



ENVIRONMENTAL

**BASELINE STUDY REPORT
SOMERSET FARM PARCEL 5
ORANGE COUNTY, VIRGINIA**

TNT PROJECT NO.: 422-C

FOR

SOMERSET GROUP, LLC

AUGUST 7, 2019



August 7, 2019

Mr. Peter Jarowey
Somerset Group LLC
214 Windsor Road
Waban, MA 02468-1120

TNT Project #: 422-C

Reference: Baseline Study, Somerset Farm Parcel 5, Orange County, Virginia

Dear Mr. Jarowey,

TNT Environmental, Inc. (TNT) conducted a site reconnaissance to observe onsite conditions as they relate to a proposed Conservation Easement for the above-referenced project in general accordance with TNT Proposal Number 2188, dated March 18, 2019.

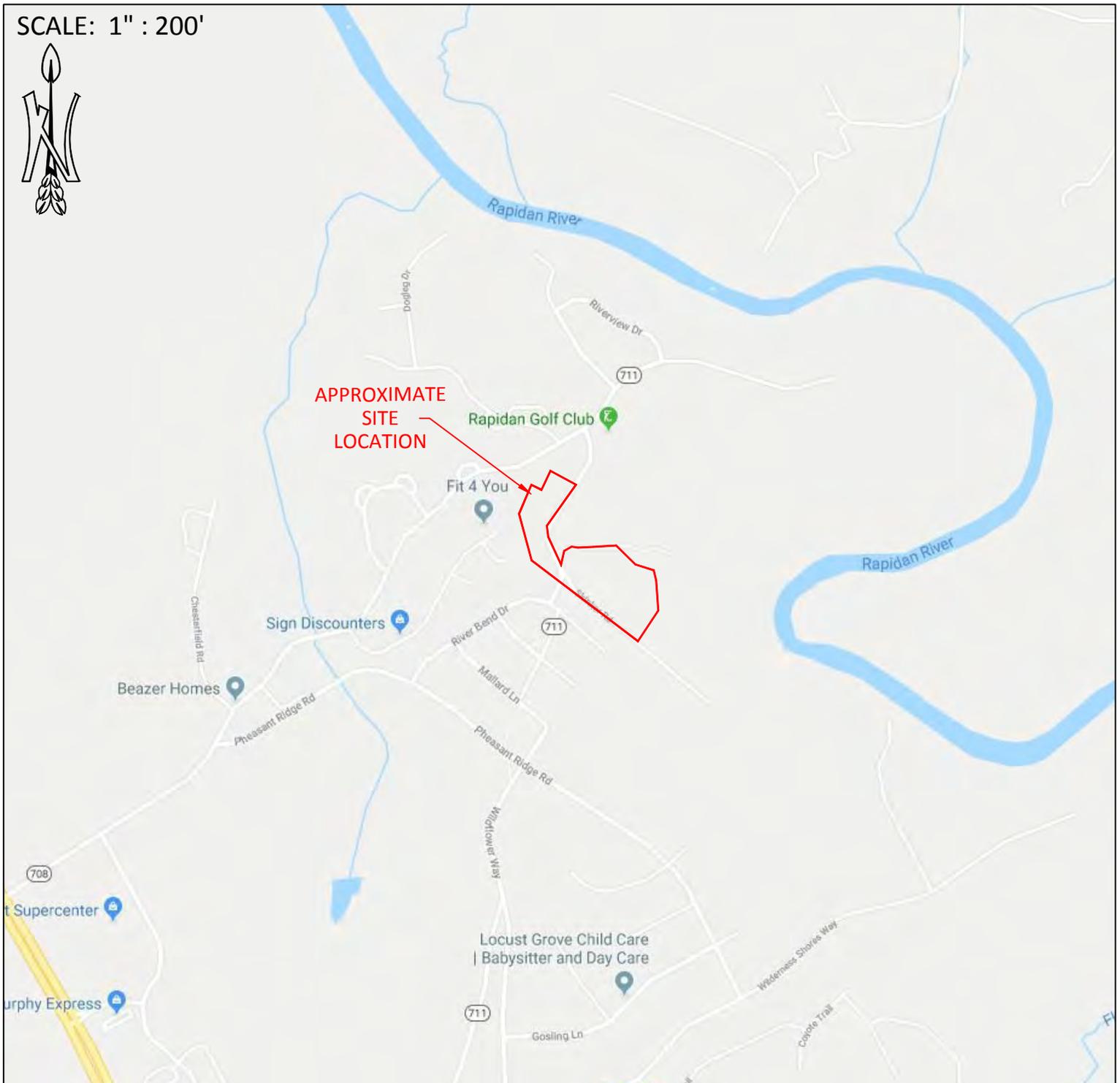
The purpose of this study is to illustrate how the project site successfully meets the requirements set forth in Section 170(h)(4)(A) of the Internal Revenue Service (IRS) Code. Section 170(h)(4)(A) of the IRS Code states that a parcel of real property must meet the definition of “conservation purposes”. According to this section, the term “conservation purposes” means:

- i. The preservation of land areas for outdoor recreation by, or the education of, the general public;
- ii. The protection of a relatively natural habitat of fish, wildlife, or plants, or similar ecosystem;
- iii. The preservation of open space (including farmland and forest land) where such preservation is
 - (I) for the scenic enjoyment of the general public or
 - (II) pursuant to a clearly delineated Federal, State, or local governmental conservation policy, and will yield a significant public benefit, or;
- iv. The preservation of a historically important land area or a certified historic structure.

PROJECT SITE DESCRIPTION

The project site consists of six (6) parcels of land totaling approximately 12 acres located north of Skinker Road and on either side of Somerville Road in Orange County, Virginia. The project site is further identified by Orange County Parcel Numbers: 004000000005A, 004000000005B, 004000000005C, 004000000005D, 004000000005H, and 004A0000D00010. (*Figure 1: Project Location Map*). Topography at the site generally slopes to the east-southeast to the Rapidan River (*Figure 2: USGS Topographic Map*). The project site is mostly wooded and unimproved, with the western half of the study area being characterized by early successional species and the eastern areas consisting of mature hardwoods and softwoods. A few scattered structures are located throughout the study area and Somerville Road runs along the central boundary of the study area.

SCALE: 1" : 200'



BASELINE STUDY

SOMERSET FARM PARCEL 5

ORANGE COUNTY, VA

AUGUST 2019



ENVIRONMENTAL
13996 PARKEAST CIRCLE
SUITE 101
CHANTILLY, VIRGINIA
20151

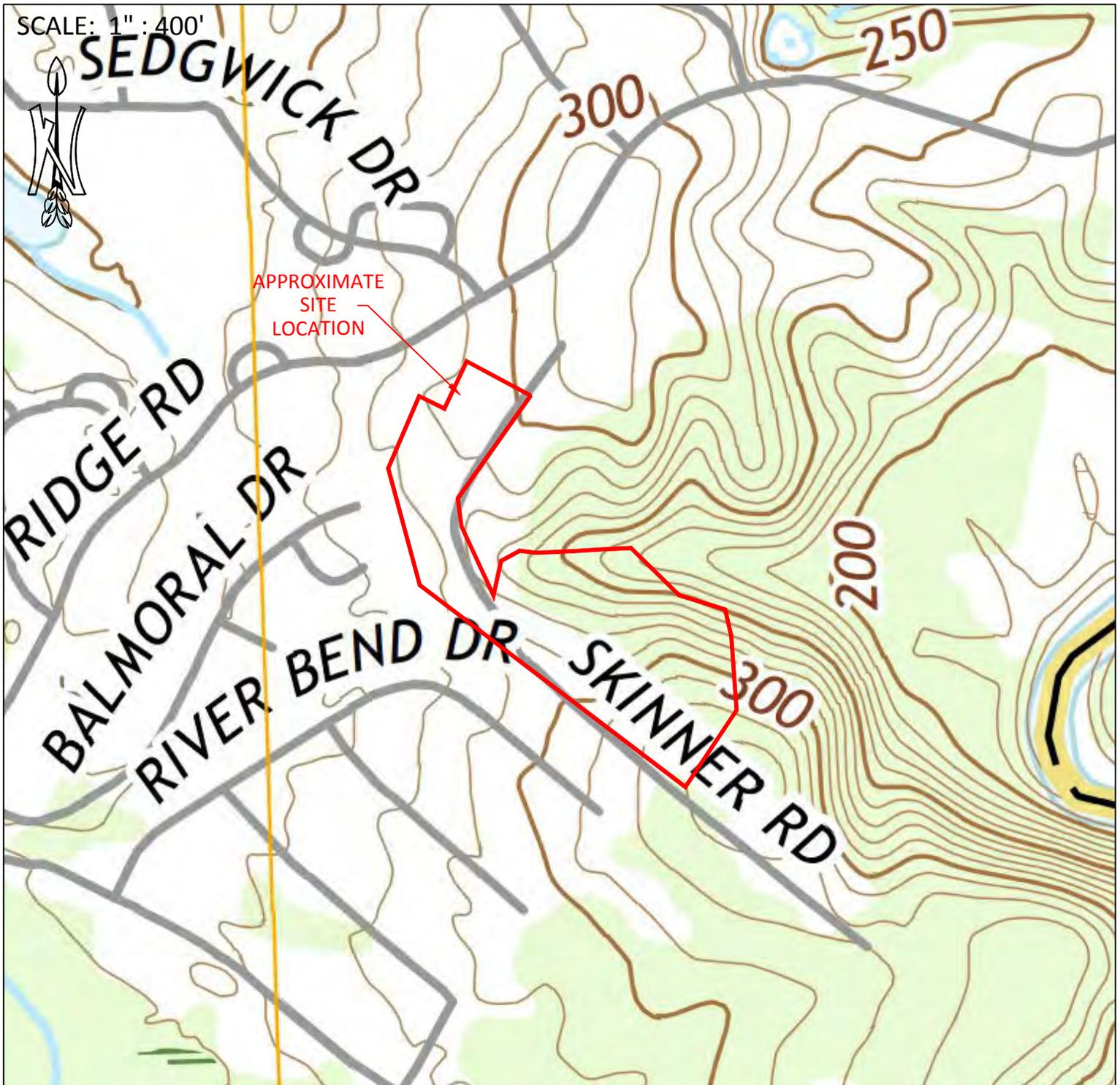
FIGURE 1

SITE LOCATION MAP

SOURCE: GOOGLE MAPS

TNT PROJECT NO: 422-C

SCALE: 1" : 400'



BASELINE STUDY

SOMERSET FARM PARCEL 5

ORANGE COUNTY, VA

AUGUST 2019



ENVIRONMENTAL

**13996 PARKEAST CIRCLE
SUITE 101
CHANTILLY, VIRGINIA
20151**

FIGURE 2

TOPOGRAPHIC MAP

SOURCE: GERMANNA, VA
USGS QUAD MAP (2016)

TNT PROJECT NO: 422-C

CONSERVATION PURPOSES

The Protection of Environmental System requirements under I.R.C. § 170(h) (4)(A)(3) state, the donation of a qualified real property of interest to protect a significant relatively natural habitat in which fish, wildlife, or plant communities, or similar ecosystem normally lives will meet the conservation purposes of this section. The I.R.C. goes further to state that “the fact the habitat or environment has been altered to some extent by human activity will not result in a deduction being denied under this section if the fish, wildlife, or plants continue to exist there in a relatively natural state.” It is clear from our detailed habitat study of this site that a significant relatively natural habitat exists on the subject property, particularly within the riparian buffer along the Rapidan River. Further, the protection of open-space on the remaining study area is also in line with the conservation purposes of this statute.

I.R.C § 170(h)(4)(A)(3)(ii) defines a significant habitat or ecosystem as those that include, but are not limited to, habitats for rare, endangered, or threatened species of animal, fish, or plants; natural areas that represent high quality examples of a terrestrial community. I.R.C § 170(h)(4)(A)(3)(iii) goes further to state that limitations on public access to property that is the subject of a donation under section 170(h)(4)(D)(3) shall not render the donation nondeductible. It is clear from our detailed habitat study of this site that a significant habitat as defined by the I.R.C. exists on the subject property and supporting information is detailed below and within the attached Appendices.

SECONDARY INFORMATION

Secondary information entails the background research and review of recorded data and mapping pertaining to the project site. Resources include but are not limited to the:

- U. S. Geological Survey (USGS) Topographic Map, Germanna Bridge, VA Quadrangle, 2016
- U. S. Fish and Wildlife Service (USFWS), National Wetlands Inventory (NWI) Online Mapper, http://wetlands.fws.gov/mapper_tool.htm
- USFWS Ecological Services, Project review
- Virginia Department of Conservation & Recreation (DCR), Project review
- Virginia Department of Inland Game and Fisheries (DGIF), Database review
- Virginia Department of Historic Resources (DHR), Database review
- USDA Natural Resources Conservation Service (NRCS), Electronic Field Office Technical Guide, Orange County Soils, www.nrcs.usda.gov/technical/efotg/
- Aerial photographs

General Site Geology

The site area is located in north-central Virginia, which is underlain primarily by plutonic, igneous bedrock. Locust Grove lies in a Triassic Basin, formed 200 million years ago when the North American and African tectonic plates rifted apart then filled with fresh basalt from the spreading center. The basin then gradually began filling with coastal sediments, which continue to erode today. The USGS Germanna Bridge Quadrangle map shows elevations of approximately 300 feet above mean sea level (MSL) in the southern and northern portions of the site and approximately 250 feet above MSL in the central portion of the site, slope steeply to the east toward the Rapidan River.

The NRCS soils survey maps soils units MrD/MrE – Manteo silt loam, MsB/MsB2 – Masada loam, TsB2 – Tatum silt loam, and TuB2/TuC2 – Turbeville loam on the site (Refer to Appendix II for the USDA NRCS soils map).

Threatened, Endangered, and Other Protected Species and Habitats

TNT conducted an online review of the Virginia DGIF Fish & Wildlife Information System on June 20, 2019 for the presence of documented occurrences of threatened and endangered species within a two-mile radius of the project site. Based on the results of the search, the American eel (*Anguilla rostrata*) is noted as being observed within the Rapidan River, located approximately 0.2 miles east of the project site. The American eel listed as a Tier III species, which represents a species with high conservation need. Additionally, the bridle shiner (*Notropis bifrenatus*) is noted as having potential habitat within the Rapidan River, located approximately 0.2 miles east of the project site. The bridle shiner is listed as a Tier I species, which represents a species with critical conservation need. Based on the results of this search, the Rapidan River is listed as a potentially anadromous fish use stream. The Rapidan River is located downgradient and east of the study area.

TNT also completed a U.S. Fish and Wildlife Service (USFWS) project review on June 20, 2019 to identify federally-listed species that have been observed onsite or may be located on the project site due to potential habitat. The search identified the project site as potentially having suitable habitat for the northern long-eared bat (*Myotis septentrionalis*), a Federally-listed threatened species and the yellow lance (*Elliptio lanceolata*), a state-listed threatened freshwater mussel. The site consists of significant amounts of suitable roosting habitat for the bat. Further, the Rapidan River located to the east of the property provides significant potential habitat for mussel species.

A Department of Conservation and Recreation (DCR) project review on the project site to identify natural heritage resources onsite. The review indicated that natural heritage resources have not been documented within 100-feet of the study area. The absence of data may indicate that the project area has not been surveyed, rather than confirm that the area lacks natural heritage resources. However, based on DCR's review of adjacent properties that TNT has conducted in 2016, the following information was found just northwest of the study area:

- The Rapidan River – Rt. 3 Stream Conservation Unit (SCU) was identified as being downstream from the project site. SCUs identify stream reaches that contain aquatic natural heritage resources, including two miles upstream and one mile downstream of documented occurrences, and all tributaries within this reach. SCUs are also given a biodiversity significance ranking based on the rarity, quality, and number of element occurrences they contain. The Rapidan River – Rt. 3 SCU contains one (1) aquatic natural heritage resource, which has been given a biodiversity ranking of B3, which represents a site of high significance. The Rapidan River – Rt. 3 SCU is associated with the yellow lance (*Elliptio lanceolata*), a mollusk that is currently classified a species of concern by the USFWS, and whose preferred habitat includes silt-free, stable stream beds and well-oxygenated water. Conservation of the subject site and its onsite tributary to the Rapidan River provides the protection to this DCR-listed resource.

Considered good indicators of the health of aquatic ecosystems, freshwater mussels are dependent on good water quality, good physical habitat conditions, and an environment

that will support populations of host fish species (Williams et al., 1993). Because mussels are sedentary organisms, they are sensitive to water quality degradation related to increased sedimentation and pollution. They are also sensitive to habitat destruction through dam construction, channelization, and dredging, and the invasion of exotic mollusk species. The yellow lance may be particularly sensitive to chemical pollutants and exposure to fine sediments from erosion (NatureServe, 2009).

ECOLOGICAL CHARACTERIZATION AND SITE RECONNAISSANCE

TNT conducted a site reconnaissance in July 2019 to evaluate the project site for its potential of placement into a conservation easement based on the requirements set forth in Section 170(h) of the IRS Code. The site reconnaissance consisted of a pedestrian survey of the property. No sampling was conducted during our reconnaissance.

Vegetation was evaluated in July for species composition, general health and vigor, presence of any specimen or champion trees, stand density and heterogeneity, amount of regeneration, relative rate of growth, and evaluation of riparian buffer zones. A list of dominant onsite vegetation identified is included in Table 1 below.

Existing Site Conditions

The project site contains mostly long-term successional forest habitat consisting primarily of American beech, oak, hickory and maple species. The well-formed understory consists primarily of these species and those outlined below in Table 1. Regeneration within this habitat is good, as many fruiting trees, shrubs and saplings were observed throughout. The preservation of these natural habitats is essential for the health and well-being of wildlife and plant communities.

The project site contains fair and good habitat to sustain populations of small and medium sized mammals. Evidence of deer was prevalent throughout this area, with trails, rub and scat found. The mature Beech-Oak-Hickory forest consists of trees averaging 35-60 feet in height with little presence of insect infestation or disease. On the eastern half of the study area, canopy coverage is nearly 100 percent during leaf-out with a well-developed sub-canopy and understory.

The riparian buffer includes an onsite tributary to the Rapidan River and is composed primarily of these same mature tree species, as well as maples and sycamores. Along the tributary and its potential contiguous wetlands, riparian vegetation is primarily mature-aged tree species.

Habitats

The project site provides a unique and diverse assemblage of natural habitats. Diverse types of fauna occupy the site, including many that were observed onsite during TNT's reconnaissance. Several species were observed in the wetland and riparian areas. These species are listed below in Table 2.

Table 1: Upland Hardwood Forest Species

| Common Name | Scientific Name |
|-------------------|--------------------------------|
| White Oak | <i>Quercus alba</i> |
| American Beech | <i>Fagus grandifolia</i> |
| Tulip Poplar | <i>Liriodendron tulipifera</i> |
| Northern Red Oak | <i>Quercus rubus</i> |
| Mockernut Hickory | <i>Carya glabra</i> |
| Blackgum | <i>Nyssa sylvatica</i> |
| Red Maple | <i>Acer rubrum</i> |
| American Holly | <i>Ilex opaca</i> |
| Eastern Redcedar | <i>Juniperus virginiana</i> |
| Common Greenbrier | <i>Smilax rotundifolia</i> |
| Sassafras | <i>Sassafras albidum</i> |
| Cucumber Root | <i>Medeola virginiana</i> |
| Paw Paw | <i>Asimina triloba</i> |
| American Hornbeam | <i>Carpinus caroliniana</i> |

Table 2: Onsite Fauna*

| Common Name | Scientific Name |
|-------------------------|-----------------------------------|
| White-Tailed Deer* | <i>Odocoileus virginianus</i> |
| Skunk* | <i>Mephitis mephitis mephitis</i> |
| Raccoon* | <i>Procyon lotor</i> |
| Gray squirrel* | <i>Sciurus carolinensis</i> |
| Red fox | <i>Vulpes vulpes</i> |
| Gray fox | <i>Urocyon cinereoargenteus</i> |
| White-footed mouse | <i>Peromyscus leucopus</i> |
| Turkey vulture* | <i>Cathartes aura</i> |
| Red tail Hawk | <i>Buteo jamaicensis</i> |
| Red-bellied woodpecker* | <i>Melanerpes carolinus</i> |
| Eastern Chipmunk | <i>Tamias striatus</i> |
| American Black Duck | <i>Anas rubripes</i> |
| Least Bittern | <i>Ixobrychus exilis</i> |
| King Rail | <i>Rallus elegans</i> |
| Great Blue Heron* | <i>Ardea herodias</i> |
| Great Egret | <i>Ardea alba</i> |
| Opossum* | <i>Didelphis virginiana</i> |
| Coyote | <i>Canis lantrans</i> |
| Woodchuck | <i>Marmota monax</i> |
| Wild Boar | <i>Sus scrofa</i> |

*Observed or sign.

Surface Waters and Tributary to the Rapidan River

The subject site contains important aquatic and natural resources within site boundaries, including an unnamed perennial stream which flow northeast into the Rapidan River. This stream runs approximately 400 feet across the study area, providing both ecological and recreational benefits. The stream is also sourced by groundwater and adjacent forested wetlands, also located onsite.

Late Successional Forest

The eastern half of the study area contains a significant amount of late successional forest, with mixed hardwoods average 12 to 30 inches at diameter at breast-height (DBH), with some much larger specimen trees located throughout the site. The forest stands consist of mostly large hardwoods and a few softwood species as listed above, with sparse groundcover vegetation and open understory due to the canopy cover and age of the forest stands.

Sloping Topography

The site contains moderate to steep sloping land that supports a mature hardwood forest and associated habitat. The preservation of this wooded topography with stabilizing, mature vegetation is essential for the protection of slope stability. Further, the slopes of the site's land are riparian buffer to an onsite unnamed tributary to the Rapidan River. Protecting these environmentally sensitive slopes provides both unique onsite habitat and protects the water quality of the Rapidan River. Further, steep slopes provide an aesthetic value to the surrounding public and private lands, and provide a valuable viewshed to the adjacent lands including the residential developments, golf course, and the Rapidan River.

Upland Habitat

The property consists of a large amount of upland habitat which provides refuge, nesting areas, and suitable habitat for many species mentioned previously.

Riparian Buffers

These habitats provide important buffers and stream bank stabilization, as well as allow for nesting areas for birds, mammals, and other species. Buffer areas help improve water quality by acting as barriers to many pollutants that may reach a stream. They also provide shelter and food for local fauna.

Table 3: Riparian Buffer Species

| Common Name | Scientific Name |
|--------------------|--------------------------------|
| Black Cherry | <i>Prunus serotina</i> |
| Tulip Poplar | <i>Liriodendron tulipifera</i> |
| Sweetgum | <i>Styraciflua liquidambar</i> |
| American Beech | <i>Fagus grandifolia</i> |
| American Hornbeam | <i>Carpinus caroliniana</i> |
| Eastern Redbud | <i>Cercis canadensis</i> |
| American Holly | <i>Ilex opaca</i> |
| Mountain Laurel | <i>Kalmia latifolia</i> |
| Sensitive Fern | <i>Onoclea sensibilis</i> |

Habitat Importance and Diversity

The project site provides an important representation of life in central Virginia and provides an important preservation of valuable, hardwood forest that buffers a tributary of the Rapidan and contributes to the water quality of the river’s watershed. Development continues to change in the vicinity of the site with residential developments to the west and south, and expanding commercial developments further south, along Route 3. The site itself provides valuable hardwood forest that should be protected.

The preservation and protection of the natural resources through conservation easements will not only enhance the diversity of habitats onsite but will provide long-term stewardship and protection of the land for public enjoyment and flora and fauna reliant on the riverine and palustrine wetland systems, as well as the early successional forests dominating the riparian areas on the site.

Table 4: Likely Onsite Mammals Based on Habitat

| Common Name | Scientific Name |
|--------------------------|--|
| Eastern Harvest Mouse | <i>Reithrodontomys humulis virginianus</i> |
| White-Tailed Deer* | <i>Odocoileus virginianus</i> |
| Raccoon* | <i>Procyon lotor</i> |
| Gray squirrel* | <i>Sciurus carolinensis</i> |
| Red fox | <i>Vulpes vulpes</i> |
| Gray fox | <i>Urocyon cinereoargenteus</i> |
| White-footed mouse | <i>Peromyscus leucopus</i> |
| Southern Flying Squirrel | <i>Glaucomys volans saturatus</i> |
| Pine vole | <i>Microtus pinetorum scalapsoides</i> |
| Eastern Cottontail | <i>Sylvilagus floridanus mallurus</i> |
| Eastern Mole | <i>Scalopus aquaticus aquaticus</i> |
| Shrew | <i>Sorex fumeus fumeus</i> |
| Star-Nosed Mole | <i>Condylura cristata parva</i> |
| Opossum* | <i>Didelphis virginiana</i> |
| Skunk* | <i>Mephitis mephitis mephitis</i> |
| Woodchuck* | <i>Marmota monax monax</i> |

*Observed or sign

CONCLUSIONS

Based on our site reconnaissance and evaluations of the project site, it is our opinion that the property meets the requirements of Section 1.170(h)(4)(A) of the IRS Code because the project area is a good example of land of a relatively natural habitat for fish, wildlife, or plants, or similar ecosystem that should be protected. Additionally, the preservation of the site and its open-space meets the conservation purpose of the easement based on the demonstrated conservation value of the parcel. Further, the project area is pursuant to a clearly delineated Federal, State, or local governmental conservation policy, and will yield a significant public benefit placement of the project site into conservation easement would benefit the existing ecosystem and general public by its preservation. The placement of this land into easement precludes the future development of this area and protects ecologically significant natural

habitats, which, in the absence of the conservation easement, would logically be developed with a resultant loss of ecological benefits.

The project site contains late successional, healthy forests. The protection and preservation of these parcels with their mature forest, and steep slopes will aid in enhancing the overall water quality of the watershed by continuing the uninterrupted important ecological services provided by the site. The preservation of contiguous habitat corridors is crucial to providing adequate habitat for both the presence and migration of wildlife.

The wooded habitats should be managed as to preserve these communities in their existing natural state to the maximum extent practicable. Cutting of live trees, other than hazard or diseased trees in these areas should be prohibited, as should any other activity that results in a disturbance of the natural, endemic vegetation. Allowable activities may include removal of dead, damaged or diseased trees and the removal of exotic (non-native) vegetation. Preserving onsite critical habitat for those protected species is in harmony with the intent of the Virginia Department of Game and Inland Fisheries and other local, state and federal programs. One of the primary causes for species becoming threatened or endangered is the loss of suitable habitat, especially when in close proximity to documented habitat of that species. The recovery of listed species is only possible through the preservation and eventual expansion of suitable habitat.

Literature Cited

Department of Conservation and Recreation (DCR) Natural Heritage Project Review for "Somerset Golf Club" (December 1, 2016).

NatureServe. 2009. NatureServe Explorer: An online encyclopedia of life [web application]. Version 7.1. NatureServe, Arlington, Virginia. Available <http://www.natureserve.org/explorer>. (Accessed: April 5, 2010).

U.S. Fish & Wildlife Service (USFWS), 2018. Information for Planning and Consultation (IPaC) (Accessed: August 30, 2018).

Virginia Department of Game and Inland Fisheries (DGIF), 2018. Fish and Wildlife Information Services (VaFWIS) Database Search [web application]. (Accessed: August 30, 2018).

Williams, J.D., M.L. Warren, Jr., K.S. Cummings, J.L. Harris, and R.J. Neves. 1993. Conservation status of freshwater mussels of the United States and Canada. *Fisheries* 18: 6-9.

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TNT would like to thank you for the opportunity to provide you with this assessment. We look forward to assisting you further with this project and other environmental concerns you may have. If you have any questions, please feel free to contact us at any time at (703) 466-5123.

Sincerely,

TNT ENVIRONMENTAL, INC.



Lauren A. Duvall, PWS, PWD, ISA-CA
Senior Wetland Scientist
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Avi M. Sareen, PWS, PWD, ISA-CA
Principal/President
Avi@TNTenvironmentalinc.com

APPENDIX I

USFWS National
Wetlands Inventory
Map



August 7, 2019

Wetlands

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

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

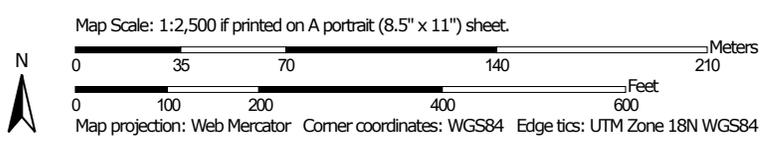
APPENDIX II

USDA Hydric Soils Map

Hydric Rating by Map Unit—Orange County, Virginia
(Somerset Farm Parcel 5)



Soil Map may not be valid at this scale.



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

Soil Rating Polygons

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Lines

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

Soil Rating Points

-  Hydric (100%)
-  Hydric (66 to 99%)
-  Hydric (33 to 65%)
-  Hydric (1 to 32%)
-  Not Hydric (0%)
-  Not rated or not available

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: Orange County, Virginia
Survey Area Data: Version 14, Sep 19, 2018

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

Date(s) aerial images were photographed: Sep 25, 2014—Mar 10, 2017

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.

Hydric Rating by Map Unit

| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
|------------------------------------|---|--------|--------------|----------------|
| MrD | Manteo silt loam, 15 to 25 percent slopes | 0 | 1.8 | 20.0% |
| MrE | Manteo silt loam, 25 to 45 percent slopes | 0 | 2.4 | 26.7% |
| MsB | Masada loam, 2 to 7 percent slopes | 0 | 2.1 | 23.4% |
| MsB2 | Masada loam, 2 to 7 percent slopes, eroded | 0 | 0.2 | 2.2% |
| TuB2 | Turbeville loam, 2 to 7 percent slopes, eroded | 0 | 1.1 | 12.3% |
| TuC2 | Turbeville loam, 7 to 15 percent slopes, eroded | 0 | 1.4 | 15.5% |
| Totals for Area of Interest | | | 9.1 | 100.0% |

Description

This rating indicates the percentage of map units that meets the criteria for hydric soils. Map units are composed of one or more map unit components or soil types, each of which is rated as hydric soil or not hydric. Map units that are made up dominantly of hydric soils may have small areas of minor nonhydric components in the higher positions on the landform, and map units that are made up dominantly of nonhydric soils may have small areas of minor hydric components in the lower positions on the landform. Each map unit is rated based on its respective components and the percentage of each component within the map unit.

The thematic map is color coded based on the composition of hydric components. The five color classes are separated as 100 percent hydric components, 66 to 99 percent hydric components, 33 to 65 percent hydric components, 1 to 32 percent hydric components, and less than one percent hydric components.

In Web Soil Survey, the Summary by Map Unit table that is displayed below the map pane contains a column named 'Rating'. In this column the percentage of each map unit that is classified as hydric is displayed.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (Federal Register, 1994). Under natural conditions, these soils are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established (Federal Register, 2002). These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in "Soil Taxonomy" (Soil Survey Staff, 1999) and "Keys to Soil Taxonomy" (Soil Survey Staff, 2006) and in the "Soil Survey Manual" (Soil Survey Division Staff, 1993).

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in "Field Indicators of Hydric Soils in the United States" (Hurt and Vasilas, 2006).

References:

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.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18.

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.

Soil Survey Staff. 2006. Keys to soil taxonomy. 10th edition. U.S. Department of Agriculture, Natural Resources Conservation Service.

Rating Options

Aggregation Method: Percent Present

Component Percent Cutoff: None Specified

Tie-break Rule: Lower

APPENDIX III

DCR Project Review

Matthew J. Strickler
Secretary of Natural Resources

Clyde E. Cristman
Director



COMMONWEALTH of VIRGINIA
DEPARTMENT OF CONSERVATION AND RECREATION

Rochelle Altholz
Deputy Director of
Administration and Finance

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

Thomas L. Smith
Deputy Director of Operations

July 19, 2019

Tara Wilkins
TNT Environmental, Inc.
13996 Parkeast Circle, Suite 101
Chantilly, VA 20151

Re: 422-C, Somerset Farm Parcel 5

Dear Ms. Wilkins:

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

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

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

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

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

A fee of \$90.00 has been assessed for the service of providing this information. Please find attached an invoice for that amount. Please return one copy of the invoice along with your remittance made payable to the Treasurer of Virginia, DCR Finance, 600 East Main Street, 24th Floor, Richmond, VA 23219. Payment is due within thirty days of the invoice date. Please note late payment may result in the suspension of project review service for future projects.

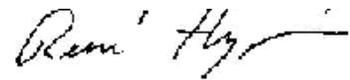
The Virginia Department of Game and Inland Fisheries (VDGIF) maintains a database of wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in this letter. Their database may be accessed from <http://vafwis.org/fwis/> or contact Ernie Aschenbach at 804-367-2733 or Ernie.Aschenbach@dgif.virginia.gov.

600 East Main Street, 24th Floor | Richmond, Virginia 23219 | 804-786-6124

**State Parks • Soil and Water Conservation • Outdoor Recreation Planning
Natural Heritage • Dam Safety and Floodplain Management • Land Conservation**

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

Sincerely,

A handwritten signature in cursive script, appearing to read "S. René Hypes". The signature is written in black ink and includes a long, sweeping horizontal stroke at the end.

S. René Hypes
Natural Heritage Project Review Coordinator

APPENDIX IV

VAFWIS DGIF
Information
Services

Species Observations where Eel, American (010131) observed 625081

38,22,41.8 -77,45,19.4 is the Search Point

| | |
|-------------------|------------------------------------|
| Display at center | Item Location is not at map center |
|-------------------|------------------------------------|

Show Position Rings
 Yes No
 1 mile and 1/4 mile at the Search Point

Show Search Area
 Yes No
 2 Search distance miles radius

Search Point is at map center

Base Map Choices
 Topography

Map Overlay Choices
 Current List: Position, Search, Observation

Map Overlay Legend

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




[Refresh Browser Page](#)

38,22,48.1 -77,43,02.4

Map Click Pan Go M

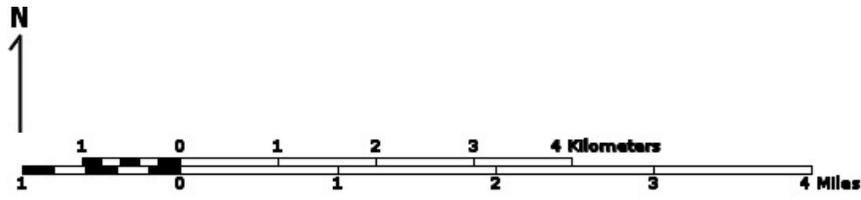
Map Scale In Zoom Out

Screen Size Small Size Big

[Help](#)



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Point of Search 38,22,41.8 -77,45,19.4
 Map Location 38,22,41.8 -77,45,19.4

- Select **Coordinate System:**
- Degrees, Minutes, Seconds Latitude - Longitude
 - Decimal Degrees Latitude - Longitude
 - Meters UTM NAD83 East North Zone
 - Meters UTM NAD27 East North Zone

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

Map projection is UTM Zone 18 NAD 1983 with left 254511 and top 4256184. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5

square miles.

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

Shaded topographic maps are from TOPO! ©2006 National Geographic

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

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

map assembled 2019-06-20 13:47:36 (qa/qc March 21, 2016 12:20 - tn=980210.1 dist=3218 I)

```
$poi=38.3783000 -77.7554099$query=select xy.x,xy.y, xxvy256.Displace_X,
xxvy256.Displace_Y, cc.High_TE, obs.FeatType from
vafwis_tables.dbo.vcvSppObs_XY xy join vafwis_tables.dbo.cvSppObs obs on
obs.obsID = xy.obsID join vafwis_tables.dbo.cvSppObsSite256 s256 on s256.obsID =
xy.obsID join vafwis_tables.dbo.cvSppObsSitexxvy256 xxvy256 on xxvy256.obsSite256
= s256.obsSite256 join vafwis_tables.dbo.cvSppObs_CC cc on cc.obsID = xy.obsID
JOIN vafwis_tables.dbo.udf_List2Table('625081','') list on list.item = obs.obsID
```

| [DGIF](#) | [Credits](#) | [Disclaimer](#) | Contact vafwis_support@dgif.virginia.gov | Please view our [privacy policy](#) |
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Virginia Department of Game and Inland Fisheries

6/20/2019 1:41:55 PM

Fish and Wildlife Information Service

VaFWIS Search Report Compiled on 6/20/2019, 1:41:55 PM

[Help](#)

Observations reported or potential habitat occurs within a **2 mile radius around point 38.3783000 -77.7554099** in **047 Culpeper County, 137 Orange County, VA** where (010077) [Shiner, bridle](#) observed.

[View Map of Site Location](#)

Species Observations where Shiner, bridle (010077) observed

N/A

*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 Wildlife Action Plan Conservation Opportunity Ranking:

- a - On the ground management strategies/actions exist and can be feasibly implemented.;
- b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
- c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

Habitat Predicted for Aquatic WAP Tier I & II Species where Shiner, bridle (010077) observed

(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 | | | | |
| Flat Run (20801031) | | 010077 | | Ia | Shiner, bridle Notropis bifrenatus | Yes |

Habitat Predicted for Terrestrial WAP Tier I & II Species where Shiner, bridle (010077) observed

N/A

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

N/A

Compiled on 6/20/2019, 1:41:55 PM I980210.1 report=BOVA searchType= R dist= 3218 poi= 38.3783000 -77.7554099

audit no. 980210 6/20/2019 1:41:55 PM Virginia Fish and Wildlife Information Service
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Virginia Department of Game and Inland Fisheries

6/20/2019 1:36:01 PM

Fish and Wildlife Information Service

VaFWIS Search Report Compiled on 6/20/2019, 1:36:01 PM

[Help](#)

Known or likely to occur within a **2 mile radius** around point **38.3783000 -77.7554099**
 in **047 Culpeper County, 137 Orange County, VA**
 where (010131) [Eel, American](#) observed.

[View Map of Site Location](#)

Species Observations where Eel, American (010131) observed (1 records)

[View Map of All Query Results](#)

[Species Observations where Eel, American \(010131\) observed](#)

| obsID | class | Date Observed | Observer | N Species | | | View Map |
|------------------------|--------|---------------|---------------------------|-------------------|-------------|----------------|---------------------|
| | | | | Different Species | Highest TE* | Highest Tier** | |
| 625081 | SppObs | Sep 7 2016 | Jason; Hill Drew; Miller | 31 | | III | Yes |

Displayed 1 Species Observations where Eel, American (010131) observed

*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 Wildlife Action Plan Conservation Opportunity Ranking:
 a - On the ground management strategies/actions exist and can be feasibly implemented.;
 b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
 c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

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 |
|----------|--|-------------------|------------|--------------|
| RA42 | Rapidan River-Fields Run | 55 | FT | I |
| RA43 | Wilderness Run | 44 | | I |

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audit no. 980210 6/20/2019 1:36:01 PM Virginia Fish and Wildlife Information Service

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VaFWIS Search Report Compiled on 6/20/2019, 1:34:06 PM[Help](#)

Known or likely to occur within a **2 mile radius around point 38.3783000 -77.7554099**
in **047 Culpeper County, 137 Orange County, VA**

[View Map of Site Location](#)

425 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 20) (18 species with Status* or Tier I** or Tier II**)

| BOVA Code | Status* | Tier** | Common Name | Scientific Name | Confirmed | Database(s) |
|---------------------------|-------------------------|------------------------|--|---------------------------------|---------------------------|-----------------------------|
| 060003 | FESE | Ia | Wedgemussel, dwarf | Alasmidonta heterodon | | BOVA |
| 050022 | FTST | Ia | Bat, northern long-eared | Myotis septentrionalis | | BOVA |
| 060029 | FT | IIa | Lance, yellow | Elliptio lanceolata | | BOVA,HU6 |
| 050020 | SE | Ia | Bat, little brown | Myotis lucifugus | | BOVA |
| 050027 | SE | Ia | Bat, tri-colored | Perimyotis subflavus | | BOVA |
| 040293 | ST | Ia | Shrike, loggerhead | Lanius ludovicianus | | BOVA |
| 060081 | ST | IIa | Floater, green | Lasmigona subviridis | | BOVA |
| 040292 | ST | | Shrike, migrant loggerhead | Lanius ludovicianus migrans | | BOVA |
| 030063 | CC | IIIa | Turtle, spotted | Clemmys guttata | | BOVA |
| 030012 | CC | IVa | Rattlesnake, timber | Crotalus horridus | | BOVA |
| 010077 | | Ia | Shiner, bridle | Notropis bifrenatus | Potential | BOVA,Habitat |
| 100248 | | Ia | Fritillary, regal | Speyeria idalia idalia | | BOVA,HU6 |
| 040052 | | IIa | Duck, American black | Anas rubripes | | BOVA,HU6 |
| 040181 | | IIa | Tern, common | Sterna hirundo | | HU6 |
| 040320 | | IIa | Warbler, cerulean | Setophaga cerulea | | BOVA,HU6 |
| 040140 | | IIa | Woodcock, American | Scolopax minor | | BOVA,HU6 |
| 040203 | | IIb | Cuckoo, black-billed | Coccyzus erythrophthalmus | | BOVA |
| 040105 | | IIb | Rail, king | Rallus elegans | | BOVA |
| 010131 | | IIIa | Eel, American | Anguilla rostrata | Yes | BOVA,SppObs,HU6 |
| 030068 | | IIIa | Turtle, woodland box | Terrapene carolina carolina | | BOVA,HU6 |

To view **All 425 species** [View 425](#)

*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 Wildlife Action Plan Conservation Opportunity Ranking:
 a - On the ground management strategies/actions exist and can be feasibly implemented.;
 b - On the ground actions or research needs have been identified but cannot feasibly be implemented at this time.;
 c - No on the ground actions or research needs have been identified or all identified conservation opportunities have been exhausted.

[View Map of All Query Results from All Observation Tables](#)

Bat Colonies or Hibernacula: **Not Known**

Anadromous Fish Use Streams (1 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** | |
| P186 | Rapidan river | Potential | 0 | | | Yes |

Impediments to Fish Passage (1 records)

[View Map of All Fish Impediments](#)

| ID | Name | River | View Map |
|----|---------------------------------------|----------|---------------------|
| 76 | LAKE OF THE WOODS DAM | FLAT RUN | Yes |

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Species Observations (25 records - displaying first 20)

[View Map of All Query Results Species Observations](#)

| obsID | class | Date Observed | Observer | N Species | | | View Map |
|------------------------|--------|---------------|-----------------------------|-------------------|-------------|----------------|---------------------|
| | | | | Different Species | Highest TE* | Highest Tier** | |
| 625081 | SppObs | Sep 7 2016 | Jason; Hill Drew; Miller | 31 | | III | Yes |
| 621279 | SppObs | Aug 15 2013 | Anne; Chazal Chris; Hobson | 2 | | IV | Yes |
| 627109 | SppObs | Aug 4 2016 | James; Brubaker | 1 | | | Yes |
| 630124 | SppObs | Aug 4 2016 | James; Brubaker | 1 | | | Yes |
| 624825 | SppObs | Apr 21 2015 | Steve; Hein | 1 | | | Yes |
| 85661 | SppObs | May 24 2001 | Ron Hughes | 1 | | | Yes |
| 6418 | SppObs | Sep 7 1990 | Werner Wieland | 5 | | | Yes |
| 6421 | SppObs | Sep 7 1990 | Werner Wieland | 5 | | | Yes |
| 15972 | SppObs | Jul 1 1981 | E. G. MAURAKIS | 16 | | | Yes |
| 10133 | SppObs | Jul 1 1981 | E. G. Maurakis | 7 | | | Yes |
| 15971 | SppObs | Jul 1 1981 | E. G. Maurakis | 13 | | | Yes |
| 337127 | SppObs | Jan 1 1981 | EGM-B-MAURAKIS | 14 | | | Yes |
| 337130 | SppObs | Jan 1 1981 | EGM-B-MAURAKIS | 16 | | | Yes |
| 337128 | SppObs | Jan 1 1981 | EGM-B-MAURAKIS | 7 | | | Yes |
| 337129 | SppObs | Jan 1 1981 | EGM-B-MAURAKIS | 13 | | | Yes |
| 10152 | SppObs | Mar 27 1977 | Smith and Van Hoose | 8 | | | Yes |
| 335945 | SppObs | Jan 1 1977 | ODU-B-OLD DOMINION UNIV. | 8 | | | Yes |
| 10153 | SppObs | Oct 19 1974 | Smith and Van Hoose | 12 | | | Yes |
| 15980 | SppObs | Oct 18 1974 | SMITH AND VAN HOOSE | 4 | | | Yes |
| 334833 | SppObs | Jan 1 1974 | ODU-B-OLD DOMINION UNIV. | 12 | | | Yes |

Displayed 20 Species Observations

Selected 25 Observations [View all 25 Species Observations](#)

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 | |

| | | | | | | | |
|---------------------|--|--------|--|----|--------------------------------|---------------------|---------------------|
| Flat Run (20801031) | | 010077 | | Ia | Shiner, bridle | Notropis bifrenatus | Yes |
|---------------------|--|--------|--|----|--------------------------------|---------------------|---------------------|

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Virginia Breeding Bird Atlas Blocks (3 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 ** | |
| 49151 | Chancellorsville, NW | 33 | | III | Yes |
| 48166 | Germanna Bridge, SE | 73 | | III | Yes |
| 49165 | Richardsville, SW | 27 | | III | Yes |

Public Holdings:

N/A

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

| FIPS Code | City and County Name | Different Species | Highest TE | Highest Tier |
|-----------|--------------------------|-------------------|------------|--------------|
| 047 | Culpeper | 349 | FTSE | I |
| 137 | Orange | 349 | FTSE | I |

USGS 7.5' Quadrangles:

- Mine Run
- Germanna Bridge
- Chancellorsville
- Richardsville

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 |
|----------|--|-------------------|------------|--------------|
| RA42 | Rapidan River-Fields Run | 55 | FT | I |
| RA43 | Wilderness Run | 44 | | I |

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 PixelSize=64; Anadromous=0.041574; BBA=0.091315; BECAR=0.026052; Bats=0.024266; Buffer=0.096532; County=0.199816; HU6=0.120469; Impediments=0.034187; Init=0.329158; PublicLands=0.238844; Quad=0.082861; SppObs=2.261797; TEWaters=0.049353; TierReaches=0.077692; TierTerrestrial=0.088091; Total=3.936463; Tracking_BOVA=0.175507; Trout=0.036056; huva=0.049246

APPENDIX V

USFWS Project
Review



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: 05E2VA00-2019-SLI-4802
Event Code: 05E2VA00-2019-E-11561
Project Name: Somerset Farm Parcel 5

June 20, 2019

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

To Whom It May Concern:

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

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

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

species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

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

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

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

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

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

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

Attachment(s):

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

Official Species List

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

This species list is provided by:

Virginia Ecological Services Field Office

6669 Short Lane

Gloucester, VA 23061-4410

(804) 693-6694

Project Summary

Consultation Code: 05E2VA00-2019-SLI-4802

Event Code: 05E2VA00-2019-E-11561

Project Name: Somerset Farm Parcel 5

Project Type: LAND - EASEMENT / RIGHT-OF-WAY

Project Description: The project site consists of six (6) parcels of land totaling approximately 12 acres located north of Skinker Road in Orange County, Virginia. The project site is further identified by Orange County Parcel Numbers: 0040000000005A, 0040000000005B, 0040000000005C, 0040000000005D, 0040000000005H, and 004A0000D00010.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/38.37937455974071N77.756339024323W>



Counties: Orange, VA

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 Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

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

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

Mammals

| NAME | STATUS |
|--|------------|
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045 | Threatened |

Clams

| NAME | STATUS |
|--|------------|
| Yellow Lance <i>Elliptio lanceolata</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4511 | Threatened |

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.

APPENDIX VI

Photo Log



Photograph 1: View to the northwest showing the western portion of the study area.



Photograph 2: View to the southwest showing the western portion of the study area.



Photograph 3: View to the southeast showing a dilapidated house in the southeastern portion of the study area.



Photograph 4: View to the north showing the northeastern portion of the study area.



Photograph 5: View to the east showing a gravel road located to the north of the study area.



Photograph 6: View to the east showing a potential stream within the study area.



Photograph 7: View to the east showing a potential stream within the study area.



Photograph 8: View to the east showing a potential wetland within the study area in the eastern portion of the site.