HRSD COLLECTION SYSTEM PROGRAM – COOK'S CORNER
MP013500

MIDDLESEX COUNTY, VIRGINIA

ENVIRONMENTAL IMPACT REVIEW (EIR)

OCTOBER 2021

PREPARED BY

Bowman

PROJECT NO. 8492-03-006

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PROJECT MP013500

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1.0 PROJECT BACKGROUND

In Middlesex County, a sewer collection system will be installed in the area known as Cook's Corner. The sewer system will be owned and operated by Hampton Roads Sanitation District (HRSD). Bowman was commissioned by HRSD to prepare an Environmental Impact Review (EIR) to determine the environmental impacts for installing the sewer system including gravity system, pump station and force main.

1.1 Project Description

The project will consist of a new sewer collection system which feeds the new wastewater pump station on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station will include a wet well, valve vault, flow meter vault, duplex submersible pumps, discharge piping, force main piping, and all associated equipment, piping, valves, and controls for a fully functioning pumping station. Additionally, HDPE force mains and PVC gravity mains will be installed to connect to a downstream force main and existing Wastewater Treatment plant.

The pump station is designed for a phased approach with three distinct phases. The first phase will consist of approximately 4,250 linear feet of 8-inch gravity sewer piping to service the project area and connect to the pump station. Additionally, the installation of 1,100 linear feet of 3-inch force main will connect the pump station to the existing interceptor system and the corresponding Saluda Wastewater Treatment plant. Phases 2 and 3 will require the installation of a 6-in force main that will ultimately terminate at the Yorktown Wastewater Treatment plant. The 6-in force main will be installed in phase 2.

1.2 Need for Project

The proposed service area contains a total of 351 acres, consisting of a future Brewery/Restaurant and future 24 Multi-family homes. There is planned growth in the area, with demands for Workforce housing as well as Light commercial, Residential, and Mixed-Use developments. There is no existing wastewater infrastructure within the service area. The existing developments are serviced by aging septic systems and drainfields. Installing a new sewer system will improve environmental quality, public health, economic growth and sanitation throughout the area of the county.

2.0 SUMMARY OF ALTERNATIVES

The HRSD Collection System Program – Cook's Corner project was evaluated in a Preliminary Engineering Report (PER) which evaluated separate collection system options. The collection system alternatives included gravity collection, submersible pump stations, a vacuum sewer system as well as a null alternative. It was determined that a gravity sewer system feeding a submersible pump station was the appropriate alternative. The PER dated August 30, 2019, can be found in Section 6.

2.1 Gravity Sewer Alternative

In a gravity collection system, wastewater is collected and transported by gravity through a network of underground pipes. Typically, a wastewater pump station is required to transfer the wastewater collected from low lying areas to the treatment facility. The advantages include reliable operation relying on gravity instead of pressure. The disadvantages include significantly higher construction costs particularly when sewers are laid in areas near the coastline because of the slope needed to provide adequate flow and velocities makes the excavations deeper the longer the sewer line traverses. Gravity systems, in most situations, require construction, operation, and maintenance of wastewater pump stations.

A wastewater pump station for a small community system will generally include a pre-cast concrete wet well, a pre-cast concrete valve vault, an electrical control building, and an emergency generator. The wet well will include two (2) submersible pumps, which are controlled by a level transducer and a duplex control panel. The duplex control system will operate the pumps in a lead-lag configuration. A paved all-weather access road will also be provided.

The forcemain will be designed to handle the peak flow from the pump station, the pressure head conditions of the main interceptor, and to provide a minimum scouring velocity of 2 feet per second (fps).

The design of the pump station and forcemain will be based on the Virginia Sewage Collection and Treatment (SCAT) Regulations and the Hampton Roads Sanitation District (HRSD) Design and Construction Standards.

2.2 Vacuum Sewer Alternative

Vacuum sewer is a method of transporting wastewater to treatment plants that uses the differential pressure between atmospheric pressure and a partial vacuum maintained in the piping network and a central vacuum collection station. Vacuum sewers are a cost-effective alternative to other methods in areas with flat terrain and extremely high groundwater table. In a vacuum collection system, sewage is transported to each connection using a gravity line to a vacuum valve pit usually buried near the street. The valve pit consists of a small collection sump and a pneumatic valve mechanism located in a chamber above the sump. One or two homes are typically connected to a single valve pit. When the wastewater in the valve pit sump reaches a predetermined level, it activates the pneumatic valve that releases the wastewater into a vacuum main where negative pressure propels it toward the central vacuum station. Vacuum mains are typically 4" to 10". The vacuum station functions as a transfer facility between a central collection point for all the vacuum sewer lines and a forcemain leading to the treatment facility. Vacuum sewer systems are ideal for service areas having very high groundwater conditions since they are water-tight and installed at shallow depths. Therefore, they can cost significantly less to install than conventional gravity collection systems where flat terrain and high groundwater exists. In addition to lower capital costs, vacuum collection systems offer the following advantages: no exfiltration, requires no power from homeowner and will function in the event of power loss, and significantly less odors. The disadvantages include increased energy costs to operate the vacuum pumps and increase maintenance costs on the overall system.

2.3 Null Alternative

A null alternative for providing a sewerage system to the Cook's Corner area in Middlesex County, Virginia would involve no upgrades to the existing sewer systems in the area. Existing septic systems and individual sewer systems in place would remain in operation regardless of the condition.

2.4 Summary of Alternatives

All three actionable alternatives: Gravity Sewer, Submersible Pump Station and Vacuum Sewer System would require identical impact areas. All adverse impacts for the alternatives would be short term impacts, involving construction activities.

Any impacts to land, wetlands, floodplains and other resources would be mitigated during construction using erosion and sediment control plans, as well as require restoration of disturbed lands to original conditions. The main factor in evaluating the alternatives is the cost effectiveness of a wastewater collection system is the topography, subsurface characteristics of the area, and cost effectiveness of the maintenance of the system.

The null alternative is not recommended as the impacts to the environment would be significant. Though the null alternative would yield less of an initial impact of the area due to no construction activities occurring, a null alternative would have significant, long-term and irreversible impacts to the environment due to failing sewer systems. Failing sewer systems have the potential of effecting the environment without any knowledge or awareness of the impacts until a significant amount of time has passed from the failure of the sewerage system. Wetlands would be corrupted, wildlife would decline and the area would become unlivable.

The local pump station with gravity sewer collection alternative was selected for the project, as this alternative had the same environmental impacts as the vacuum sewer actionable alternative, and provided a solution to the sewer collection need. Additionally, it was the most cost effective for construction as well as maintenance for a new sewerage system.

3.0 AFFECTED ENVIRONMENT

3.1 Wildlife, Marine Life and Endangered Species

3.1.1 General Wildlife and Vegetation

3.1.1.1 Affected Environment

The proposed collection system will be along previously disturbed existing roads and open fields. The proposed pump station will be near the forest's edge so some tree cutting or clearing is proposed. The proposed collection system will require some excavation. Since all land disturbed by the installation of force mains and gravity sewer will be returned to its original state, no impacts to the biological environment are expected.

Pursuant to Section 7 of the Endangered Species Act, federal agencies are required to consider the impacts their undertakings will have on any federally listed threatened or endangered species. The US Fish and Wildlife

Service (FWS) in Virginia has made and online review process available to assist with informal consultation under Section 7. This review identified the following species: Northern Long Eared Bat, Monarch Butterfly. There is no critical habitat within the project area for either species.

3.1.1.2 Environmental Consequences

The DGIF Hibernacula and Maternity Roost Tree Location map has determined there are no critical areas to the Northern Long Eared Bat in the project area. There is no current habitat available for the Monarch Butterfly. To mitigate any and all potential impacts to the Monarch Butterfly and Northern Long Eared Bat, tree clearing activities will be minimal, located specifically at the pump station site. Therefore, no significant adverse short or long term affects are anticipated for the general wildlife and species identified.

3.1.1.3 Mitigation

No mitigation required.

3.1.2.1 Affected Environment

The Migratory Bird Treaty Act (MBTA) implements four separate treaties (or conventions), between the United States and Great Britain (on behalf of Canada) (1916), Mexico (1936) and Japan (1972), and the former Soviet Union (1978). The Act, and the treaties it implements, focused on regulating the "taking" of migratory birds, and introduced the concept of "take" to federal law. Take (defined at 50 CFR 10.12 as "to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt" any of the foregoing) can be intentional or unintentional, and occur through several means.

The Bald or Golden Eagle Protection Act of 1940, as amended, prohibits anyone without a permit issued by the FWS from "taking" bald or golden eagles, including their parts, nests, or eggs. The Act provides criminal penalties for persons who "take, possess, sell, purchase, barter, offer to sell, purchase or barter, transport, export or import, at any time or any manner, any bald eagle… [or golden eagle], alive or dead, or any part, nest,

or egg thereof." The Act defines 'take' as "pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest, or disturb.

The E-bird data mapping tool provided by The Cornell Lab of Ornithology was used to determine if any migratory birds were found in or near the project site. The CCB mapping portal was utilized to determine if any active Bald or Golden Eagle nests are located within 660 feet of the project area. A copy of the CCB nest locator map is attached in Section 6.

3.1.2.2 Environmental Consequences

The FWS Official Species List includes the following migratory birds: Bald Eagle, Prairie Warbler, and Wood Thrush. The CCB nest locator map indicates that no active Bald or Golden Eagle nests are within 660 feet of the project site. No Eagle Act Permit will be required. It is not anticipated that any Bald or Golden Eagles will be impacted by the project. The E-bird data mapping tool determined no Prairie Warblers or Wood Thrushes have been sighted in or near the project area. Additionally, tree clearing will be minimal; Therefore, no significant adverse short or long term affects are anticipated for the Prairie Warbler or Wood Thrush.

3.1.2.3 Mitigation

No mitigation required.

3.2 Wetlands

3.2.1 Affected Environment

Primary wetland information was gathered using the US Fish and Wildlife Service National Wetlands Inventory (NWI) mapping and is provided in Section 6. NWI mapping includes the proposed locations of the pumping station and gravity/interceptor lines. During detail design a Stormwater Management and Erosion and Sediment Control Plan will be prepared to assure any off-site wetland impact is avoided. However, no wetlands are present where construction will take place.

3.2.2 Environmental Consequences

Wetland mapping revealed there are wetlands near the project site. The wetlands that are near the project site are primarily Freshwater Forested/Shrub Wetland and Riverine. There are also Freshwater Emergent wetlands near the project site. However, there are no wetlands to be impacted within the project site.

The impacts are based on wetlands and streams mapped out on the National Wetland Inventory (NWI) maps. These NWI maps are at best a planning tool and may miss some wetland and stream impacts. Any impacts to off-site wetlands will be temporary during construction, as the disturbed areas will be restored to their original contours and immediately revegetated. Therefore, no significant adverse long term impacts are anticipated for wetlands.

3.2.3 Mitigation

A Stormwater Management and Erosion and Sediment Control Plan will be used to avoid impacts to off-site wetlands, both plans of which have been reviewed and approved by Middlesex County Planning District Commission. After construction, the disturbed areas will be restored to their original contours and revegetated.

3.3 Displacement of Households, Businesses, or Services.

3.3.1 Affected Environment

The project site is located primarily along General Puller Highway and forested areas. Therefore, no households, businesses, or services will be displaced by construction.

3.3.2 Environmental Consequences

No significant adverse short- or long-term affects are anticipated for Households, Businesses or Services, as the project site is within the public right of way along General Puller Highway.

3.3.3 Mitigation

No mitigation is required.

3.4 Possible Destruction of Surrounding Farmland or the Loss of Open Space Land

3.4.1 Affected Environment

A Natural Resources Conservation Service (NRCS) web soil survey report for farmland classification was obtained for the project site to determine if any important farmland resources are present since above ground development will occur there. The project is exempt from Form AD-1006 because the location of the proposed project will be located on land that has current infrastructure.

3.4.2 Environmental Consequences

A NRCS web soil survey was conducted to determine the presence of any important farmland classification or the hydric ratings of the project location. The survey notes the project area consists of Emporia Loam, Ochlockonee Silt Loam, and Slagle Silt Loam soils. The Emporia and Slagle soils are designated as prime farmland. However, there are no existing farms in the area of interest. As the project area exists on property with previously disturbed land, the project will not impact any farmland. The hydric ratings of the soils in the area of interest shows they are partially hydric. The pump station will not be built on hydric soils and the hydric areas of the project site will be backfilled with the same hydric soils after construction. Therefore, no significant adverse short or long term affects are anticipated.

3.4.3 Mitigation

No impacts are anticipated, and therefore, no mitigation is required.

3.5 Historical and Cultural Resources

3.5.1 Affected Environment

The National Historic Preservation Act of 1966 ensure historical areas are not disturbed by new developments to the extent possible. Additionally,

according to the Virginia Clean Water Revolving Loan Fund (VCWRLF) guidelines, the project must account for effects on the archaeological, historical and cultural resources within the area of interest. The VA Department of Historic Resources (DHR) makes archived historical listing data available via the Virginia Cultural Resource Information System (VCRIS).

A V-CRIS search utilized for the project site to determine if any archeological sites will be impacted by development. A small portion of the project impedes a historic property (DHR ID #059-0090). However, the property is adjacent to the project area, and the encroachment of the historic property within the VDOT right-of-way (ROW).

3.5.2 Environmental Consequences

The project avoids all historic properties that are not within the VDOT ROW. Any encroachment of historic properties that are within the VDOT ROW will be restored to original condition. Therefore, no significant adverse short or long term affects are anticipated any archeological, historical or cultural resources.

3.5.3 Mitigation

No mitigation is required.

3.6 Noise

3.6.1 Affected Environment

Various noise levels are anticipated to be generated by this project due to construction activities related to installation of sewer lines, and construction of the pumping station.

The pump station will operate with an emergency back-up generator. The generator will only operate in emergency situations, at approximately 75 dBA.

3.6.2 Environmental Consequences

Any noise levels generated by the project construction activities will be temporary and limited to normal daylight hours.

Any additional noise from the pump station will be during emergency situations. Therefore, no significant adverse short or long term affects are anticipated.

3.6.3 Mitigation

Construction will be limited to normal daylight hours, Monday – Friday, except in emergency situations.

3.7 Traffic and Transportation

3.7.1 Affected Environment

Traffic will be affected wherever sewer lines and forcemain are being installed. The streets throughout the project area are controlled by the Virginia Dept. of Transportation (VDOT).

Additionally, VDOT has reviewed and approved the project plans for the HRSD Collection System Program – Cook's Corner project.

3.7.2 Environmental Consequences

Any proposed disturbance of the public right of way, any trenchless placement of any improvement within the public right of way, or any lane closure needed for installation of any proposed improvement will require issuance of a VDOT land use permit. Any work within the public right of way will comply with the approved construction improvements plan. The required improvements plan and land use permit will be acquired prior to beginning any construction activities. VDOT has reviewed and approved the project plans for the HRSD Collection System Program – Cook's Corner project. Therefore, no significant adverse long term affects are anticipated

3.7.3 Mitigation

All work with the potential to effect roadways or other transportation facilities will be reviewed and coordinated with the VDOT District office and the local residency office. Construction along roadways will require some flagging of traffic; however, road closures will be limited and will be coordinated with VDOT and the County. VDOT has reviewed and approved the project plans for the HRSD Collection System Program – Cook's Corner project. Therefore, there are no significant negative long term affects to the traffic and transportation of the area of interest.

3.8 Air Quality

3.8.1 Affected Environment

This project will have minor fugitive dust during the construction phase. The temporary fugitive dust will be handled by the mitigation steps suggested below. The Clean Air Act is a federal law that regulates air emissions from stationary and mobile sources and allows the EPA to establish National Ambient Air Quality Standards (NAAQS) to protect public health and welfare, as well as, to regulate emissions of hazardous air pollutants. Executive Order Number 6 for Virginia supports the critical role of the Virginia DEQ in protection of Virginia's air, water, and public health. EPA maintains a database of US counties and cities that are either in non-attainment or maintenance called "Greenbook". Any projects located in one of these listed areas will require completion of a conformity analysis to determine if the project will potentially impact clean air and require mitigation measures to minimize those impacts.

3.8.2 Environmental Consequences

No environmental consequences are anticipated. However, if any issues arise, the mitigation steps below will be taken to ensure minimal impact. According to the Environmental Protection Agency's (EPA) published Greenbook", found at https://www3.epa.gov/airquality/greenbook/anayo_va.html, Middlesex County is not listed which indicates that the County is in Attainment and complies with the Clean Air Act. The list that indicates Middlesex County is not a non-attainment or maintenance area is provided in Section 6.0.

3.8.3 Mitigation

Fugitive dust caused by the movement of construction materials and construction equipment will be controlled by adherence to the Virginia Department of Environmental Quality regulations and 9 VAC 5-50-60 et. Seq., which governs the abatement of visible and fugitive dust emissions. Erosion and Sediment control plans will be implemented to mitigate any abnormally excessive fugitive dust and other air quality issues. Therefore, no significant adverse long term affects are anticipated air quality of the project area.

3.9 Water Resources

3.9.1 Affected Environment

Surface waters are present near the project area in the form of riverine wetlands. The location of the riverine wetlands is provided using the NWI mapping. During detail design, a stormwater management and Erosion and Sediment Control Plan was prepared to assure any impact to the riverine system is avoided. However, no surface waters are present on the project site.

3.9.2 Environmental Consequences

The construction on the project site will not impact any surface waters as none are present within the area of interest. Any off site impacts due to line installation will be temporary as the disturbed land will be restored to its original contours and immediately revegetated. During detail design, a stormwater management and Erosion and Sediment Control Plan was prepared to assure any impact would be mitigated. Therefore, no significant adverse long term affects are anticipated.

3.9.3 Mitigation

A Stormwater Management and Erosion and Sediment Control Plan will be used to avoid impacts to off-site wetlands. After construction, the disturbed areas will be restored to their original contours and revegetated.

3.10 Aesthetic and Visual Impacts

3.10.1 Affected Environment

There are no aesthetic areas within the project area. No sewer lines will be visible as they will be below grade. The pumping station will be located away from local traffic at the forest's edge. Tree screening is anticipated for the pumping station.

3.10.2 Environmental Consequences

The project is not expected to impact any aesthetic areas as the linework will be underground. Any impact would be temporary during construction as the land would be revegetated and restored to its original contours. Additionally, the pumping station will be away from the main roads, with tree screening. Therefore, no significant adverse long term affects are anticipated

3.10.3 Mitigation

No mitigation is required.

3.11 Designated Wild, Scenic and/or Recreational River use

3.11.1 Affected Environment

The project area of interest does not contain any rivers. Therefore, construction will be no impacts to river use.

3.11.2 Environmental Consequences

No disturbance is expected as the project site does not contain any rivers. Any impacts will be minimal as the disturbed land will be restored to its original contours and immediately revegetated. Therefore, no significant adverse long term affects are anticipated

3.11.3 Mitigation

No mitigation is required.

3.12 Socio-Economic Changes

3.12.1 Affected Environment

EPA published the Environmental Justice Screen (EJScreen), an environmental justice mapping and screening tool that provides the EPA with a national dataset that combines the environmental and demographic indicators. An EJScreen report was conducted for the project area. The Middlesex County Planning Commission was involved during detailed design, and has approved the project. Public meetings have been held, and will continue to be held to engage the public and receive feedback regarding the project.

3.12.2 Environmental Consequences

The EJSCREEN Report determined that no Superfund sites are present in the project area. There is no indicators for Ozone and Lead Paint in the project area. The pumping station will have little to no impact on the two environmental indicators. Lead paint will not be used, and ozone will not be used as a disinfectant for this pumping station. The project area also does not have an active population. Therefore, no significant adverse short or long term affects are anticipated.

3.12.3 Mitigation

No mitigation is required.

3.13 Floodplain Impacts

3.13.1 Affected Environment

Installation of the sewer lines will have no impact on any flood hazard areas provided the area is restored to its original contours and revegetated. The FEMA Map Service Center was utilized to obtain a copy of the Flood Insurance Rate Map (FIRM) for the project area and a FEMA Firmette to determine if any proposed work will convert land within the 100 or 500-year floodplain. Copies of the FEMA mapping are attached as Section 6.

3.13.2 Environmental Consequences

The proposed project area is located within the boundaries of FEMA FIRM 51119C0180E and FEMA FIRM 51119C0185E. The FEMA map can be found in Section 6.

All portions of the proposed project area are located in Zone X, an area that is outside of the 100 and 500-year floodplain. The project is not expected to impact any flood hazard areas. Therefore, no significant adverse long term affects are anticipated.

3.13.3 Mitigation

No permanent structures will be constructed within the 100-year floodplain. Any disturbed areas will be restored to their original contours and revegetated immediately.

4.0 SUMMARY OF IMPACTS

4.1 IMPACTS TO WILDLIFE, MARINE LIFE AND ENDANGERED SPECIES

Therefore, no significant adverse short or long term affects are anticipated for the general wildlife and species identified.

4.2 IMPACTS TO WETLANDS

During construction, land disturbance will be required. Although there are no wetlands in the immediate area of the project site, a short term impact to wetlands may occur during construction. However, vegetation, elevations and conditions will be restored to original conditions. Therefore, no significant adverse long term impacts are anticipated for wetlands.

4.3 IMPACTS TO HOUSEHOLDS, BUSINESSES OR SERVICES

Therefore, no significant adverse short or long term affects are anticipated for households, businesses or services.

4.4 IMPACTS TO FARMLAND AND OPEN SPACE

During construction, land disturbance will be required. Although there are no important farmlands in the immediate area of the project site, a short term impact can be anticipated during construction. However, vegetation, elevations and conditions will be restored to original conditions. Therefore, no significant adverse long term impacts are anticipated for farmland and open space land.

4.5 IMPACTS TO HISTORICAL AND CULUTRAL RESOURCES

There is a small portion of a historic property identified in the DHR VCRIS tool that is within the VDOT ROW. During construction, this small portion of the historic property may be disturbed. However, disturbances will be restored to original conditions post construction. Therefore, no significant adverse long term impacts are anticipated for historic and cultural resources.

4.6 IMPACTS TO NOISE

During construction, there will be a noise impact during typical working hours. However, after construction, the pump station will operate below 75 DBA. Therefore, no significant adverse long term impacts are anticipated for noise.

4.7 IMPACTS TO TRAFFIC AND TRANSPORTATION

During construction, there will be a minimal impact to the transportation and traffic in the Cook's Corner service area. However, after construction transportation and traffic in the service area will not be impacted. Therefore, no significant adverse long term impacts are anticipated for transportation and traffic.

4.8 IMPACTS TO AIR QUALITY

During construction, the Contractors will abide by the Erosion and Sediment control plans implemented in the project, which were also approved by the Middlesex Planning District Commission. No air quality issues are anticipated during construction or after construction. Therefore, no significant adverse short or long term impacts are anticipated for air quality.

4.9 IMPACTS TO WATER RESOURCES AND DESIGNATED WILD, SCENIC OR RECREATIONAL RIVERS

There are no water resources, including wild, scenic or recreational rivers within the project area. Therefore, no significant adverse short or long term impacts are anticipated for noise.

4.10 IMPACTS TO AETHETIC AND VISUAL CONCERNS

During construction activities, there may be some visual impacts. However, after construction there will be tree screening for the pump station site, and all disturbed land will be restored. Therefore, no significant adverse long term impacts are anticipated for Aesthetics or Visual impacts.

4.11 IMPACTS TO SOCIO-ECONOMIC CHANGE

The construction of the gravity sewer lines and pump station will positively impact the Socio-Economic status of the Cook's Corner Service area, by providing a workable sewer system for potential homes.

There are no significant adverse long term impacts are anticipated for Socio Economic changes.

4.12 IMPACTS TO FLOODPLAINS

The project area is located in Zone X, which is not within the 100-year or 500-year floodplains. During construction, land disturbance will occur, however all land disturbance will be restored to original conditions. Therefore, no significant adverse long term impacts are anticipated for floodplains.

5.0 IRREVERSIBLE OR IRRETRIEVABLE ENVIRONMENTAL CHANGES

5.1 CHANGES TO WILDLIFE, MARINE LIFE AND ENDANGERED SPECIES

There are no irreversible nor irretrievable environmental changes to wildlife, marine life or endangered species.

5.2 CHANGES TO WETLANDS

There are no irreversible nor irretrievable environmental changes to wetlands.

5.3 CHANGES TO HOUSEHOLDS, BUSINESSES OR SERVICES

There are no irreversible nor irretrievable environmental changes to households, businesses or services.

5.4 CHANGES TO FARMLAND AND OPEN SPACE

There are no irreversible nor irretrievable environmental changes to farmland or open space lands.

5.5 CHANGES TO HISTORICAL AND CULUTRAL RESOURCES

There are no irreversible nor irretrievable environmental changes to historical or cultural resources.

5.6 CHANGES TO NOISE

There are no irreversible nor irretrievable environmental changes to noise.

5.7 CHANGES TO TRAFFIC AND TRANSPORTATION

There are no irreversible nor irretrievable environmental changes to traffic or transportation.

5.8 CHANGES TO AIR QUALITY

There are no irreversible nor irretrievable environmental changes to air quality.

5.9 CHANGES TO WATER RESOURCES AND WILD, SCENIC OR RECREATIONA RIVERS

There are no irreversible nor irretrievable environmental changes to water resources and/or wild, scenic or recreational rivers.

5.10 CHANGES TO AESTHETIC AND VISUAL CONCERNS

There are no irreversible nor irretrievable environmental changes to aesthetics or visual impacts.

5.11 CHANGES TO SOCIO-ECONOMIC CHANGE

There are no irreversible nor irretrievable environmental changes to socio-economic impacts.

5.12 CHANGES TO FLOODPLAINS

There are no irreversible nor irretrievable environmental changes to floodplains.

6.0 EXHIBITS, REFERENCES AND MAPPING

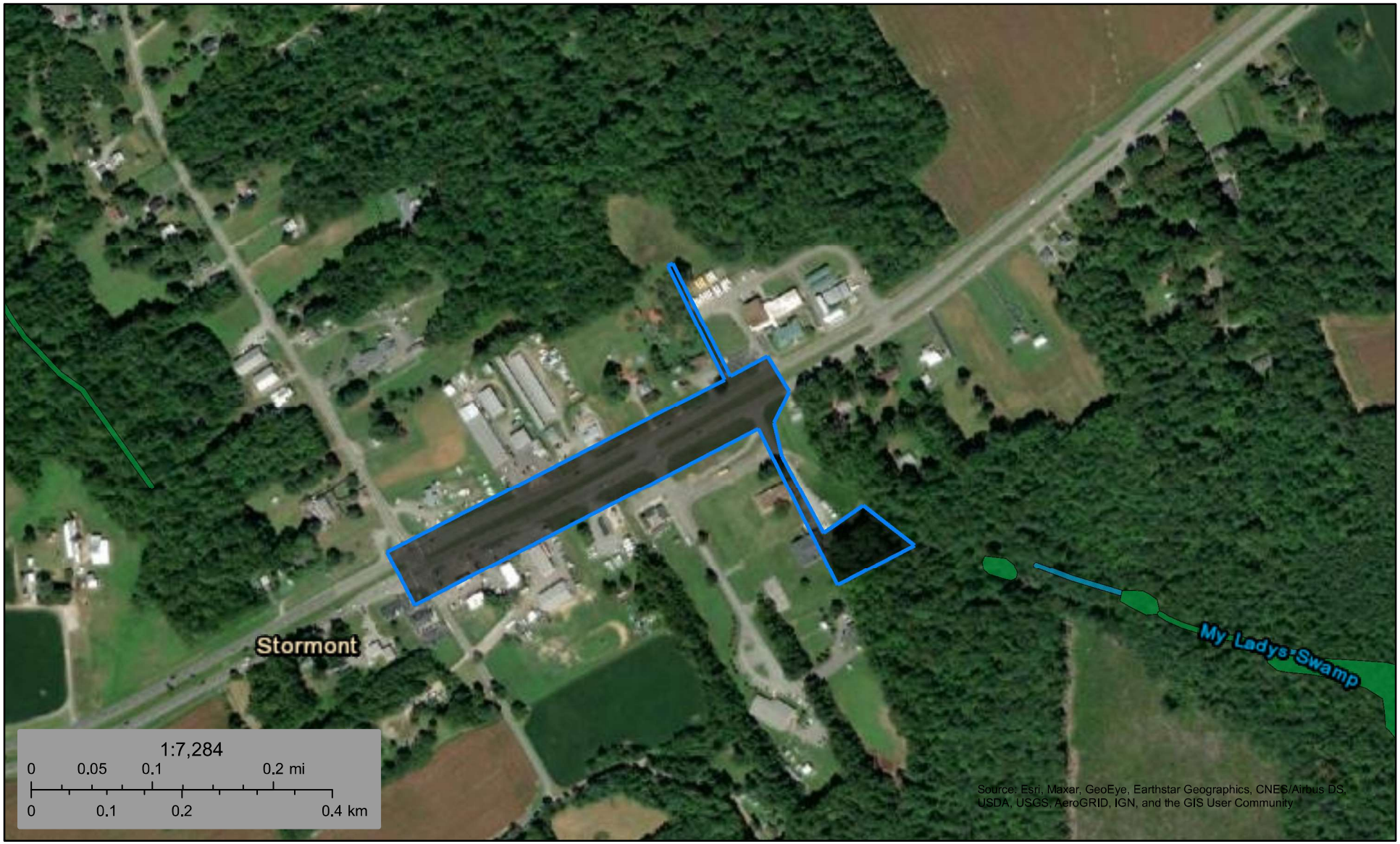
6.1 PRELIMINARY ENGINEERING REPORT

6.2 WILDLIFE, MARINE LIFE AND ENDANGERED SPECIES

6.3 WETLANDS

U.S. Fish and Wildlife Service
National Wetlands Inventory

Cook's Corner Wetlands



October 7, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

6.4 FARMLAND AND OPEN SPACE

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

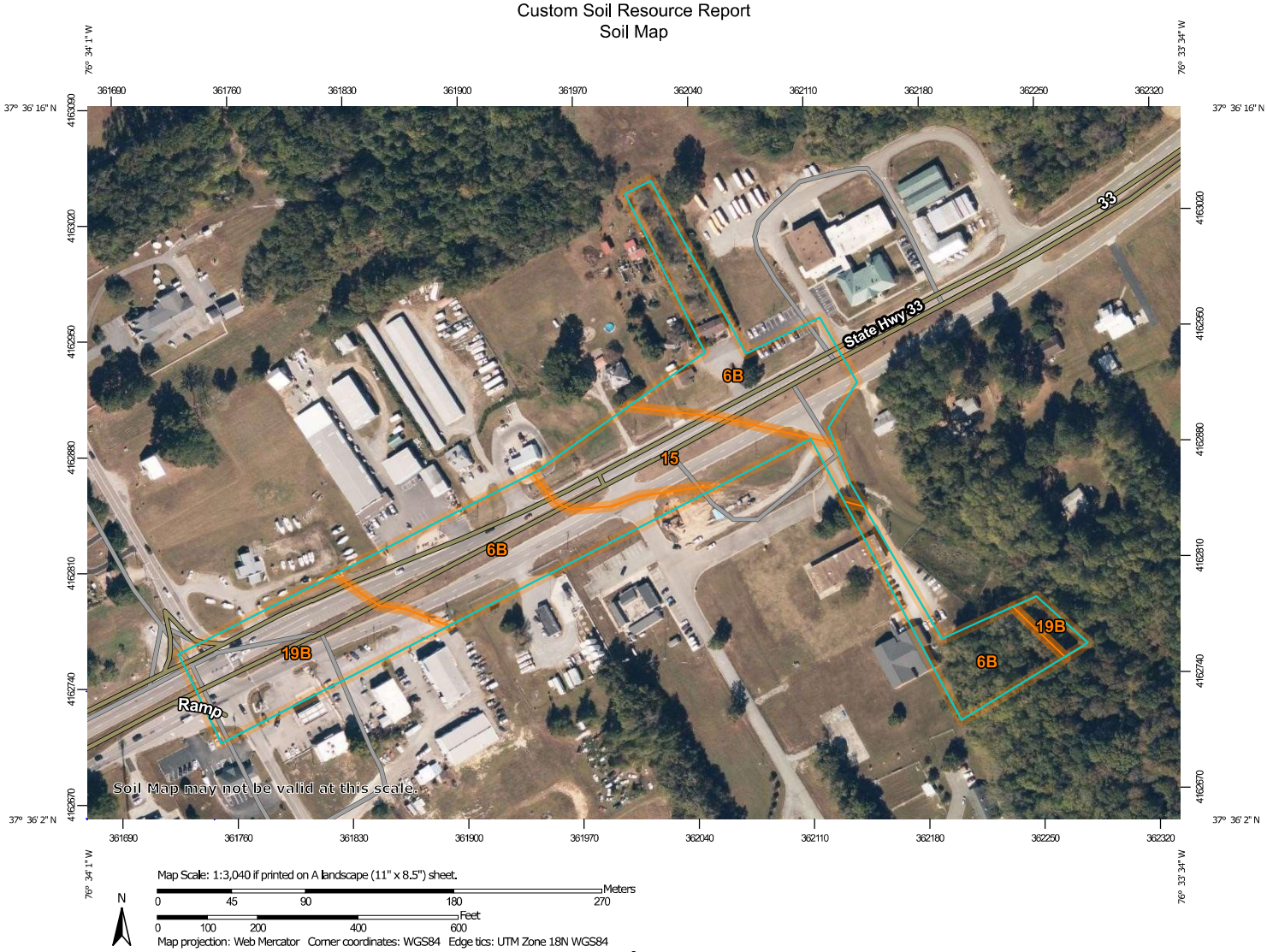
A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Middlesex County, Virginia

Cook's Corner Soils Map

September 30, 2021

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,040 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Virginia
Survey Area Data: Version 13, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 11, 2019—Oct 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6B	Emporia loam, 2 to 6 percent slopes	5.0	57.8%
15	Ochlockonee silt loam	1.6	18.5%
19B	Slagle silt loam, 2 to 6 percent slopes	2.0	23.7%
Totals for Area of Interest		**8.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Virginia

6B—Emporia loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 40hr
Elevation: 20 to 150 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Marine deposits

Typical profile

H1 - 0 to 14 inches: loam
H2 - 14 to 31 inches: clay loam
H3 - 31 to 59 inches: sandy clay loam
H4 - 59 to 66 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

15—Ochlockonee silt loam

Map Unit Setting

National map unit symbol: 40h5
Elevation: 50 to 800 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Ochlockonee and similar soils: 75 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ochlockonee

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 34 inches: loam
H3 - 34 to 62 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Bibb

Percent of map unit: 5 percent
Landform: Flood plains

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19B—Slagle silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 40hc
Elevation: 70 to 350 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Marine deposits

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 24 inches: loam
H3 - 24 to 38 inches: loam
H4 - 38 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

6.5 HISTORICAL AND CULUTRAL RESOURCES

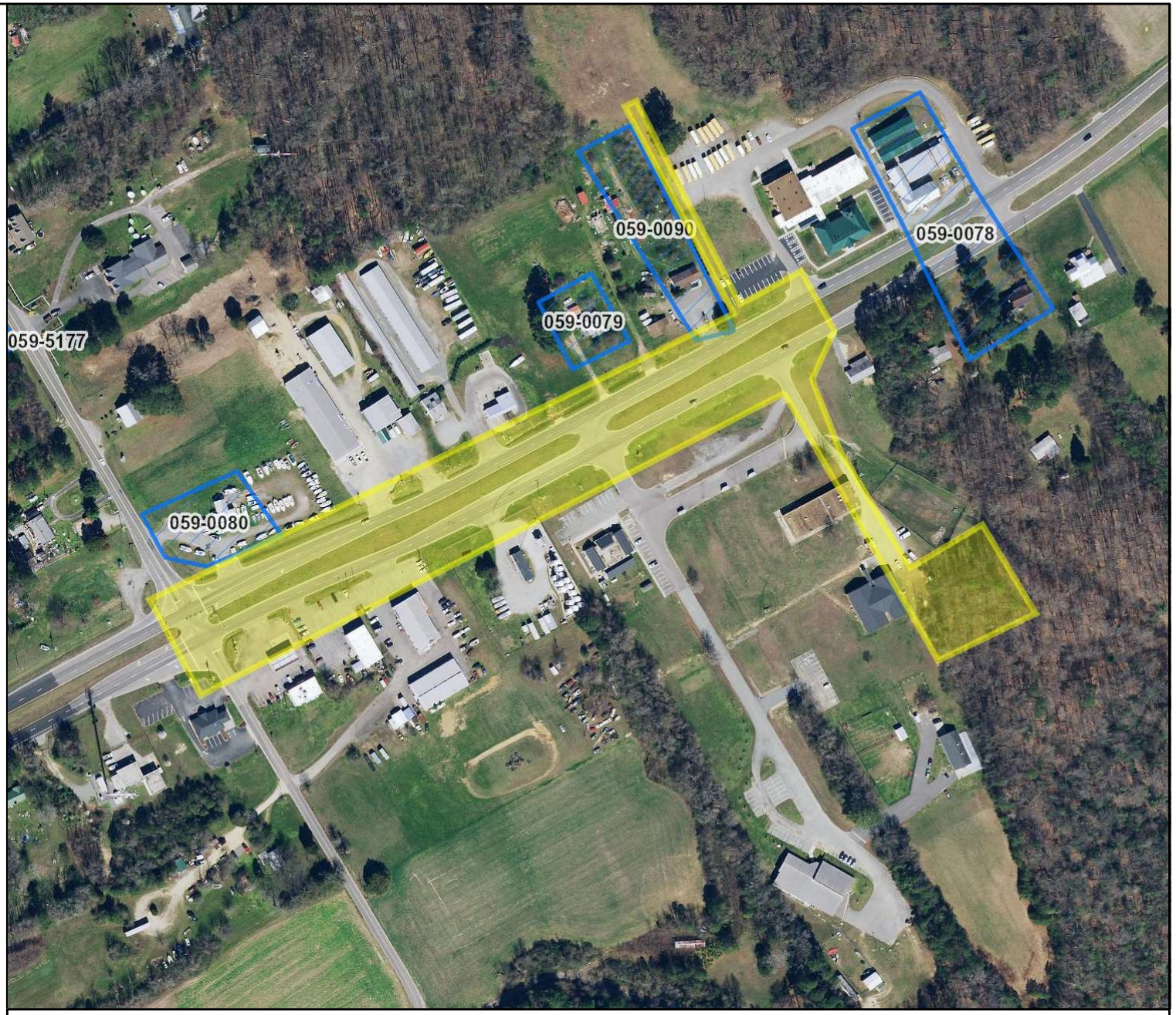
Virginia Dept. of Historic Resources

V-CRIS

Virginia Cultural Resource Information System

Legend

- Architecture Resources
- Architecture Labels
- Archaeological Resources



N

Feet

0 100 200 300 400

1:4,514 / 1"=376 Feet

Title: Cook's Corner Historical Map

Date: 10/4/2021

DISCLAIMER:Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions.The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.

Notice if AE sites:Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.

From: ePIX System <ePIX@dhr.virginia.gov>
Sent: Tuesday, October 5, 2021 1:08 PM
To: Koleman Joy
Subject: [EXTERNAL] Cook's Corner Pump Station (DHR File No. 2021-4685) | e-Mail #01216

Dear Koleman Joy:

Thank you for submitting your application through the ePIX system andrequesting the comments of the Department of Historic Resources on thereferenced project. Your application isbeing processed and our 30-day review period will start on the next businessday after submission. You will benotified if your application is insufficient or if additional materials arerequired for our review.

You may view the submitted application and track our review of thisproject through your ePIX account under "My Projects" (https://epix.dhr.virginia.gov). When our review is complete, comments will beemailed to you and attached to the application in your ePIX account. No project activities that have the potentialto impact historic properties should take place until the lead agency hasprovided a notice to proceed.

If you wish or are asked to submit additional materials in support ofyour application, documents must be submitted electronically to the appropriatereviewer. Submissions with a total sizeof less than 10mb may be submitted via email. Submissions larger than 10mb must be made through VITA's Large FileTransfer Application (https://lft.virginia.gov/). Contact your reviewer for instructions.

Please reference the assigned DHR File Number on all futurecorrespondence.

If you have any questions concerning the review process or if we mayprovide any further assistance, please do not hesitate to contact me. We look forward to working with you on thisproject.

Sincerely,

Jennifer Bellville-Marrion
Review and Compliance Division

6.6 SOCIO-ECONOMIC CHANGE

EJSCREEN Report (Version 2020)

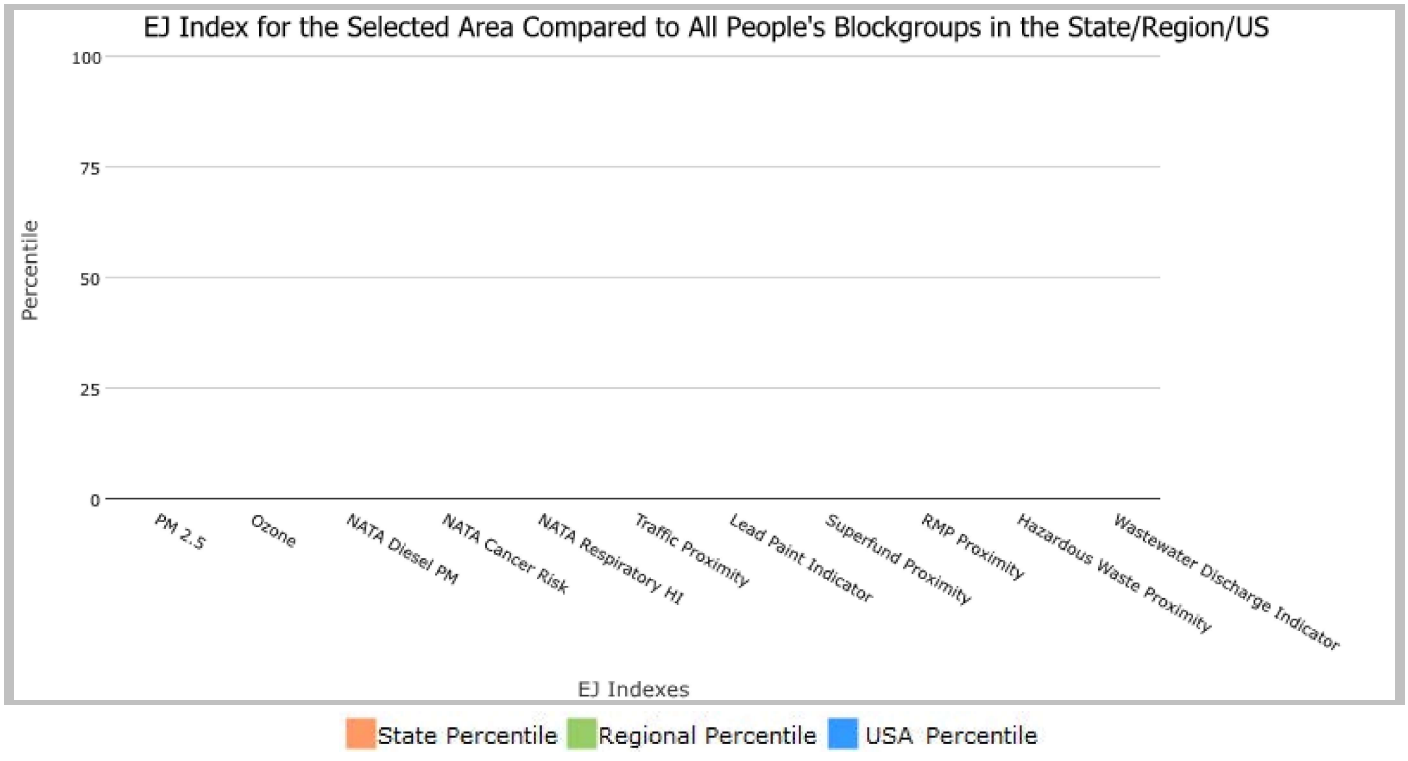
the User Specified Area, VIRGINIA, EPA Region 3

Approximate Population: 0

Input Area (sq. miles): 0.01

Cook

Selected Variables	State Percentile	EPA Region Percentile	USA Percentile
EJ Indexes			
EJ Index for PM2.5	N/A	N/A	N/A
EJ Index for Ozone	N/A	N/A	N/A
EJ Index for NATA* Diesel PM	N/A	N/A	N/A
EJ Index for NATA* Air Toxics Cancer Risk	N/A	N/A	N/A
EJ Index for NATA* Respiratory Hazard Index	N/A	N/A	N/A
EJ Index for Traffic Proximity and Volume	N/A	N/A	N/A
EJ Index for Lead Paint Indicator	N/A	N/A	N/A
EJ Index for Superfund Proximity	N/A	N/A	N/A
EJ Index for RMP Proximity	N/A	N/A	N/A
EJ Index for Hazardous Waste Proximity	N/A	N/A	N/A
EJ Index for Wastewater Discharge Indicator	N/A	N/A	N/A



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

EJSCREEN Report (Version 2020)

the User Specified Area, VIRGINIA, EPA Region 3

Approximate Population: 0

Input Area (sq. miles): 0.01

Cook

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0

EJSCREEN Report (Version 2020)

the User Specified Area, VIRGINIA, EPA Region 3

Approximate Population: 0

Input Area (sq. miles): 0.01

Cook

Selected Variables	Value	State Avg.	%ile in State	EPA Region Avg.	%ile in EPA Region	USA Avg.	%ile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in µg/m^3)	N/A	7.87	N/A	8.63	N/A	8.55	N/A
Ozone (ppb)	N/A	42.4	N/A	43.2	N/A	42.9	N/A
NATA* Diesel PM (µg/m^3)	N/A	0.425	N/A	0.477	N/A	0.478	N/A
NATA* Cancer Risk (lifetime risk per million)	N/A	31	N/A	31	N/A	32	N/A
NATA* Respiratory Hazard Index	N/A	0.41	N/A	0.4	N/A	0.44	N/A
Traffic Proximity and Volume (daily traffic count/distance to road)	N/A	570	N/A	650	N/A	750	N/A
Lead Paint Indicator (% Pre-1960 Housing)	N/A	0.21	N/A	0.36	N/A	0.28	N/A
Superfund Proximity (site count/km distance)	N/A	0.11	N/A	0.15	N/A	0.13	N/A
RMP Proximity (facility count/km distance)	N/A	0.38	N/A	0.62	N/A	0.74	N/A
Hazardous Waste Proximity (facility count/km distance)	N/A	1.6	N/A	2	N/A	5	N/A
Wastewater Discharge Indicator (toxicity-weighted concentration/m distance)	N/A	3.1	N/A	34	N/A	9.4	N/A
Demographic Indicators							
Demographic Index	N/A	32%	N/A	30%	N/A	36%	N/A
People of Color Population	N/A	38%	N/A	33%	N/A	39%	N/A
Low Income Population	N/A	25%	N/A	27%	N/A	33%	N/A
Linguistically Isolated Population	N/A	3%	N/A	3%	N/A	4%	N/A
Population With Less Than High School Education	N/A	11%	N/A	10%	N/A	13%	N/A
Population Under 5 years of age	N/A	6%	N/A	6%	N/A	6%	N/A
Population over 64 years of age	N/A	15%	N/A	16%	N/A	15%	N/A

* The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

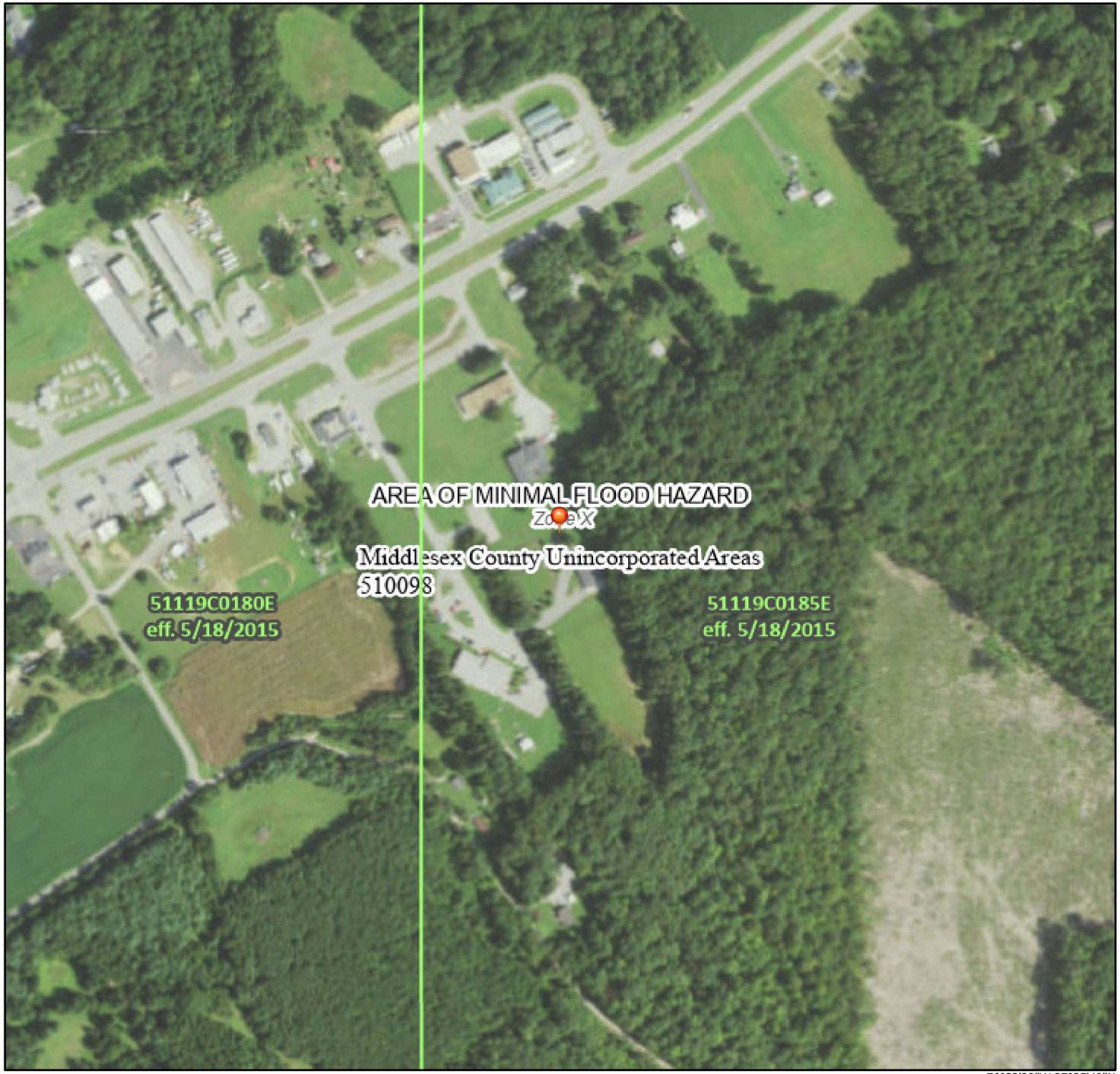
For additional information, see: www.epa.gov/environmentaljustice

6.7 FLOODPLAINS

National Flood Hazard Layer FIRMette

FEMA

76°33'59"W 37°36'18"N



76°33'22"W 37°35'49"N

0 250 500 1,000 1,500 2,000 Feet

1:6,000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/1/2021 at 3:23 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

7.0 AGENCY CORRESPONDENCE, REVIEW AND RESPONSES

List of Agency Documentation:

Department of Conservation and Recreation Resources

Virginia Department of Forestry

Fisheries Management Division

Virginia Marine Resources Commission

Virginia Department of Agriculture and Consumer Services

Virginia Department of Game and Inland Fisheries

Virginia Department of Health

Virginia Department of Historic Resources

Virginia Department of Transportation

Virginia Institute of Marine Science

Virginia Division of Geology and Mineral Resources

Department of Conservation & Recreation
CONSERVING VIRGINIA'S NATURAL & RECREATIONAL RESOURCES

Web Project ID: WEB0000016418

Client Project Number: 8492-03-006

PROJECT INFORMATION

TITLE: HRSD Collection System Program - Cook's Corner

DESCRIPTION: The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively. The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

EXISTING SITE CONDITIONS: Existing Town, Existing Roads, Existing Infrastructure

QUADRANGLES: Saluda

COUNTIES: Middlesex

Latitude/Longitude (DMS): 37° 36' 11.9059" N / 76° 33' 40.4186" W

Acreage: 362 acres

Comments:

REQUESTOR INFORMATION

Priority: N **Tier Level:** Tier I **Tax ID:**

Contact Name: Tim Wilson

Company Name: Bowman Consulting

Address: 460 McLaws Circle, Suite 120

City: Williamsburg

State: AL

Zip: 23185

Phone: 757-229-1776

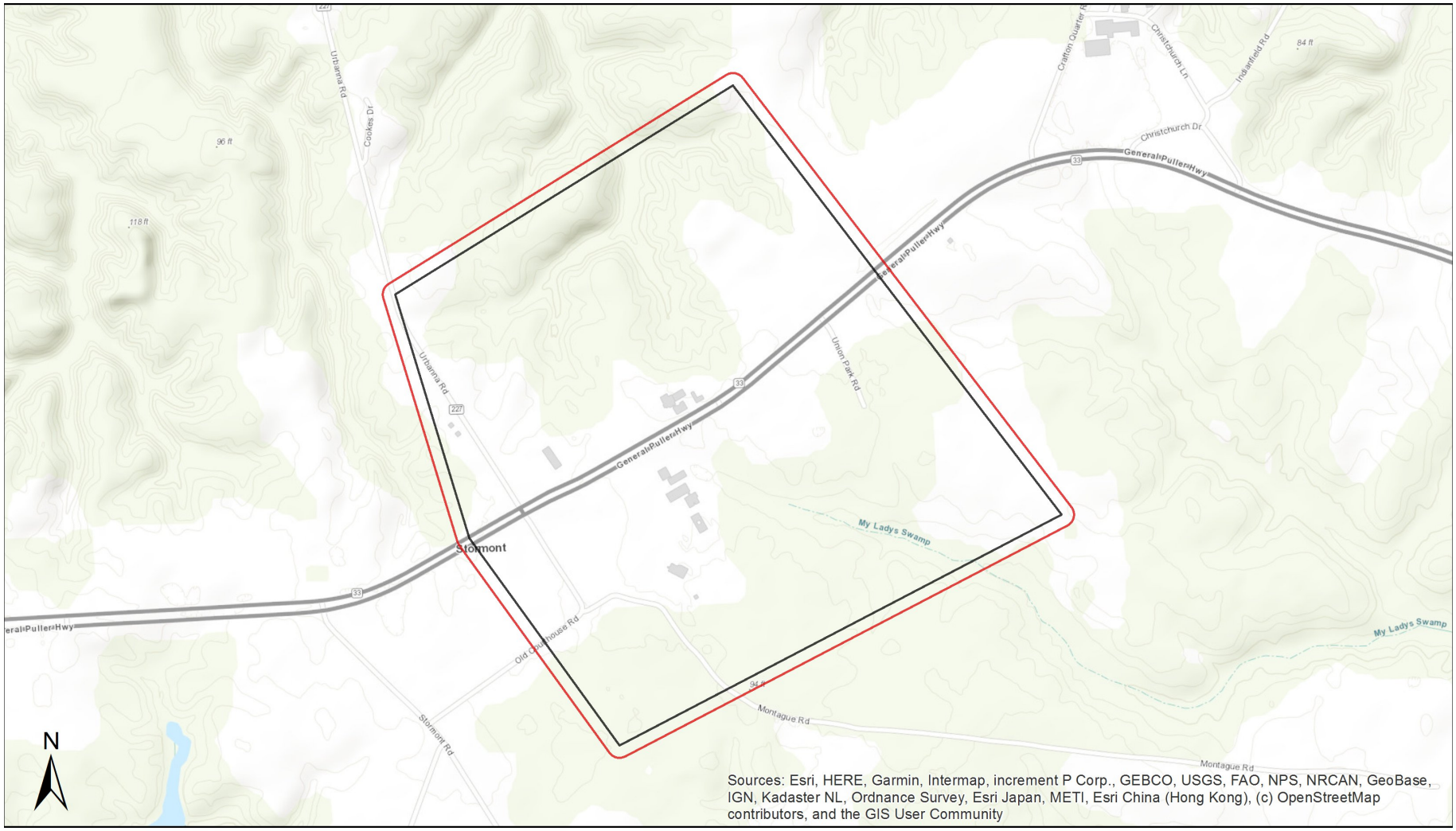
Fax: 757-229-4683

Email: twilson@bowmancg.com

Conservation Site	Site Type	Brank	Acreage	Listed Species Presence	Essential Conservation Site?
Natural Heritage Screening Features Intersecting Project Boundary					

Intersecting Predictive Models
Predictive Model Results

HRSD Collection System Program - Cook's Corner



Project Boundary

Buffered Project Boundary

1:12,729

0 0.1 0.2 0.4 mi

0 0.175 0.35 0.7 km

Quads: Saluda

Counties: Middlesex

Company: Bowman Consulting

Lat/Long: 373611 / -763340

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director

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 in the vicinity of 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, natural heritage resources have not been documented within the submitted project boundary including a 100 foot buffer. In addition, the project area does not intersect any of the predictive models identifying potential habitat for natural heritage resources.

Under a Memorandum of Agreement established between the Virginia Department of Agriculture and Consumer Services (VDACS) and the Virginia Department of Conservation and Recreation (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.

Any absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks additional natural heritage resources. New and updated information is continually added to Biotics. Please revisit this website or contact DCR for an update on this natural heritage information if a significant amount of time passes (DCR recommends no more than six months) before it is utilized.

The Virginia Department of Wildlife Resources maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters, that may contain information not documented in the Natural Heritage Data Explorer. Their database may be accessed from http://vafwis.org/fwis/ or contact Ernie Aschenbach (804-367-2733 or Ernie.Aschenbach@dwr.virginia.gov).

Thank you for submitting your project to the Virginia Department of Conservation and Recreation's Natural Heritage Data Explorer Web Service. Based on the preliminary screening results for this project, no further correspondence will be sent from this office. Should you have any questions or concerns about this report, the Data Explorer, or other Virginia Natural Heritage Program services, please contact the Natural Heritage Project Review Unit at 804-371-2708.

Bowman

October 15, 2021

Mr. Terry Lasher
Assistant State Forester
Virginia Department of Forestry
900 Natural Resources Drive, Suite 800
Charlottesville, VA 22903

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Mr. Lasher:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

There will be tree clearing for the purposes of installing the pump station. However, the clearing area is minimal compared to the overall project area. Additionally, instead of a fence, the pump station will have a tree screen. We have gathered information on wetlands and do not anticipate any other impacts within the project area. Enclosed is a wetlands map and a vicinity map of the project for your reference.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions

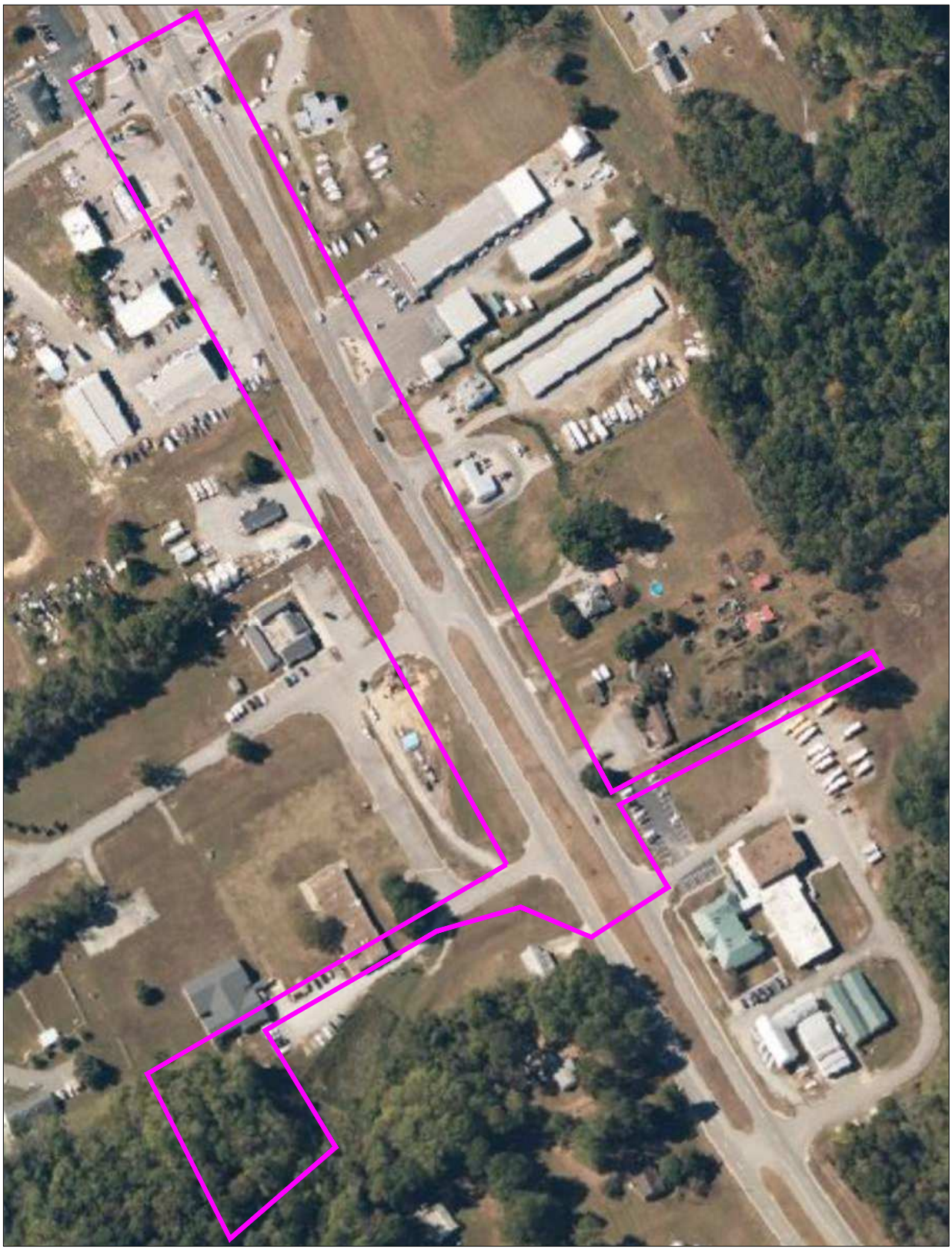
concerning this project, please contact our office at 757-229-1776, or contact me directly, via email, at kjoy@bowman.com.

Sincerely,

BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

\\Va-will-dc1-srv\new_projects\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.DOF EA Review.docx



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

Bowman Consulting Group, Ltd.
460 McLaws Circle
Suite 120
Williamsburg, VA 23185
Phone: (757) 229-1776
Fax: (757) 229-4683
www.bowmanconsulting.com

Bowman

PROJECT NO
COUNTY PROJECT NUMBER

PLAN STATUS
XX/XX/XX IXXXX

DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

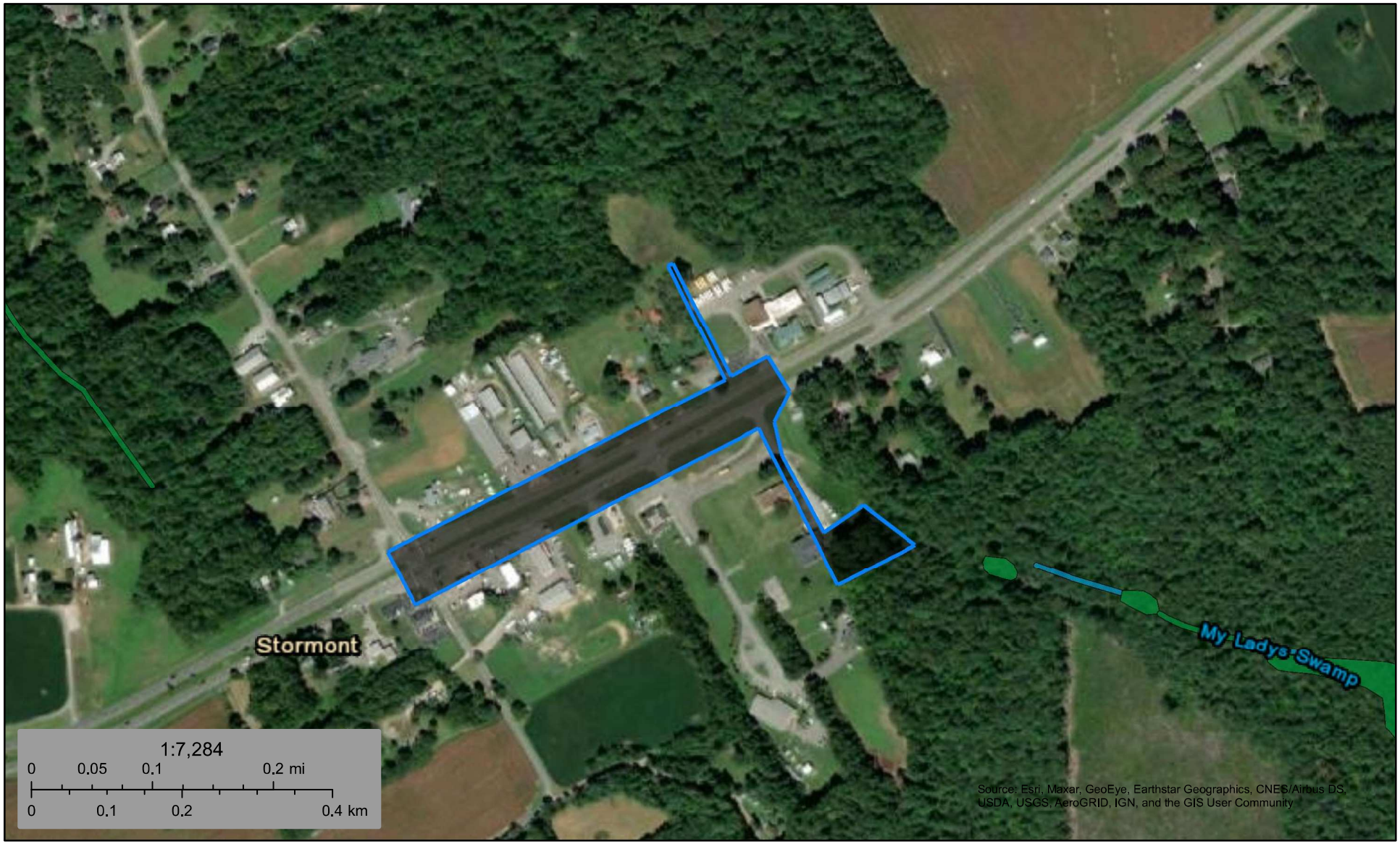
DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

U.S. Fish and Wildlife Service
National Wetlands Inventory

Cook's Corner Wetlands



October 7, 2021

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

Bowman

October 15, 2021

Mr. Pat Geer
Deputy Chief
Fisheries Management Division
2600 Washington Avenue
Newport News, VA 23607

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Mr. Geer:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We have gathered information regarding Federally listed species and critical habitats within the project site and we do not anticipate any impacts. We are requesting your confirmation of any potential impacts in addition to any present concerns you may have related to possible effects of the project listed above on such species or critical habitat, as well as any other wildlife concerns.

Enclosed is an endangered species list and a vicinity map for your reference.

460 McLaws Circle, Suite 120, Williamsburg, VA 23185
p: 757.229.1776 | f: 757.229.4683
www.bowmanconsulting.com

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776. You can also email at me at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

P:\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.FISHIERIES EA Review.docx

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:
Consultation Code: 05E2VA00-2021-SLI-6009
Event Code: 05E2VA00-2021-E-17645
Project Name: Cook's Corner

September 29, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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: 05E2VA00-2021-SLI-6009
Event Code: Some(05E2VA00-2021-E-17645)
Project Name: Cook's Corner
Project Type: WASTEWATER FACILITY
Project Description: Located on south side of General Puller Highway between Old Courthouse road and Union Park Road.
Construction of Wastewater pumping station, forcemain piping and gravity sewer for area known as Cook's Corner in Middlesex County, Virginia.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.602251499999994,-76.56213093116888,14z

Counties: Middlesex County, Virginia

Endangered Species Act Species

There is a total of 2 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 Fisheries[1], 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
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

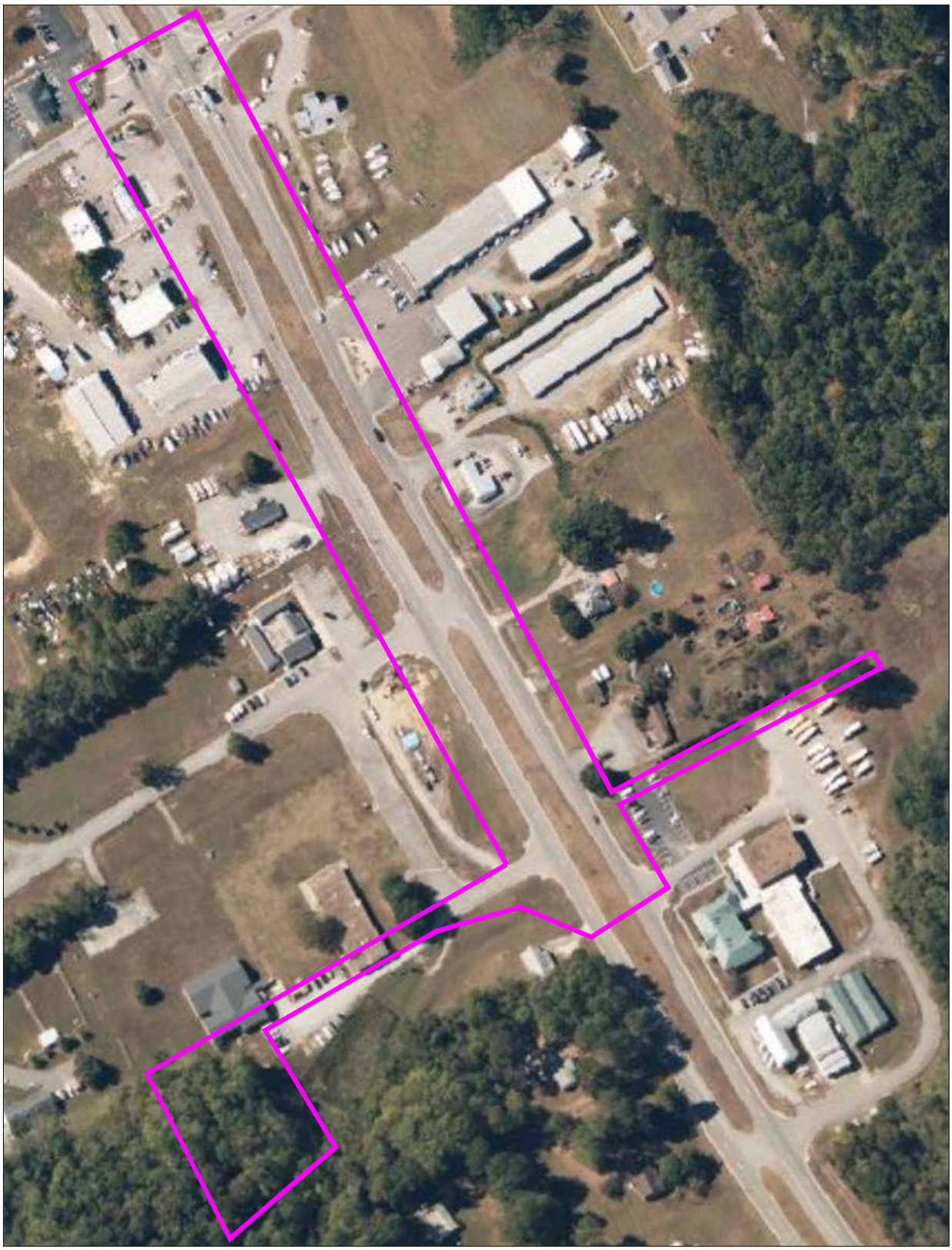
Critical habitats

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.



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

Bowman Consulting Group, Ltd.
460 McLaws Circle
Suite 120
Williamsburg, VA 23185
Phone: (757) 229-1776
Fax: (757) 229-4683
www.bowmanconsulting.com

Bowman

PROJECT NO
COUNTY PROJECT NUMBER

PLAN STATUS
XX/XX/XX IXXXX

DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

Bowman

October 15, 2021

Mr. Tony Watkinson
Habitat Management
Virginia Marine Resources Commission
2600 Washington Avenue
Newport News, VA 23607

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Mr. Watkinson:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We have gathered information regarding Federally listed species, critical habitats, and migratory birds within the project site and we do not anticipate any impacts. We are requesting your confirmation of any potential impacts in addition to any present concerns you may have related to possible effects of the project listed above on such species or critical habitat, as well as any other wildlife concerns.

Enclosed is an endangered species list and a vicinity map for your reference.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776. You can also email at me at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

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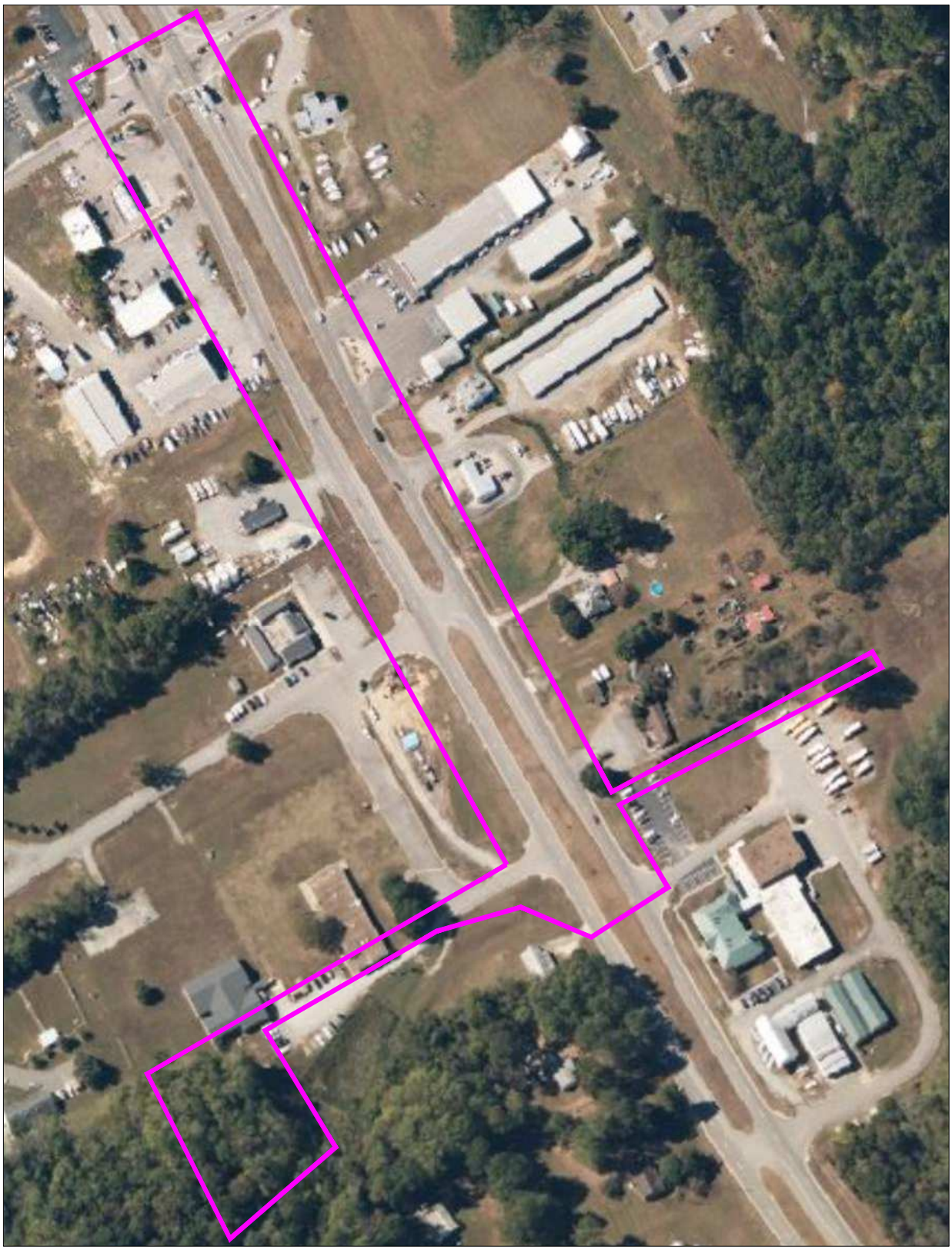

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Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

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SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

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:
Consultation Code: 05E2VA00-2021-SLI-6009
Event Code: 05E2VA00-2021-E-17645
Project Name: Cook's Corner

September 29, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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.

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Virginia Ecological Services Field Office
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Project Summary

Consultation Code: 05E2VA00-2021-SLI-6009
Event Code: Some(05E2VA00-2021-E-17645)
Project Name: Cook's Corner
Project Type: WASTEWATER FACILITY
Project Description: Located on south side of General Puller Highway between Old Courthouse road and Union Park Road.
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Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

Bowman

October 15, 2021

Mr. Keith Tignor
Virginia Department of Agriculture & Consumer Services
Office of Plant & Pest Services
1100 Bank Street
Richmond, VA 23219

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Mr. Tignor:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

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We have gathered information regarding soils within the project site. While the soils indicate most of the project is located on prime farmland, there are no farms in the area. The project will occur on previously disturbed land, forested land, or VDOT approved right of way. We do not anticipate any impacts.

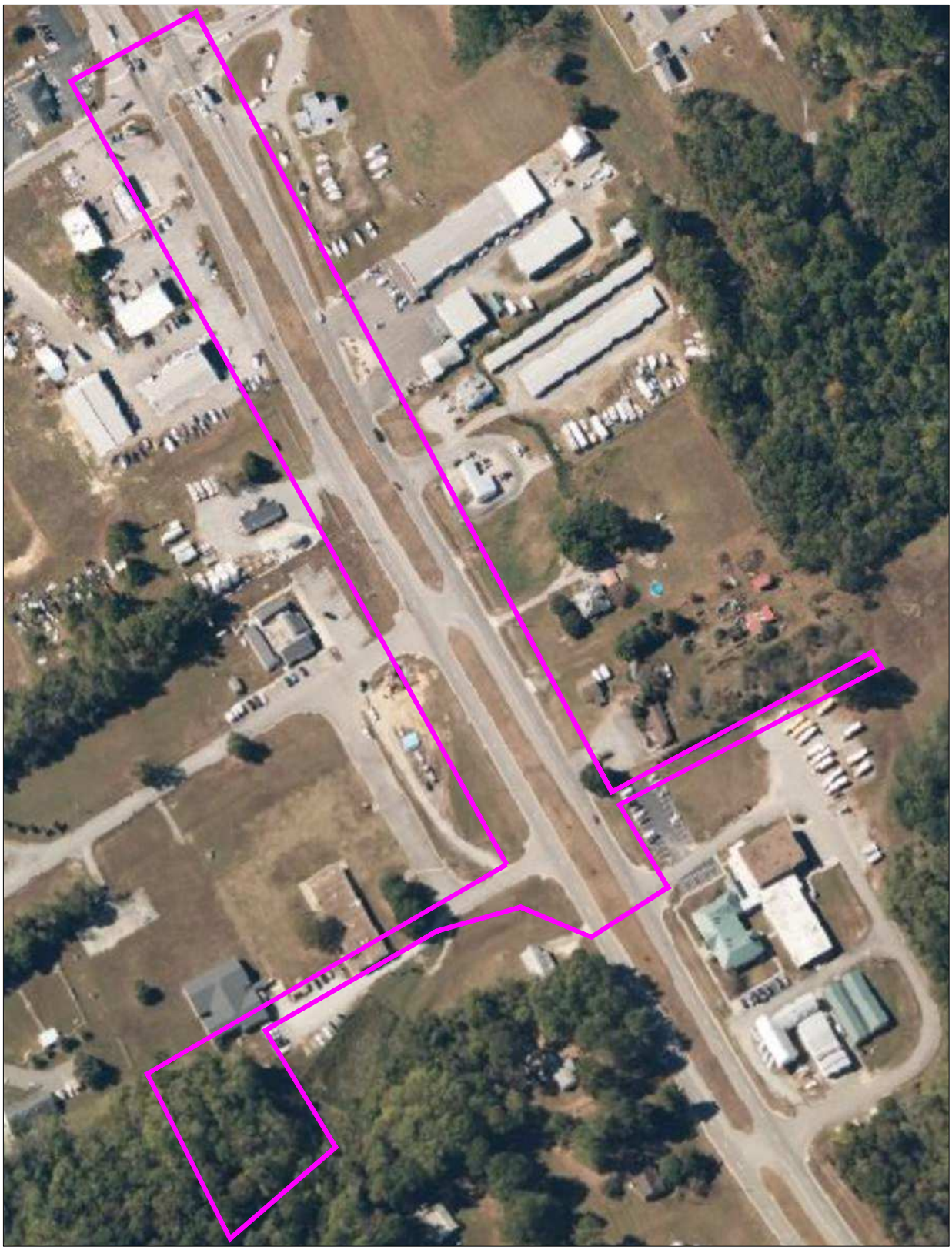
Enclosed is a vicinity map and a soils report for your reference.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776, or contact me directly, via email, at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

\\Va-will-dc1-srv\new_projects\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.VDACS EA Review.docx



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ENVIRONMENTAL ASSESSMENT

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SHEET

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Middlesex County, Virginia

Cook's Corner Soils Map

September 30, 2021

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

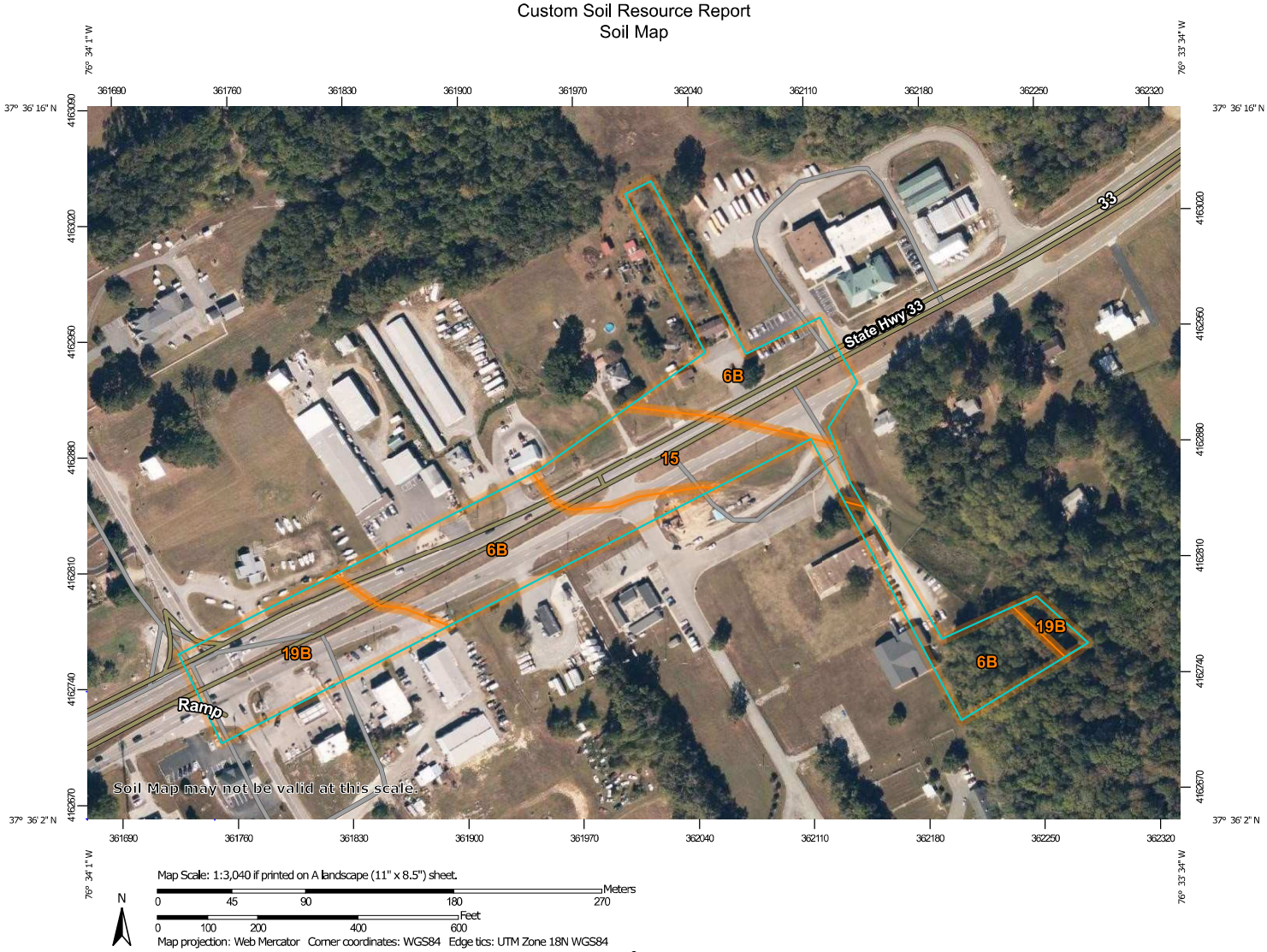
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map



Map Scale: 1:3,040 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 45 90 180 270

Feet
0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Middlesex County, Virginia
Survey Area Data: Version 13, Jun 5, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Oct 11, 2019—Oct 15, 2019

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
6B	Emporia loam, 2 to 6 percent slopes	5.0	57.8%
15	Ochlockonee silt loam	1.6	18.5%
19B	Slagle silt loam, 2 to 6 percent slopes	2.0	23.7%
Totals for Area of Interest		**8.6**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The

delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Middlesex County, Virginia

6B—Emporia loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 40hr
Elevation: 20 to 150 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Emporia and similar soils: 75 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Emporia

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Marine deposits

Typical profile

H1 - 0 to 14 inches: loam
H2 - 14 to 31 inches: clay loam
H3 - 31 to 59 inches: sandy clay loam
H4 - 59 to 66 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 36 to 54 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

15—Ochlockonee silt loam

Map Unit Setting

National map unit symbol: 40h5
Elevation: 50 to 800 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: Not prime farmland

Map Unit Composition

Ochlockonee and similar soils: 75 percent
Minor components: 9 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ochlockonee

Setting

Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Marine deposits

Typical profile

H1 - 0 to 7 inches: silt loam
H2 - 7 to 34 inches: loam
H3 - 34 to 62 inches: sandy loam

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: FrequentNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Bibb

Percent of map unit: 5 percent
Landform: Flood plains

Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

Kinston

Percent of map unit: 4 percent
Landform: Flood plains
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

19B—Slagle silt loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 40hc
Elevation: 70 to 350 feet
Mean annual precipitation: 40 to 55 inches
Mean annual air temperature: 47 to 70 degrees F
Frost-free period: 182 to 210 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Slagle and similar soils: 80 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Slagle

Setting

Landform: Marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Marine deposits

Typical profile

H1 - 0 to 9 inches: silt loam
H2 - 9 to 24 inches: loam
H3 - 24 to 38 inches: loam
H4 - 38 to 60 inches: loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.57 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None

Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Hydric soil rating: No

References

American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

Federal Register. July 13, 1994. Changes in hydric soils of the United States.

Federal Register. September 18, 2002. Hydric soils of the United States.

Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

National Research Council. 1995. Wetlands: Characteristics and boundaries.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262

Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577

Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580

Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.

United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.

United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374

United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084

United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

Bowman

October 15, 2021

Ms. Amy Martin Ewing
Virginia Department of Game and Inland Fisheries
7870 Villa Park Dr #400
Henrico, VA 23228

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Ms. Ewing:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We have gathered information regarding Federally listed species, critical habitat, and migratory birds within the project site and we do not anticipate any impacts. We are requesting your confirmation in addition to any present concerns you may have related to possible effects of the project listed above on such species or critical habitat, as well as any other wildlife concerns.

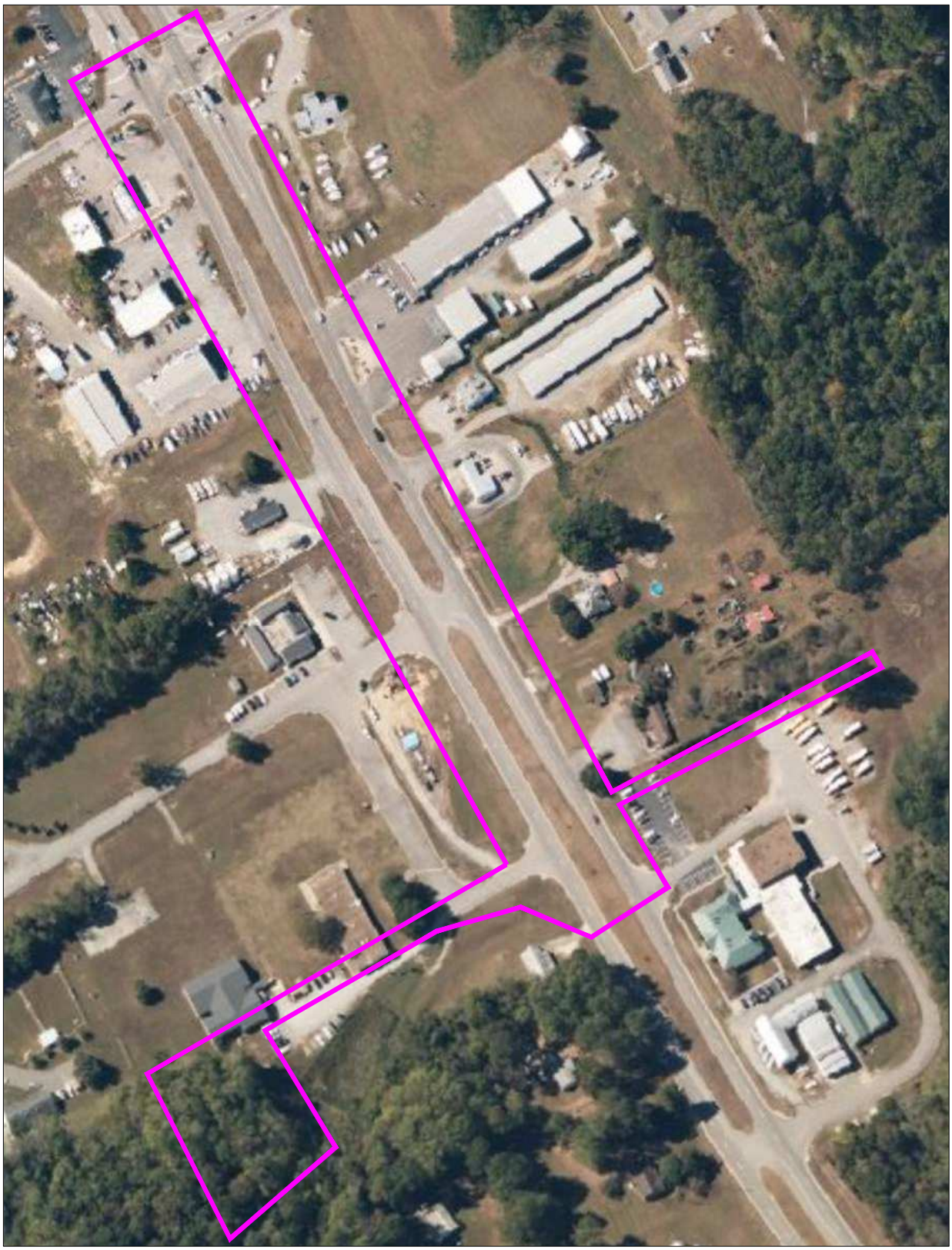
The enclosed review package provides the information about the species, critical habitat, and bald eagles considered in our review, and the provided species conclusion table identifies our determinations for the potential impacts of the project.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776, or contact me directly, via email, at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

\\Va-will-dc1-srv\new_projects\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.VDGIF EA Review.docx



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

Bowman Consulting Group, Ltd.
460 McLaws Circle
Suite 120
Williamsburg, VA 23185
Phone: (757) 229-1776
Fax: (757) 229-4683
www.bowmanconsulting.com

Bowman

PROJECT NO
COUNTY PROJECT NUMBER

PLAN STATUS
XX/XX/XX IXXXX

DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

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:
Consultation Code: 05E2VA00-2021-SLI-6009
Event Code: 05E2VA00-2021-E-17645
Project Name: Cook's Corner

September 29, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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: 05E2VA00-2021-SLI-6009
Event Code: Some(05E2VA00-2021-E-17645)
Project Name: Cook's Corner
Project Type: WASTEWATER FACILITY
Project Description: Located on south side of General Puller Highway between Old Courthouse road and Union Park Road.
Construction of Wastewater pumping station, forcemain piping and gravity sewer for area known as Cook's Corner in Middlesex County, Virginia.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.602251499999994,-76.56213093116888,14z

Counties: Middlesex County, Virginia

Endangered Species Act Species

There is a total of 2 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 Fisheries[1], 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
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

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.

VaFWIS Search Report Compiled on 10/6/2021, 1:26:02 PM

Help

Known or likely to occur within a **3 mile radius around point 37.6021944 -76.5631111** in **073 Gloucester County, 103 Lancaster County, 119 Middlesex County, VA**

View Map of Site Location

500 Known or Likely Species ordered by Status Concern for Conservation (displaying first 30) (30 species with Status* or Tier I** or Tier II**)

BOVA Code	Status*	Tier**	Common Name	Scientific Name
010031	FESE	Ia	Sturgeon, shortnose	Acipenser brevirostrum
030074	FESE	Ia	Turtle, Kemp's ridley sea	Lepidochelys kempii
010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus
030075	FESE	Ic	Turtle, leatherback sea	Dermochelys coriacea
030071	FTST	Ia	Turtle, loggerhead sea	Caretta caretta
040110	FTSE	Ia	Rail, eastern black	Laterallus jamaicensis jamaicensis
050022	FTST	Ia	Bat, northern long-eared	Myotis septentrionalis
030072	FTST	Ib	Turtle, green sea	Chelonia mydas
040120	FTST	IIa	Plover, piping	Charadrius melodus
100361	FTST	IIa	Beetle, northeastern beach tiger	Cicindela dorsalis dorsalis
050020	SE	Ia	Bat, little brown	Myotis lucifugus
050027	SE	Ia	Bat, tri-colored	Perimyotis subflavus
040096	ST	Ia	Falcon, peregrine	Falco peregrinus
040293	ST	Ia	Shrike, loggerhead	Lanius ludovicianus
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin
030063	CC	IIIa	Turtle, spotted	Clemmys guttata
040040		Ia	Ibis, glossy	Plegadis falcinellus
070148		Ic	Amphipod, Lancaster County	Crangonyx baculispina
020002		IIa	Treefrog, barking	Hyla gratiosa
040052		IIa	Duck, American black	Anas rubripes
040033		IIa	Egret, snowy	Egretta thula
040029		IIa	Heron, little blue	Egretta caerulea caerulea
040036		IIa	Night-heron, yellow-crowned	Nyctanassa violacea violacea
040114		IIa	Oystercatcher, American	Haematopus palliatus
040181		IIa	Tern, common	Sterna hirundo
040320		IIa	Warbler, cerulean	Setophaga cerulea
040140		IIa	Woodcock, American	Scolopax minor
040203		IIb	Cuckoo, black-billed	Coccyzus erythropthalmus
040105		IIb	Rail, king	Rallus elegans

To view **All 500 species** View 500

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

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

Anadromous Fish Use Streams (3 records)

View Map of All Anadromous Fish Use Streams

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE*	Highest Tier**	
C103	Piankatank	Confirmed	1			Yes
C61	Piankatank river	Confirmed	5		IV	Yes
C69	Rappahannock river 1	Confirmed	6		IV	Yes

Impediments to Fish Passage (4 records)

View Map of All Fish Impediments

ID	Name	River	View Map
149	GRAYS DAM	TR-DRAGON SWAMP	Yes
75	LOWER ROSEGILL LAKE DAM	RAPPAHANNOCK RIVER	Yes
70	ROSEGILL UPPER DAM	TR-RAPPAHANNOCK	Yes
74	TOWN BRIDGE POND DAM	TOWN BRIDGE SWAMP	Yes

Threatened and Endangered Waters (4 Reaches)

View Map of All Threatened and Endangered Waters

Stream Name	T&E Waters Species							View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name						
Rappahannock River (048005)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		Yes
Rappahannock River (048947)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		Yes
Rappahannock River (052249)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		Yes
Rappahannock River (057307)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus		Yes

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests (8 records)

View Map of All Query Results
Bald Eagle Nests

Nest	N Obs	Latest Date	DGIF Nest Status	View Map
GL0603	7	Apr 26 2008	UNKNOWN	Yes
MI0501	4	Apr 23 2006	HISTORIC	Yes
MI0602	7	Apr 30 2008	Unknown	Yes
MI0603	4	Apr 28 2007	Unknown	Yes
MI0809	1	Apr 30 2008	UNKNOWN	Yes
MI8002	5	May 11 1985	HISTORIC	Yes
MI8601	14	Apr 26 2000	HISTORIC	Yes
MI9201	14	Jan 1 2001	HISTORIC	Yes

Displayed 8 Bald Eagle Nests

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

View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species

Stream Name	Tier Species						View Map
	Highest TE*	BOVA Code, Status*, Tier**, Common & Scientific Name					
Rappahannock River (20801041)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes
Rappahannock River (20801041)	FESE	010032	FESE	Ib	Sturgeon, Atlantic	Acipenser oxyrinchus	Yes

Habitat Predicted for Terrestrial WAP Tier I & II Species (2 Species)

View Map of Combined Terrestrial Habitat Predicted for 2 WAP Tier I & II Species Listed Below

ordered by Status Concern for Conservation

BOVA Code	Status*	Tier**	Common Name	Scientific Name	View Map
020044	ST	IIa	Salamander, Mabee's	Ambystoma mabeei	Yes
030067	CC	IIa	Terrapin, northern diamond-backed	Malaclemys terrapin terrapin	Yes

Virginia Breeding Bird Atlas Blocks (6 records)

View Map of All Query Results
Virginia Breeding Bird Atlas Blocks

BBA ID	Atlas Quadrangle Block Name	Breeding Bird Atlas Species			View Map
		Different Species	Highest TE*	Highest Tier**	
58094	Saluda, CE	1			Yes
58093	Saluda, CW	5			Yes
58092	Saluda, NE	1			Yes
58091	Saluda, NW	2			Yes
58106	Urbana, SE	70		III	Yes
58105	Urbana, SW	1			Yes

Public Holdings:

N/A

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

FIPS Code	City and County Name	Different Species	Highest TE	Highest Tier
073	Gloucester	409	FESE	I
103	Lancaster	361	FESE	I
119	Middlesex	386	FESE	I

USGS 7.5' Quadrangles:
Saluda
Urbana

USGS NRCS Watersheds in Virginia:

N/A

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

HU6 Code	USGS 6th Order Hydrologic Unit	Different Species	Highest TE	Highest Tier
CB09	Dragon Swamp-Meggs Bay	67	SS	II
CB10	Piankatank River-Carvers Creek	74	SS	I
RA69	Rappahannock River-Lagrange Creek	53	FESE	I
RA73	Rappahannock River-Carter Creek	53	FESE	I

Compiled on 10/6/2021, 1:26:02 PM V1142146.0 report=V searchType= R dist= 4828.032 poi= 37.6021944 -76.5631111

CCB Mapping Portal

Layers: VA Eagle Nest Buffers

Map Center [longitude, latitude]: [-76.54990196228026, 37.6068201627733]

Map Link:
https://ccbbirds.org/maps/#layer=VA+Eagle+Nest+Buffers&zoom=14&lat=37.6068201627733&lng=-76.54990196228026&base=World+Imagery+%28ESRI%29

Report Generated On: 09/29/2021

8 Bald Eagle Nests

37,36,08.0 -76,33,47.0
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1/2 mile and 1/8 mile at the **Search Point**

Show Search Area
( ) Yes (•) No
3 Search distance miles radius

Search Point is at map center

Base Map Choices
Color Aerial Photography

Map Overlay Choices
Current List: Position, BAEANests

Map Overlay Legend

Position Rings 1/2 mile and 1/8 mile at the Search Point

Bald Eagle nests 660 and 330 foot management zones

back

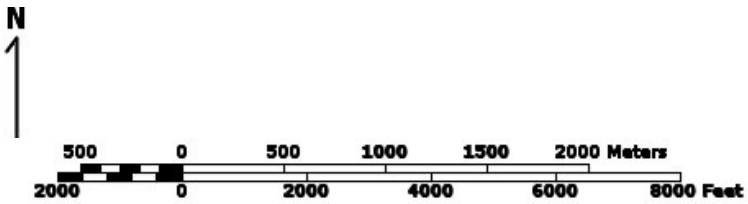
Refresh Browser Page

Map Click Pan Id M

Map Scale In Zoom Out

Screen Size Small Size Big

Help



Point of Search 37,36,08.0 -76,33,47.0
Map Location 37,36,08.0 -76,33,47.0

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: Color Aerial Photography 2002 - Virginia Base Mapping Program, Virginia Geographic Information Network

Map projection is UTM Zone 18 NAD 1983 with left 359628 and top 4165231. Pixel size is 8 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 pixles. The map display represents 4800 meters east to west by 4800 meters north to south for a total of 23.0 square kilometers. The

map display represents 15750 feet east to west by 15750 feet north to south for a total of 8.9 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
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map assembled 2021-10-06 13:20:19 (qa/qc March 21, 2016 12:20 - tn=1142146.0 dist=4828.032 Visitor)
$poi=37.6022222 -76.5630556

Anadromous Fish Use Streams

37,36,07.9 -76,33,47.2
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1/4 mile and 1/16 mile at the **Search Point**

Show Search Area
( ) Yes (•) No
3 Search distance miles radius

Search Point is at map center

Base Map Choices
Color Aerial Photography

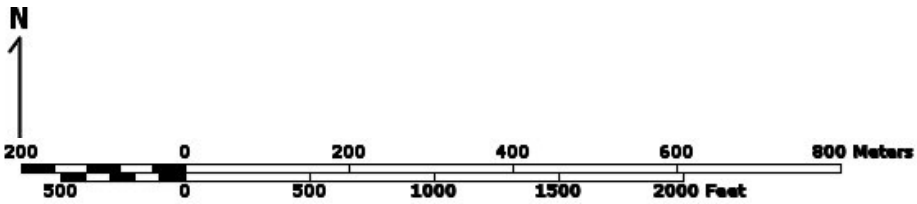
Map Overlay Choices
Current List: Position, Anadromous

Map Overlay Legend

Anadromous Fish Reach
Confirmed
Potential
123 Impediment
Position Rings 1/4 mile and 1/16 mile at the Search Point

back | Refresh Browser Page | Help

Map Click: Pan | Id | M
Map Scale: In | Zoom | Out
Screen Size: Small | Size | Big



Point of Search 37,36,07.9 -76,33,47.2
Map Location 37,36,07.9 -76,33,47.2

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: Color Aerial Photography 2002 - Virginia Base Mapping Program, Virginia Geographic Information Network

Map projection is UTM Zone 18 NAD 1983 with left 361423 and top 4163428. Pixel size is 2 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 pixles. The map display represents 1200 meters east to west by 1200 meters north to south for a total of 1.4 square kilometers. The

map display represents 3937 feet east to west by 3937 feet north to south for a total of 0.5 square miles.

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map assembled 2021-10-06 13:18:11 (qa/qc March 21, 2016 12:20 - tn=1142146.0 dist=4828.032 Visitor)
$poi=37.6021944 -76.5631111

Virginia Breeding Bird Atlas Blocks

37,36,07.9 -76,33,47.2
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1/4 mile and 1/16 mile at the **Search Point**

Show Search Area
( ) Yes (•) No
3 Search distance miles radius

Search Point is at map center

Base Map Choices
Color Aerial Photography

Map Overlay Choices
Current List: Position, BBA

Map Overlay Legend

Position Rings 1/4 mile and 1/16 mile at the Search Point

Data Observation Site

back

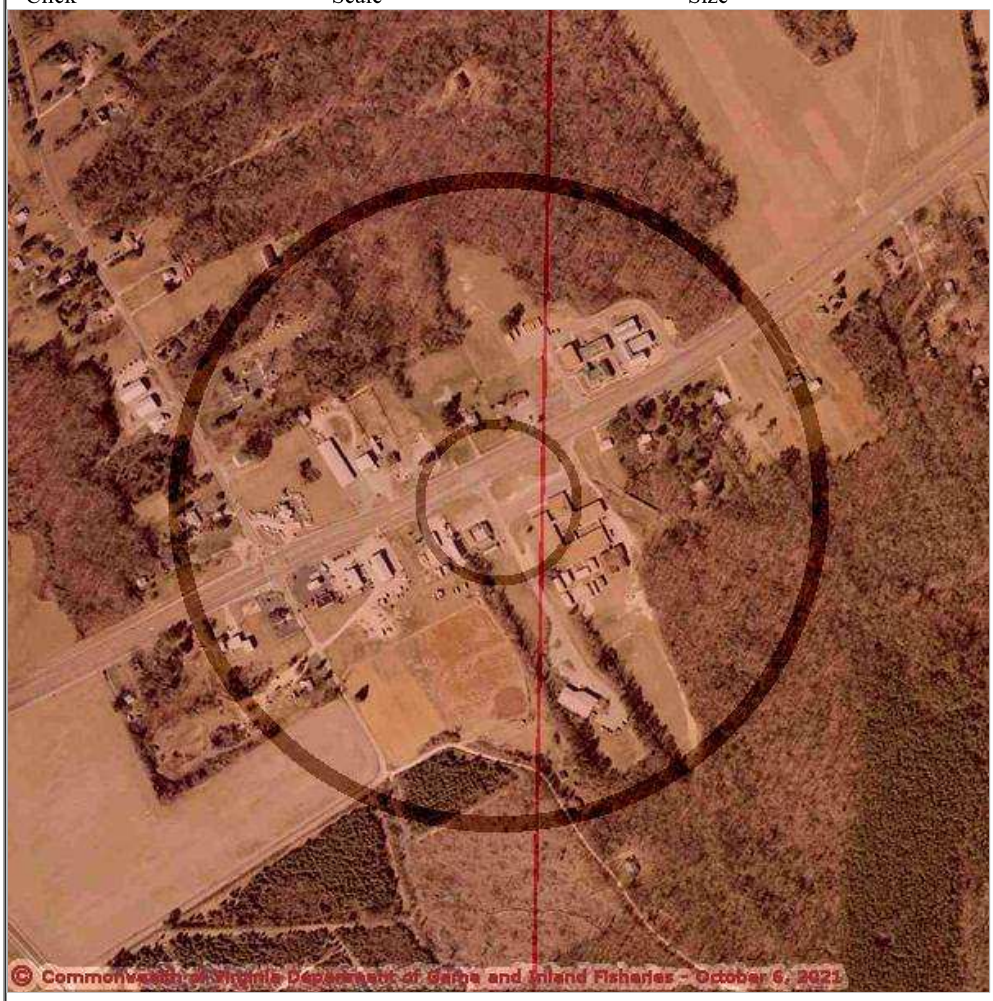
Refresh Browser Page

Map Click Pan Id M

Map Scale In Zoom Out

Screen Size Small Size Big

Help



Point of Search 37,36,07.9 -76,33,47.2
Map Location 37,36,07.9 -76,33,47.2

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: Color Aerial Photography 2002 - Virginia Base Mapping Program, Virginia Geographic Information Network

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map assembled 2021-10-06 13:22:52 (qa/qc March 21, 2016 12:20 - tn=1142146.0 dist=4828.032 Visitor)
$poi=37.6021944 -76.5631111

Habitat Predicted for WAP Tier I and II Species

37,36,07.9 -76,33,47.2
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1/4 mile and 1/16 mile at the **Search Point**

Show Search Area
( ) Yes (•) No
3 Search distance miles radius

Search Point is at map center

Base Map Choices
Color Aerial Photography

Map Overlay Choices
Current List: Position, TierReaches

Map Overlay Legend

Predicted Habitat WAP Tier I & II
Aquatic
Terrestrial
Position Rings 1/4 mile and 1/16 mile at the Search Point

back | Refresh Browser Page | Help

Map Click: Pan | Id | M
Map Scale: In | Zoom | Out
Screen Size: Small | Size | Big

Point of Search 37,36,07.9 -76,33,47.2
Map Location 37,36,07.9 -76,33,47.2

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: Color Aerial Photography 2002 - Virginia Base Mapping Program, Virginia Geographic Information Network

Map projection is UTM Zone 18 NAD 1983 with left 361423 and top 4163428. Pixel size is 2 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 pixles. The map display represents 1200 meters east to west by 1200 meters north to south for a total of 1.4 square kilometers. The

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map assembled 2021-10-06 13:21:18 (qa/qc March 21, 2016 12:20 - tn=1142146.0 dist=4828.032 Visitor)
$poi=37.6021944 -76.5631111

Threatened and Endangered Waters

37,36,07.9 -76,33,47.2
is **the Search Point**

Show Position Rings
(•) Yes ( ) No
1/4 mile and 1/16 mile at the **Search Point**

Show Search Area
( ) Yes (•) No
3 Search distance miles radius

Search Point is at map center

Base Map Choices
Color Aerial Photography

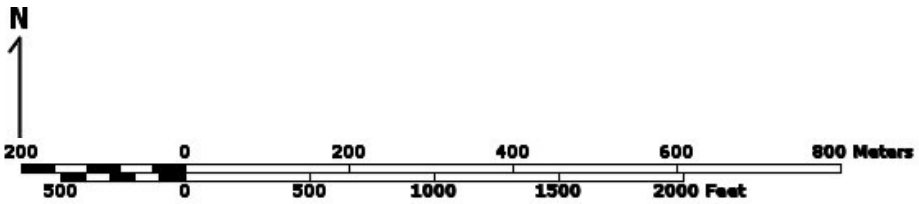
Map Overlay Choices
Current List: Position, TEWaters

Map Overlay Legend

T & E Waters
Federal
State

Position Rings 1/4 mile and 1/16 mile at the Search Point

back
Refresh Browser Page
Map Click Pan Id M
Map Scale In Zoom Out
Screen Size Small Size Big
Help



Point of Search 37,36,07.9 -76,33,47.2
Map Location 37,36,07.9 -76,33,47.2

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: Color Aerial Photography 2002 - Virginia Base Mapping Program, Virginia Geographic Information Network

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map assembled 2021-10-06 13:19:04 (qa/qc March 21, 2016 12:20 - tn=1142146.0 dist=4828.032 Visitor)
$poi=37.6021944 -76.5631111

Species Conclusions Table

Project Name: Cook's Corner Pump Station

Date: 10/8/2021

Species / Resource Name	Conclusion	ESA Section 7 / Eagle Act Determination	Notes / Documentation
Northern Long-eared Bat (Myotis septentrionalis)	No habitat is present for this species	No effect/Not likely to Adversely Affect	No habitat present.
Bald Eagle (Haliaeetus leucocephalus)	Unlikely to disturb nesting Bald Eagles	No Eagle Act permit required, any work conducted within 660' of Eagle's nests will be completed outside of Breeding Season	Project is not within 660' of a nest. Not within a concentration area.
Monarch Butterfly (Danaus plexippus)	No habitat is present for this species	No effect/Not likely to Adversely Affect	No habitat present
Prairie Warbler (Dendroica discolor)	Unlikely to disturb migratory bird	No effect/Not likely to Adversely Affect	No habitat present
Wood Thrush (Hylocichla mustelina)	Unlikely to disturb migratory bird	No effect/Not likely to Adversely Affect	No habitat present
Critical Habitat	No critical habitat present	No effect	

Bowman

October 15, 2021

Virginia Department of Health
Office of Drinking Water
James Madison Building
109 Governor Street, Room 628
Richmond, VA 23219

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

To whom it may concern:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We do not anticipate any impacts in the project area. Enclosed is a vicinity map with the facilities and the service area shown for your reference.

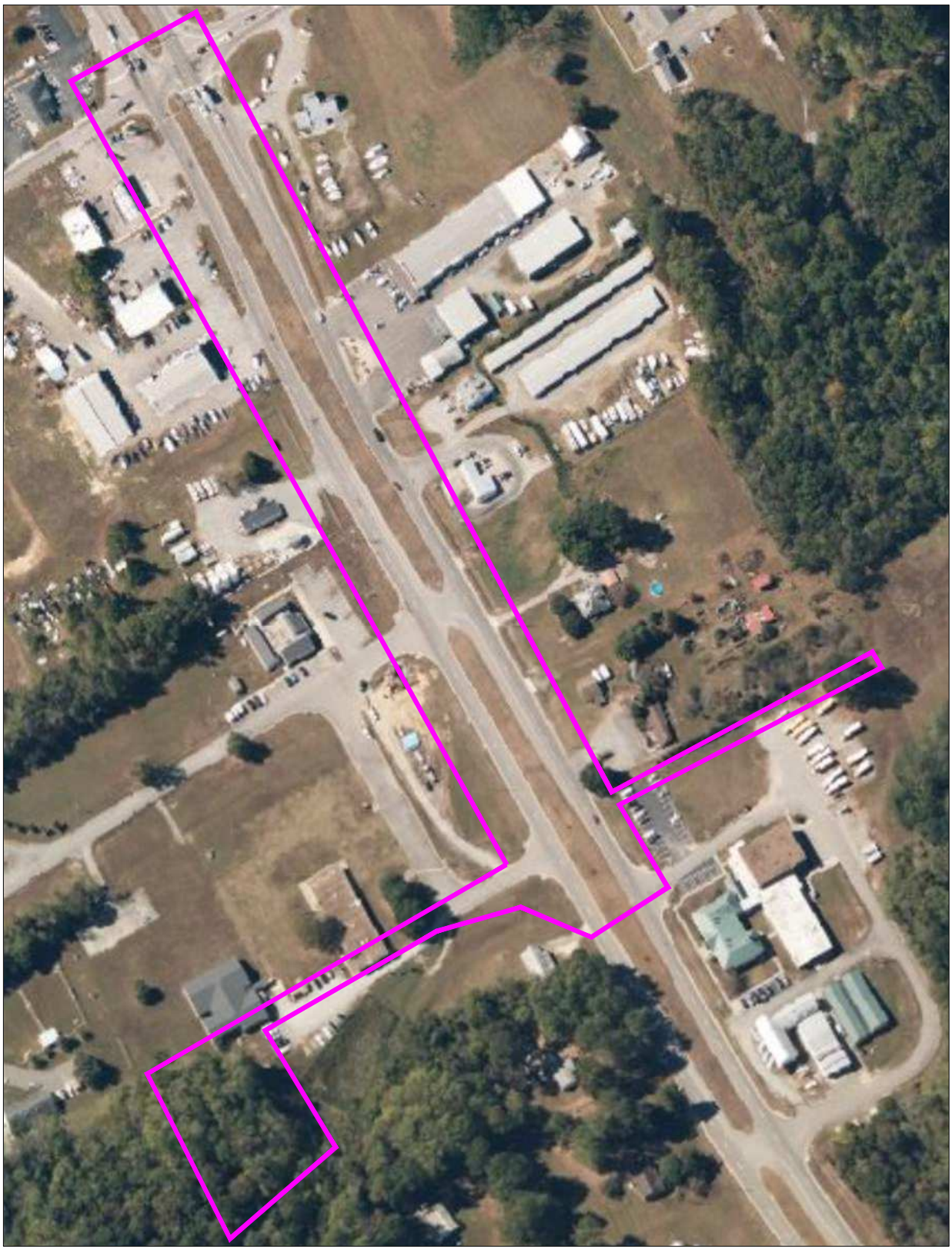
Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776, or contact me directly, via email, at kjoy@bowman.com.

Sincerely,

BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

\\Va-wil-dc1-srv\new_projects\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.VDH EA Review.docx



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

Bowman Consulting Group, Ltd.
460 McLaws Circle
Suite 120
Williamsburg, VA 23185
Phone: (757) 229-1776
Fax: (757) 229-4683
www.bowmanconsulting.com

Bowman

PROJECT NO
COUNTY PROJECT NUMBER

PLAN STATUS
XX/XX/XX IXXXX

DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

Bowman

October 15, 2021

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

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Mr. Kirchen:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review in order to assess the impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We have identified historic properties that are listed or eligible for listing on the National Register of Historic Places. The project site crosses through part of property 059-0090. However, the crossing occurs in the VDOT approved right of way and is therefore acceptable. We do not anticipate any other impacts. We are requesting your confirmation of the properties and their potential impacts. DEQ, as the lead state agency, is responsible for compliance with Section 106 of the National Historic Preservation Act and will provide findings of effect as appropriate during the consultation process. A Virginia Department of Historic Research ePix survey has been submitted.

460 McLaws Circle, Suite 120, Williamsburg, VA 23185
p: 757.229.1776 | f: 757.229.4683
www.bowmanconsulting.com

Additionally, attached are the Virginia Cultural Resource Information System maps, and a vicinity map for your reference.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776. You can also email at me at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

P:\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.VDHR EA Review.docx

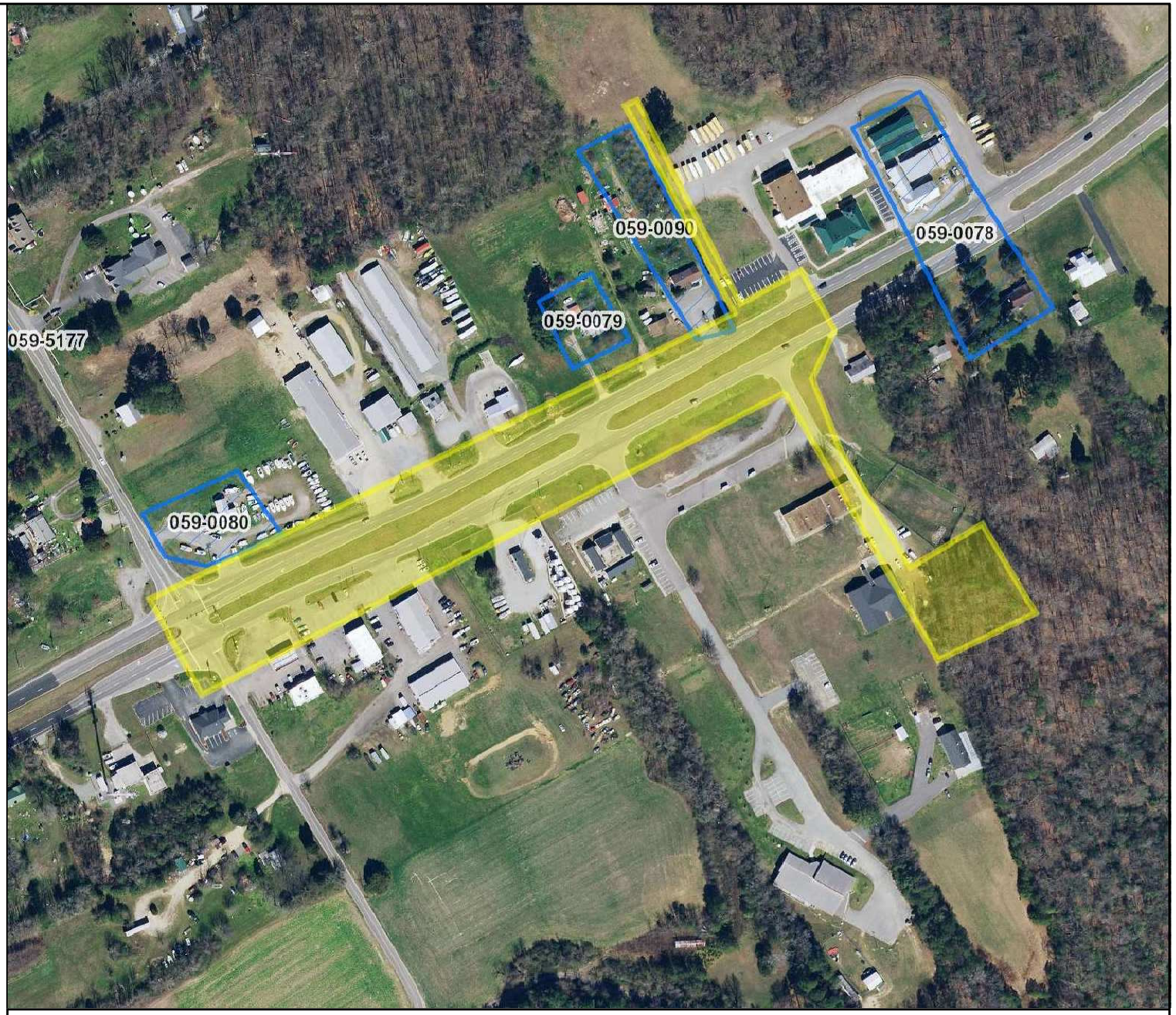
Virginia Dept. of Historic Resources

V-CRIS

Virginia Cultural Resource Information System

Legend

- Architecture Resources
- Architecture Labels
- Archaeological Resources



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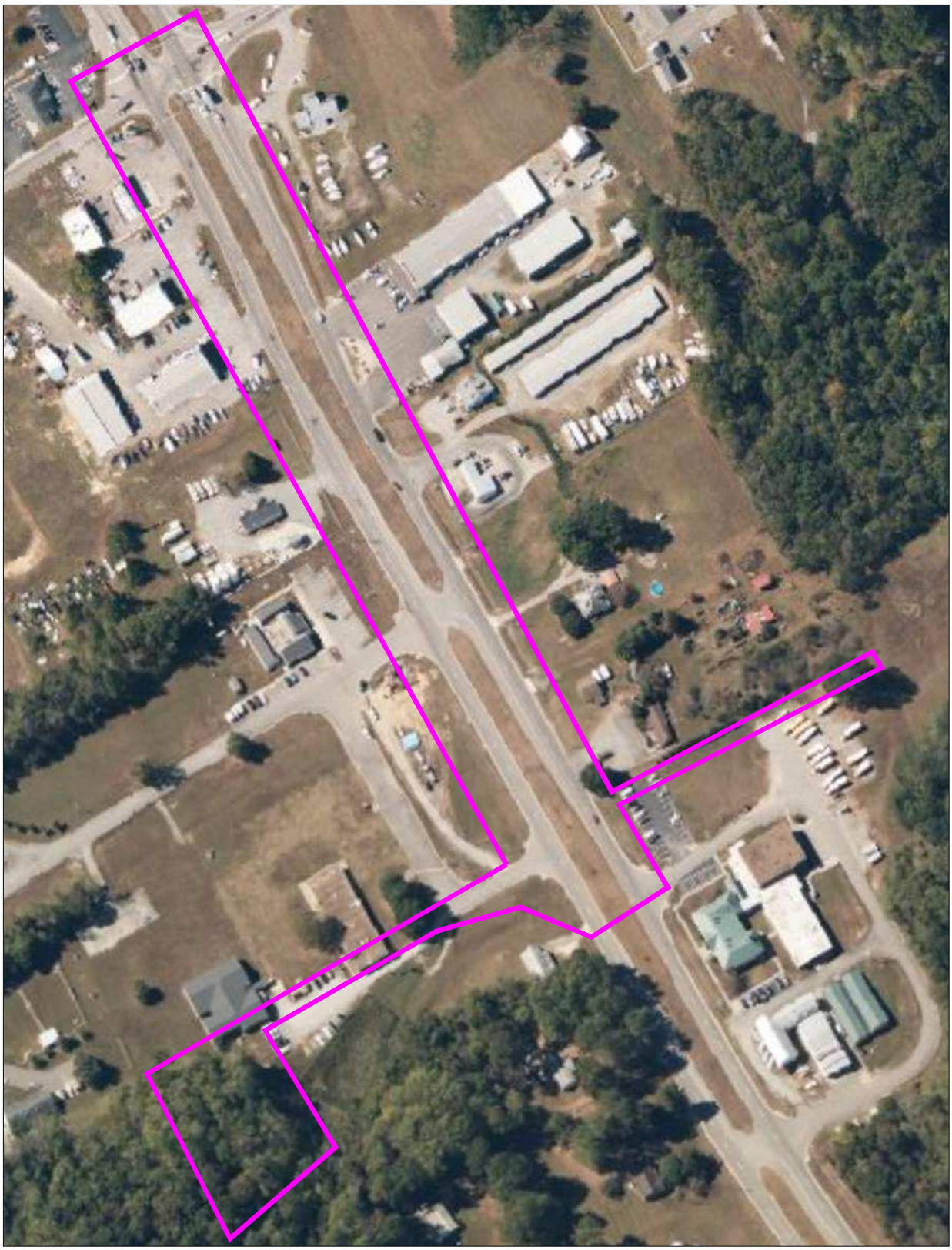
Title: Cook's Corner Historical Map **Date: 10/4/2021**

DISCLAIMER:Records of the Virginia Department of Historic Resources (DHR) have been gathered over many years from a variety of sources and the representation depicted is a cumulative view of field observations over time and may not reflect current ground conditions.The map is for general information purposes and is not intended for engineering, legal or other site-specific uses. Map may contain errors and is provided "as-is". More information is available in the DHR Archives located at DHR's Richmond office.

Notice if AE sites:Locations of archaeological sites may be sensitive the National Historic Preservation Act (NHPA), and the Archaeological Resources Protection Act (ARPA) and Code of Virginia §2.2-3705.7 (10). Release of precise locations may threaten archaeological sites and historic resources.



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

Bowman Consulting Group, Ltd.
460 McLaws Circle
Suite 120
Williamsburg, VA 23185
Phone: (757) 229-1776
Fax: (757) 229-4683
www.bowmanconsulting.com

Bowman

PROJECT NO
COUNTY PROJECT NUMBER

PLAN STATUS
XX/XX/XX IXXXX

DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

From: ePIX System <ePIX@dhr.virginia.gov>
Sent: Tuesday, October 5, 2021 1:08 PM
To: Koleman Joy
Subject: [EXTERNAL] Cook's Corner Pump Station (DHR File No. 2021-4685) | e-Mail #01216

Dear Koleman Joy:

Thank you for submitting your application through the ePIX system andrequesting the comments of the Department of Historic Resources on thereferenced project. Your application isbeing processed and our 30-day review period will start on the next businessday after submission. You will benotified if your application is insufficient or if additional materials arerequired for our review.

You may view the submitted application and track our review of thisproject through your ePIX account under "My Projects" (https://epix.dhr.virginia.gov). When our review is complete, comments will beemailed to you and attached to the application in your ePIX account. No project activities that have the potentialto impact historic properties should take place until the lead agency hasprovided a notice to proceed.

If you wish or are asked to submit additional materials in support ofyour application, documents must be submitted electronically to the appropriatereviewer. Submissions with a total sizeof less than 10mb may be submitted via email. Submissions larger than 10mb must be made through VITA's Large FileTransfer Application (https://lft.virginia.gov/). Contact your reviewer for instructions.

Please reference the assigned DHR File Number on all futurecorrespondence.

If you have any questions concerning the review process or if we mayprovide any further assistance, please do not hesitate to contact me. We look forward to working with you on thisproject.

Sincerely,

Jennifer Bellville-Marrion
Review and Compliance Division

Bowman

October 15, 2021

Ms. Heather Williams
Virginia Department of Transportation (VDOT)
Environmental Division
1401 East Broad Street
Richmond, VA 23219

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Ms. Williams:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We do not anticipate any impacts. Enclosed is a vicinity map of the project. Please note VDOT has already approved the project in the attached correspondence dated March 2, 2021. This letter is for the purposes of the Environmental Impact Review.

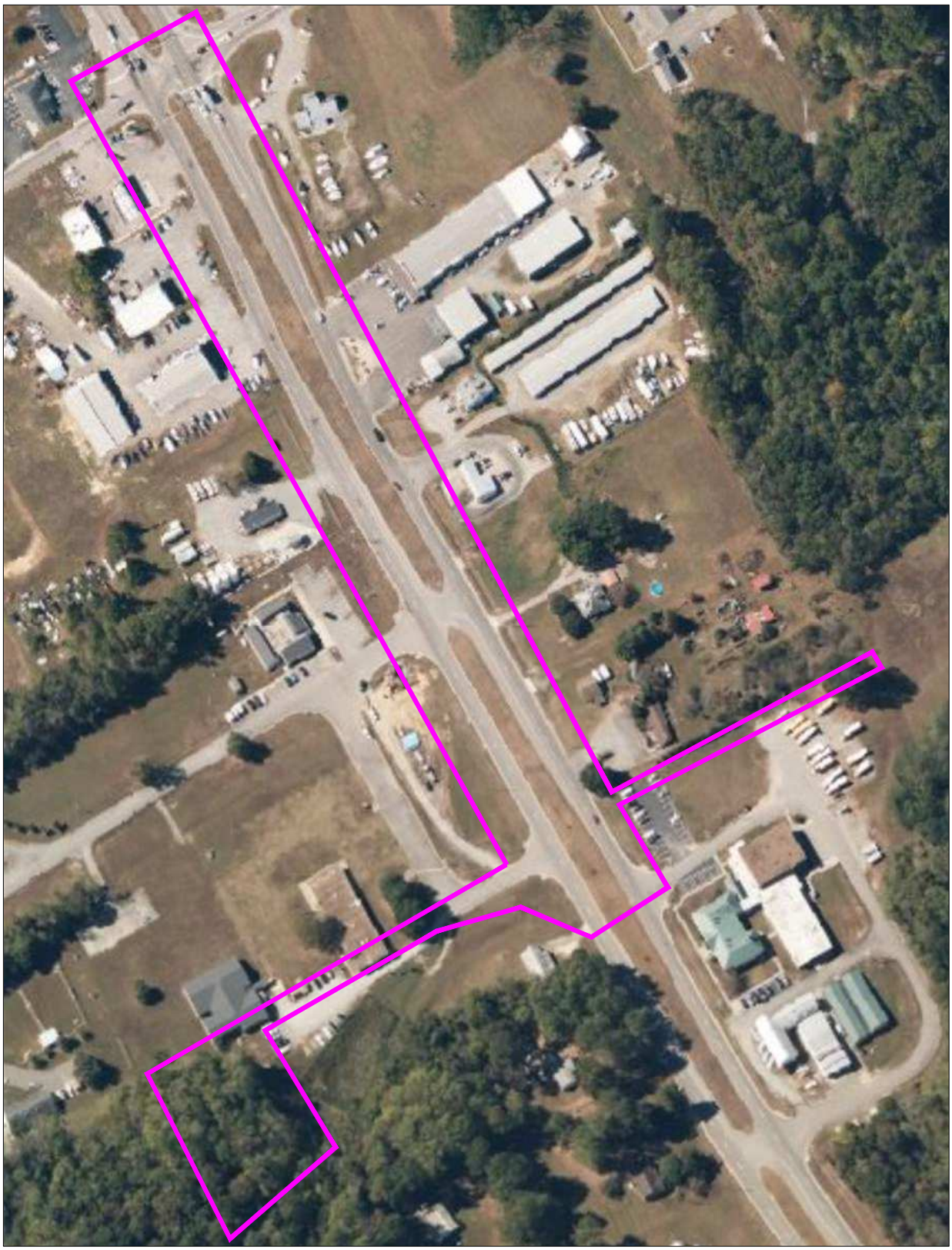
Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776. You can also email at me at kjoy@bowman.com.

If you should have any further questions or comments please feel free to contact our office.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

\\Va-will-dc1-srv\new_projects\8492 - Lower Middlesex County\8492-03-006 (ENG) - Cooks Corner PS\Engineering\Design Documents\Environmental Report\Agency Contacts\Letters\Letter.VDOT EA Review.docx



Legend
Cook's Corner–
Project Boundary

COOK'S CORNER
ENVIRONMENTAL ASSESSMENT

MIDDLESEX COUNTY VIRGINIA

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Bowman

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COUNTY PROJECT NUMBER

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DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

COMMONWEALTH of VIRGINIA

DEPARTMENT OF TRANSPORTATION
87 Deacon Road
Fredericksburg, Virginia 22405

Stephen C. Brich, P.E.
COMMISSIONER

March 2, 2021

Middlesex County
Attn: Mr. David Kretz
P.O. Box 428
Saluda, VA. 23149

Re: HRSD Cooks Corner Collection System
1st Revised Utility Plan Review
Middlesex County, Rt. 33

Dear Mr. Kretz:

This office has reviewed the referenced plan in accordance with minimum standards as received on February 9, 2021, and we have noted that all items appear to be satisfactory. Therefore, the plans are hereby found acceptable on this date of March 2, 2021. If they have not done so already, then he applicant must obtain a VDOT Land Use Permit prior to construction. Contact Mr. Dean Dorsey at (804) 815-6987 to questions related to permit fees and bond. If there are any questions on these comments, please contact Scott Gagnon at (540) 907-8637, or Chad Brooks at (804) 761-2148 to discuss any technical issues. I would be glad to discuss any concerns that you may have on this review directly.

Sincerely,

Scott Gagnon

Scott Gagnon, P.E.
Assistant Resident Engineer-Land Use
Fredericksburg District

Cc: Bowman Consulting, Mr. Timothy Wilson
VDOT, Ms. Joyce McGowan
VDOT, Mr. Mac Creech
VDOT, Ms. Celeste DeSimone

Bowman

October 15, 2021

Ms. Emily A. Hein
Virginia Institute of Marine Science
Watermen's Hall 242D
1375 Greate Road, P.O. Box 1346
Gloucester Point, VA 23062-1346

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Ms. Hein:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

The project will consist of a new wastewater collection system which feeds a new pump station. The pump station is located on the south side of General Puller Highway (Route 33), between Old Courthouse Road and Union Park Road. The pump station is designed for construction and operation during three distinct phases. The first phase will connect system to the pump station by 8-inch gravity piping. The pump station will connect to the existing Saluda wastewater treatment plant by 3-inch force main piping. The second and third phases will connect the pump station to the existing Yorktown wastewater treatment plant by 6-inch force main piping and operate at full capacity, respectively.

The proposed service area contains 351 acres, including a Brewery/Restaurant, and 24 multi-family homes. There is planned growth in the area, with demands for Light commercial, Residential, and Mixed-use developments. There is no existing wastewater infrastructure within the service area. Installing a new wastewater collection system will improve environmental quality, public health, and sanitation.

We have gathered information regarding Federally listed species, critical habitats, and migratory birds within the project site and we do not anticipate any impacts. We are requesting your confirmation of any potential impacts in addition to any present concerns you may have related to possible effects of the project listed above on such species or critical habitat, as well as any other wildlife concerns.

Enclosed is an endangered species list and a vicinity map for your reference.

Please send your comments directly to Bowman Consulting at 460 McLaws Circle, Williamsburg, VA 23185. We would appreciate a response within 30 days of receiving this letter. If you have any questions concerning this project, please contact our office at 757-229-1776. You can also email at me at kjoy@bowman.com.

Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

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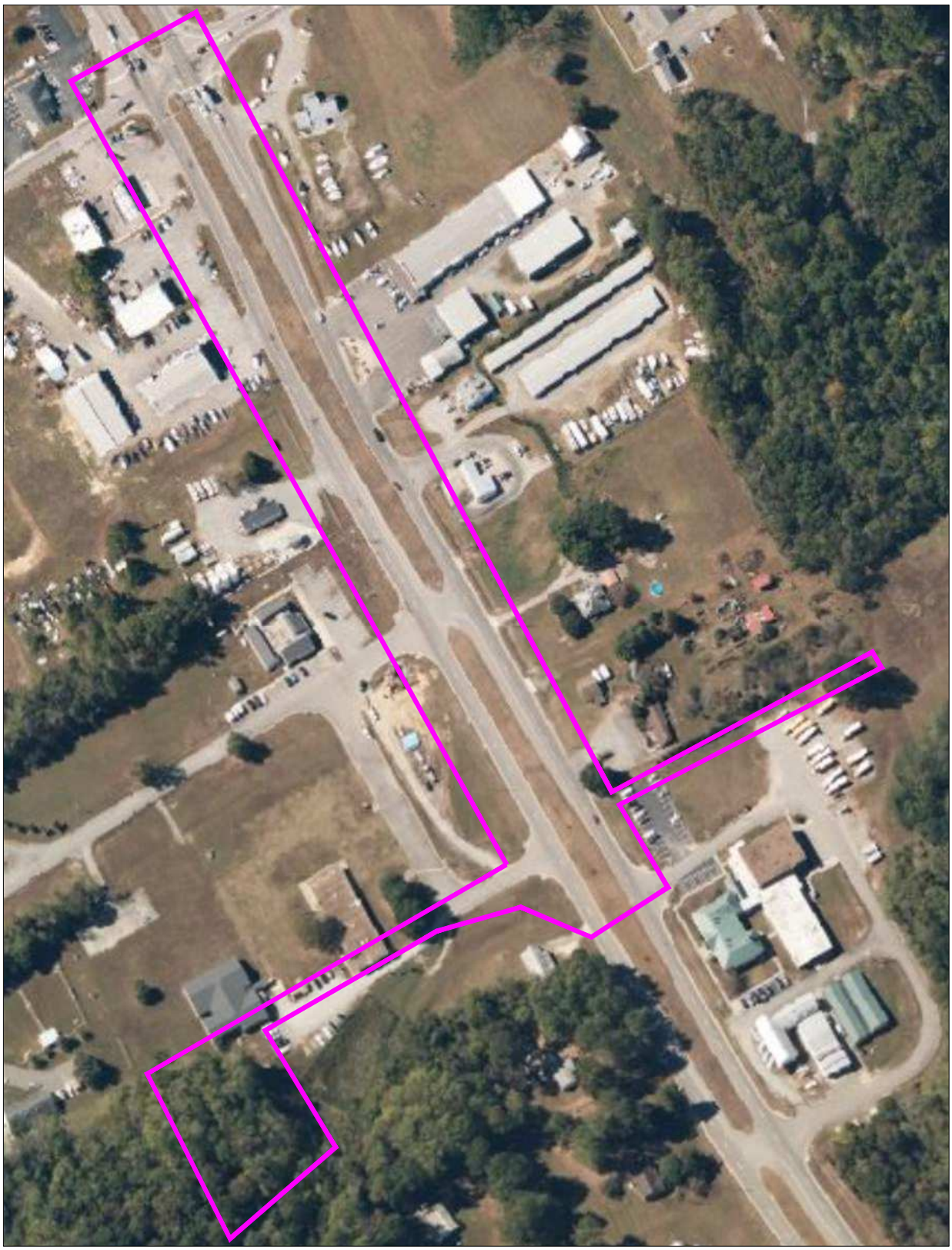

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DESIGN | DRAWN | CHKD

DATE | DESCRIPTION

SCALE H: V:

JOB No. 8492-03-006

DATE OCT 8, 2021

FILE No. 0000-D-00-000

SHEET

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:
Consultation Code: 05E2VA00-2021-SLI-6009
Event Code: 05E2VA00-2021-E-17645
Project Name: Cook's Corner

September 29, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location 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: 05E2VA00-2021-SLI-6009
Event Code: Some(05E2VA00-2021-E-17645)
Project Name: Cook's Corner
Project Type: WASTEWATER FACILITY
Project Description: Located on south side of General Puller Highway between Old Courthouse road and Union Park Road.
Construction of Wastewater pumping station, forcemain piping and gravity sewer for area known as Cook's Corner in Middlesex County, Virginia.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@37.602251499999994,-76.56213093116888,14z

Counties: Middlesex County, Virginia

Endangered Species Act Species

There is a total of 2 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 Fisheries[1], 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
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

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.

Bowman

October 15, 2021

Mr. David Spears
Division of Geology and Mineral Resources
Fontaine Research Park
900 Natural Resources Drive, Suite 500
Charlottesville, VA 22903-0667

Re: Cook's Corner Pump Station
Environmental Assessment
BCG Project # 8492-03-006

Dear Mr. Spears:

Bowman Consulting Group, Inc. is in the process of performing an Environmental Impact Review to assess the potential environmental impacts of the above referenced project.

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Sincerely,
BOWMAN CONSULTING GROUP, LTD.

Koleman Joy, EIT

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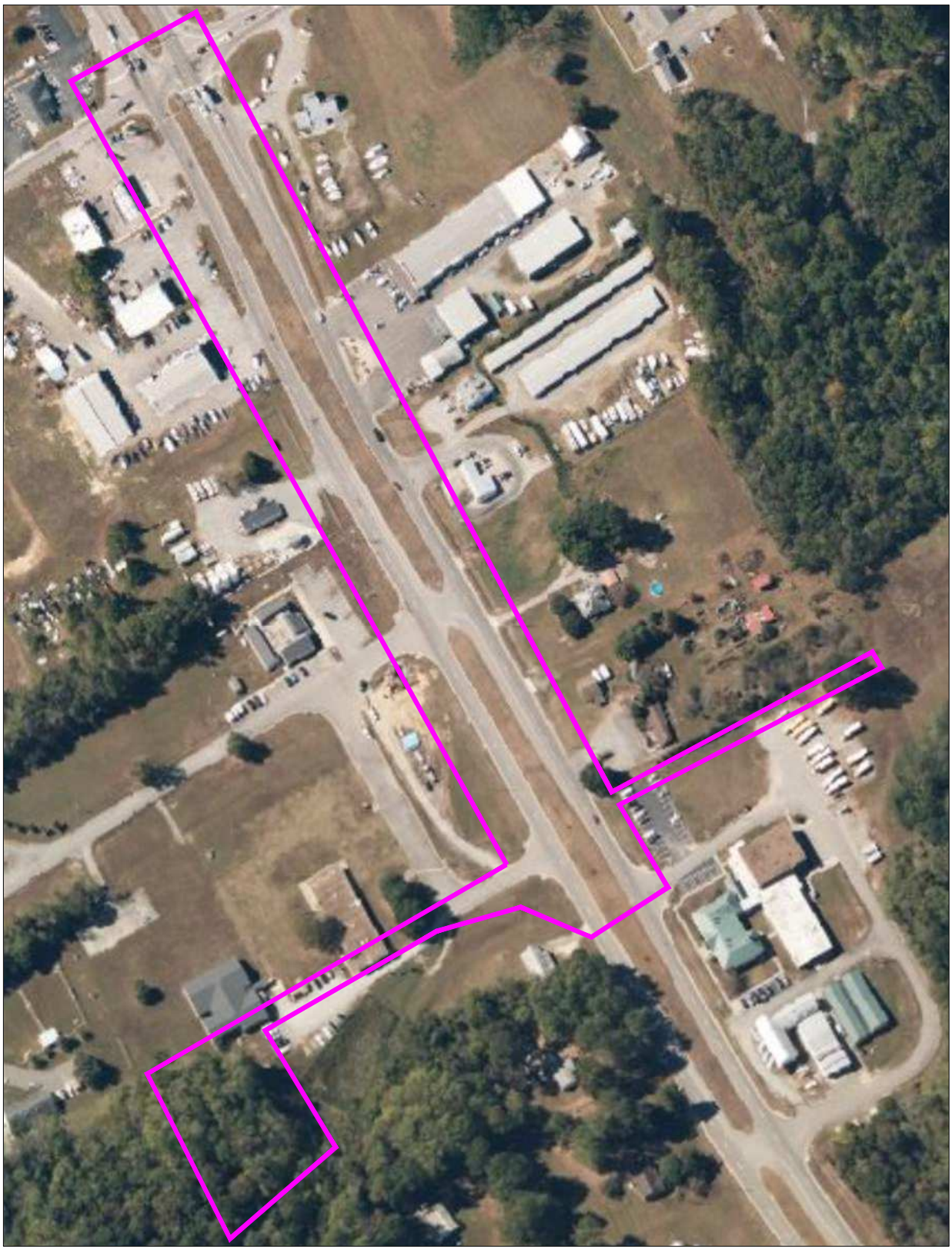

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SCALE H: V:

JOB No. 8492-03-006

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SHEET

BOWMAN

460 MCLAWS CIRCLE, SUITE 120
WILLIAMSBURG, VIRGINIA 23185
PHONE: 757-229-1776
FAX: 757-229-4683

BOWMAN.COM