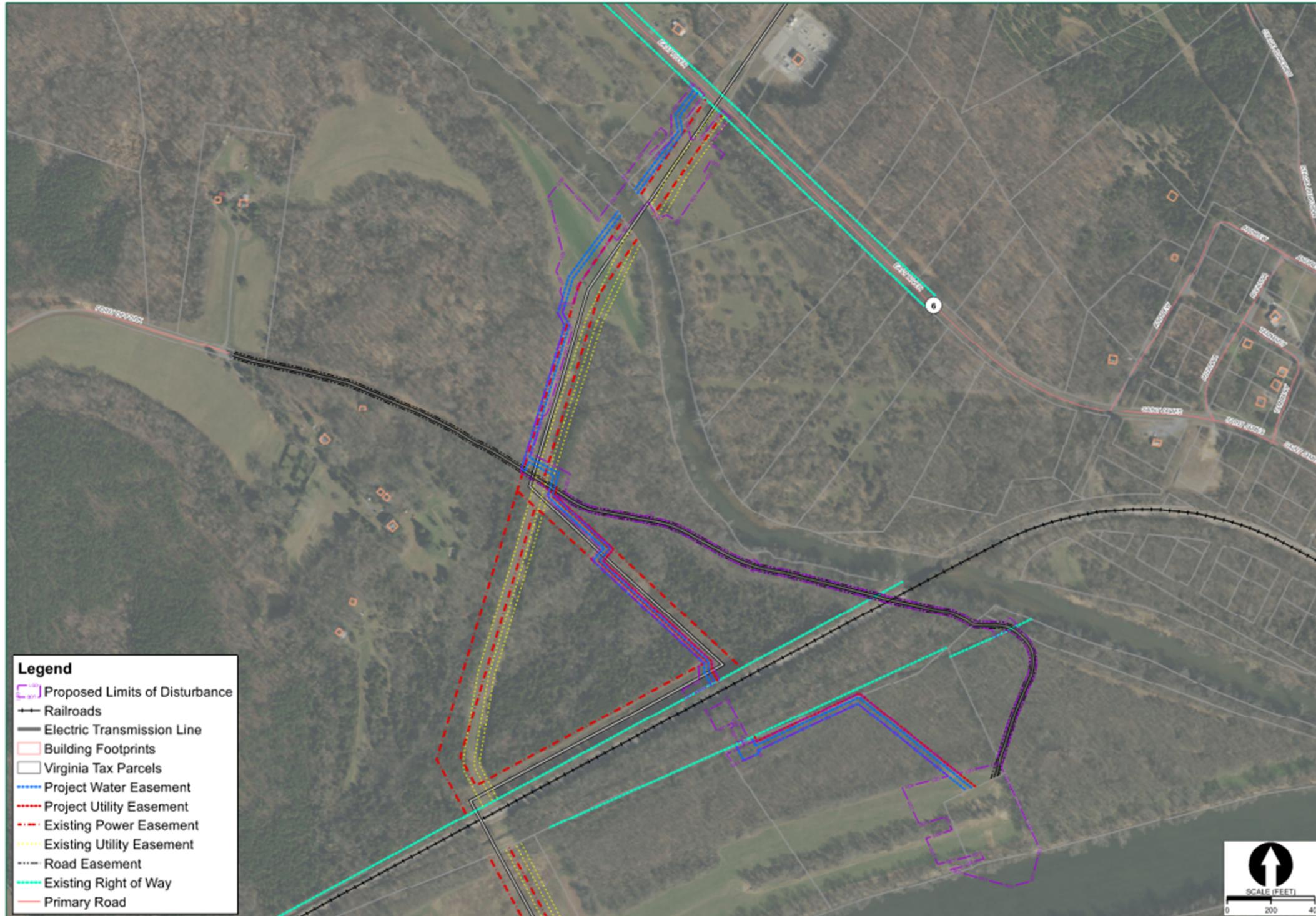


Figure 3. Existing Conditions Map



Photograph: Point of Forks circa 1958. Source: US Geological Survey



Photograph: Point of Forks circa 1984. Source: National High Altitude Photography



Photograph: Point of Forks circa 2006. Source: National Agriculture Information Program

The proposed water withdrawal structure and pump station will be located on the north bank of the James River just upstream of the confluence with the Rivanna River at the end of Route 624 (Point of Fork Road). The pump station will be built on a JRWA-owned parcel (tax parcel 61-A-4A) which will be accessed via Route 624. The raw water transmission line will generally traverse agriculture and silviculture lands northwest of the pump station and pass under a CSX rail line and easement. North of the CSX easement, the project alignment will generally follow Dominion Power easements eventually passing under the Rivanna River adjacent to an existing multi-utility crossing. The project area will terminate at Route 6 in the vicinity of a Colonial Gas pipeline-owned substation. See [Appendix E](#) for additional Site Conditions and Details.

Wetland delineations of the proposed Project corridor have been conducted in accordance with the U.S. Army Corps of Engineers (USACE) 1987 Delineation Manual and subsequently issued USACE guidance to identify the presence and location of jurisdictional wetlands and streams within the Project limits. The wetland delineations were confirmed on August 29, 2016 (USACE Project number NAO-2014-0708) (see [Appendix D-4](#)).

The Project is comprised of disturbance to all or a portion of 6 separate tax parcels. Details of easement locations can be found in [Appendix E-2: JRWA Owned Easement Plats and Pump Station Parcel](#). Adjacent property owner information, including names and addresses, can be found in Figure 4.

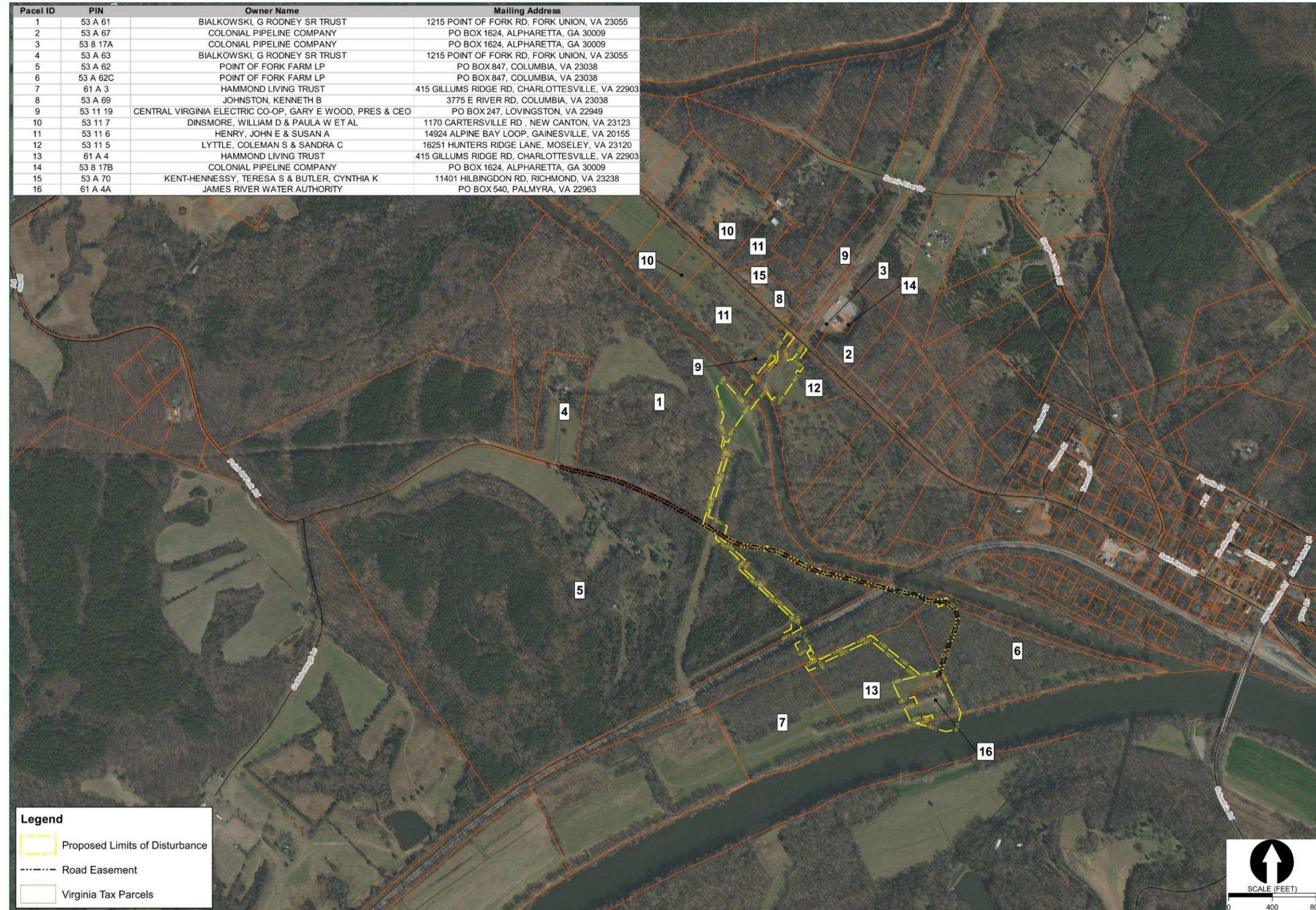


Figure 4. Adjacent Property Owners Map

2.4 Project Description

The infrastructure associated with this project is described in the section below. For additional details see [Appendix F: Project Engineering Details](#).

2.4.1 Raw Water Intake and Pump Station Site

The Pump Station will include the construction of a building located above the 100-year floodplain and supported by the wetwell and vertical columns. The ultimate building's horizontal footprint is approximately 3,500 square feet and its maximum height is approximately 37 feet above grade. It will enclose the pump and electrical equipment and will have an attached screened enclosure for a stand-by power generator and compressor for intake screen maintenance. Gravel parking for operator personnel and access for a crane will also be provided.

The raw water intake is placed in the bottom of the riverbed such it will be submerged during the historical low flow of the river. The intake is connected to a 30" gravity fed pipe that discharges the water into the pump station wet well. This pipe must maintain a minimum slope towards the pump station to maintain "scour" velocity such that any sediments that enter through the intake screen do not build up in the pipe.

Due to constraints of topography, geology, and constructability (as described above and in the sections below) the pump station and wetwell must be in close proximity to the raw water intake. This necessitates that the site be located within the 100-year floodplain. Therefore, the top of the wetwell and the finished building floor must be elevated above the 100-year floodplain (which will be above the existing grade) to protect the pump, control, and electrical equipment during flood events. The pump station and raw water intake are situated on an approximately 2.1-acre parcel owned by JRWA.

The pump station will be constructed with materials and colors designed to blend in with the surroundings to the extent feasible. The building will be partially shielded from view by recreational users of the James River by tree cover and its placement at the top of a steep bank. Renderings of the pumps station are provided below.