



**NATURAL RESOURCES INVENTORY  
&  
FOREST STAND DELINEATION  
REPORT**

**St. Mary's County  
Regional Agricultural Center**

New Market Turner Road, Mechanicsville, St. Mary's County, MD

May 22, 2023

Prepared For:



**BRUDIS & ASSOCIATES, INC.**

9240 Rumsey Road, Suite C  
Columbia, Maryland 21045

EP#: 20230304

**EnviroProjects**

93 Eastway, Severna Park, MD 21146

(410) 599-5335

[www.EnviroProj.com](http://www.EnviroProj.com)

# ST. MARY'S COUNTY REGIONAL AGRICULTURAL CENTER NATURAL RESOURCES INVENTORY & FOREST STAND DELINEATION REPORT

May 22, 2023

## 1.0 PURPOSE AND SCOPE

A Natural Resources Inventory/Forest Stand Delineation (NRI/FSD) study was conducted on March 14, 2023, at the proposed St. Mary's County Regional Agricultural Center (SM RAC). The study property is located at 37707 New Market Turner Road, Mechanicsville, MD 20659 and is recorded in St. Mary's tax records on Tax Map 4, Parcel 474 a total of ±47.1-acres. Appendix A includes the Project Location Map, with aerial photograph and property map data. The NRI/FSD was conducted in accordance with Maryland Forest Conservation Act of 1991 and Saint Mary's County Zoning Ordinance, Chapter 75. Included with this NRI/FSD report are Appendix A, Mapping Data; Appendix B, Forest Stand Delineation datasheets with photographs, Appendix C, Agency Correspondence, and Appendix D, NRI/FSD Plan.

## 2.0 SITE LOCATION AND PHYSICAL FEATURES

The subject study area has an approximate ±47.1-acre gross tract acreage. The site is mostly forested with a single, mature, mid-successional forest stand, a central area is cleared and used as a county waste depository. The study area is bordered to the south and west by state highway and commercial property, north by overhead powerline utility right-of-way and east by public lands (school and parks). The study area topography falls to the east from the site center toward the stream channel. Topography also slopes west and south from the central high point towards off-site streams. The study site contains a mid-successional, deciduous hardwood forest in good condition. Nine (9) large trees were identified on the site. The study area does not occur within the Chesapeake Bay Critical Area. The forest stand delineation study area is illustrated in Appendices A and D of the report.

### 2.1 Topography

The site slopes gradually downward to the east towards the on-site stream channel and also to the west and south towards off-site stream channels. Topographic surface elevations in the study area range from approximately 135' above mean sea level (AMSL) in the northeast streambed of the site to 188' AMSL at the waste management facility in the center of the Site. The USGS Charlotte Hall, MD 7.5 (2019) Minute Quadrangle topographic map of the study area is in Appendix A.

### 2.2 Hydrology

The study area occurs within the Killpeck Creek subwatershed of the Lower Patuxent River. The Patuxent River drains to the Chesapeake Bay. The Hydrologic Unit Code (HUC) of the unnamed tributary to Killpeck Creek is 020600060601 and has State designation of Use-I: which includes waters for "Water Contact Recreation, and Protection of Nontidal Warmwater Aquatic Life". The property study area is not within the Federal Emergency Management Agency (FEMA) Floodway and 100-Year Floodplain zone; per FEMA FIRM Panel 24037C0057E (effective October 19, 2004).

### 2.3 Recorded Soils

According to the St. Mary's County, USDA Web Soil Survey (accessed 2023), ten (10) soil

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series occur within the study area. Appendix A, Hydric Soils Map shows the mapped soil series and hydric soil rating data for each soil mapping unit within the study area. The Soil Series Table, below, gives a description of each soil unit present within the study area. The NRI/FSD plan (Appendix D) depicts the locations of soil units at the site.

**SM RAC, Soil Series Table**

Soil Series Map Unit- Hydric Rating – Saint Mary's County, Maryland					
Series Symbol	Soil Series Map Unit Name	Hydric Rating	Hydrologic Group	K-Factor Whole	Drainage Class
BIB2	Beltsville silt loam, 2 to 5% slopes, moderately eroded	Non-Hydric (5)	C	0.37	Moderately Well Drained
BIB3	Beltsville silt loam, 2 to 5% slopes, severely eroded	Non-Hydric (5)	C	0.43	Moderately Well Drained
BIC3	Beltsville silt loam, 5 to 10% slopes, severely eroded	Non-Hydric (5)	C	0.43	Moderately Well Drained
BrB2	Bourne fine sandy loam, 2 to 5% slopes, moderately eroded	Non-Hydric (5)	C	0.28	Moderately Well Drained
EwD2	Evesboro-Westphalia complex, 12 to 20% slopes, moderately eroded	Non-Hydric (0)	B	0.15	Well Drained
EwE2	Evesboro-Westphalia complex, 20 to 45% slopes, moderately eroded	Non-Hydric (0)	B	0.15	Well Drained
KeC2	Kempsville fine sandy loam, 5 to 10% slopes, moderately eroded	Non-Hydric (0)	C	0.28	Well Drained
KeD2	Kempsville fine sandy loam, 10 to 15% slopes, moderately eroded	Non-Hydric (0)	C	0.28	Well Drained
RuB	Rumford loamy sand, 0 to 5% slopes	Non-Hydric (0)	A	0.1	Well Drained
SaaB	Sassafras sandy loam, 2 to 5% slopes, Northern Coastal Plain	Non-Hydric (4)	B	0.2	Well Drained

## 2.4 General Vegetation

The site is mostly forested with a single, mature, mid-successional forest stand. On-site plants are common to the coastal plain of Maryland. The on-site forest area was dominated by White Oak (*Quercus alba*); no invasive species were identified in the forest stand delineation data points. The forest stand is discussed in detail in Section 5.0 Results of Forest Stand Delineation.

## 2.5 Rare, Threatened or Endangered Species

The Maryland Department of Natural Resources (MDNR) Maryland Environmental Resources and Land Information Network (MERLIN) geographic information system (GIS) data shows potential Forest Interior Dwelling (FID) habitat and Sensitive Species Project Review Areas (SSPRA) within the study area. Correspondence was directed to the United States Fish and Wildlife Service (USFWS) and MDNR, Wildlife and Heritage Service (WHS) on March 20, 2023, requesting any information on recorded occurrences or potential for rare, threatened, or Endangered (RTE) species for the property. USFWS correspondence on March 31, 2023, including the USFWS online "iPAC Trust Resources List" data, indicates there are no known "critical habitats" or protected species at the subject site. On April 27, 2023, MDNR-WHS responded that within the off-site powerline, contiguous to the subject study property, has several State listed, protected, plant species are known to occur, and identified the zone in "close proximity to the powerline right-of-way" merits avoidance to the extent practicable. Agency correspondence is contained in Appendix C.

## 2.6 Historic and Cultural Resources

The MDNR, MERLIN GIS data finds the SM RAC site shows no historic/cultural resources within the study area. Correspondence was directed to Maryland Historic Trust-State Historic Preservation Office (MHT-SHPO) requesting any information on known records of historic sites

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or cultural resources on the subject property and the immediate vicinity on March 20, 2023. On April 10, 2023, SHPO determined that no historic or cultural resources are affected at the study property. Agency correspondence is contained in Appendix C.

### **3.0 WETLANDS AND WATERS**

The USFWS National Wetlands Inventory (NWI) map (Appendix A) shows a stream but no mapped wetland occurring at the study site. MDNR MERLIN GIS mapping data indicates no wetlands, or “Wetlands of Special State Concern” occur in the study area. EnviroProjects conducted a Wetlands and Waters of the US delineation study of the SM RAC site on March 14, 2023. The *Waters of the US Wetland Delineation Report* dated April 28, 2023, documents that one perennial stream and associated wetland, jurisdictional Waters of the US, occur on-site. The site's Waters of the US Map is in Appendix A.

In Maryland, nontidal wetlands have a 25-foot State-regulated buffer. Saint Mary County Code, Chapter 5, establishes a 50-foot buffer around all streams, measured from the top of bank.

### **4.0 FOREST STAND DELINEATION METHODS AND PROCEDURES**

The Forest Stand Delineation was prepared in compliance with the Maryland Forest Conservation Act (FCA, 1991) using the methodology described in the *State Forest Conservation Manual* (Maryland, Department of Natural Resources, 1997) and Saint Mary's County Zoning Ordinance, Chapter 75. Please refer to the NRI/FSD Plan that accompanies / augments this report. Where possible, a preliminary assessment of soils, topography, existing forests, stream channels, wetlands, and floodplain limitations was considered prior to the field investigation. The fieldwork was completed in March 2023.

A systematic random sampling method was used to collect information from sample points within the property. The sampling procedure utilized 1/10 acre sample plots. Data sheets were used from the *State Forest Conservation Manual* (Maryland, Department of Natural Resources, 1997). All trees with two (2) inches and greater diameter within the sample plots were recorded on data sheets. The average basal area expressed in square feet per acre was calculated based on tree data collected at the sample points. In addition, common understory species and herbaceous layer species were recorded. All common species, both woody and non-woody, occurring in the zero to three feet herbaceous layer were recorded in the herbaceous field. Likewise, all common species occurring in the 3-20 feet understory layer were recorded in the respective field. Percent canopy closure was observed at each cardinal point and plot center per presence/absence (yes or no on data sheet). Averages of canopy closure for each vegetation layer were then calculated 100% for yes and 0% for no. In addition to this calculation, an approximate observed overall canopy closure value for each vegetation layer was recorded. Invasive cover and percent woody debris were recorded by general observation. Comments were included for other relevant features in the area, such as adjacent species not occurring within the plot, and human influences/disturbance. In addition to the point sampling, non-wooded vegetative communities and areas of interest not within sample points were generally characterized. The property contains one Forest Stand, as shown on the NRI/FSD Plan map. Unless otherwise noted, floral nomenclature follows Brown and Brown (1972).

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All significant or specimen trees within the study area were noted and are shown on the NRI/FSD Plan (Appendix D). Specimen trees are defined generally as trees at least 75% as large as the County Champion tree of the same species and/or having 30-inch or greater in Diameter at Breast Height (DBH). DBH was measured using a diameter tape and/or Biltmore stick. Standing dead tree “snags” are not included in the tree inventory. Specimen trees noted in the field were tagged/flagged in the field with Aluminum stamp-numbered tags and red and white stripe flagging. Red and white stripe flagging with handwritten labels was used for FSD data points. Specimen tree species, DBH, and condition were noted for each tree, along with comments if applicable. Conditions rate from Poor to Excellent, and relate to the current health of the tree and the ability of the tree to withstand impacts and increased exposure, as shown in the table below:

**Significant Tree Condition Ratings**

Condition Rating	Description
Excellent	Excellent designations are rare and predominantly pertain to large very dominant trees in excellent health that represent an archetypical representation of the species.
Good	Good trees are healthy and exhibit good structure.
Fair	Fair trees either are hindered by 1 or more factors which may be corrected (insect infestation, heavy climbing vines, etc...), or are compromised trees that may not be structurally suited for exposure as an edge or open tree.
Poor	Poor trees are estimated to be on an irreversible health decline, e.g., damaged, end of life (EOL), rot, dieback, etc...
Poor/Dying	Poor Dying trees are in irreversible health decline and/or impaired such that mortality is imminent. Dying trees often have widowmaker branches, may be immediately dangerous to life or health (IDLH), and/or deemed unsavable/incurable.

A stand quality assessment designation (High, Moderate, Low) for the forest stand was assigned. Factors considered in this designation included forest structure score, the presence of significant or specimen trees, and the presence or absence of environmentally sensitive features (e.g., wetlands, steep slopes, erodible soils, floodplain). The percentage of invasive species estimated at each sample point includes non-native invasive species and native species which exhibit invasive qualities in the specific area sampled.

### **5.0 RESULTS OF THE FOREST STAND DELINEATION**

One forest stand was identified in the ±47.1-acre SM RAC NRI/FSD study area. The forest stand identified was designated as Forest Stand A (FS-A). Four (4) data points were collected within the forest stand (FSDP1, FSDP2, FSDP4 and FSDP5). The FSD data sheets are contained in Appendix B. The data points are shown on the Forest Stand Delineation Plan Sheet in Appendix D.

Nine (9) specimen trees (greater than 30-inches DBH) were located within the study area. The table below summarizes the SM RAC study area large and significant tree study findings.

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**SM RAC, Specimen and Significant Trees Table**

Label	Size	Species	Common	Condition	Stand	Note
50	30	<i>Quercus alba</i>	White Oak	Good	A	poison ivy
51	32	<i>Quercus alba</i>	White Oak	Good	A	split @ +8'
52	31.5	<i>Quercus alba</i>	White Oak	Good	A	split @ +8'
53	33	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
54	32	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
55	30	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
56	37	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
57	30	<i>Quercus alba</i>	White Oak	Good	A	
58	40	<i>Quercus alba</i>	White Oak	Good	A	

**5.1 FOREST STAND A Mid-Successional Deciduous Hardwood Forest:  
High Retention Priority Ranking, ±40.9 acres**

Based on field observations, on-site forest composition, the site hosts one forest stand. Forest Stand A (FS-A) is a mature mid-successional deciduous hardwood, forest stand (±40.9 acres). The forest stand extends beyond the study area. FS-A is contiguous to a larger forest extending north of the study and past the utility right-of-way. FS-A contains no historic/cultural resources and is mapped by MDNR as potential FID bird habitat on-site and SSPRA due to off-site habitat.

Four (4) sample plots (FSDP1 FSDP2, FSDP4 and FSDP5) were used to characterize the condition and health of the forest stand. FS-A is dominated by White Oak (*Quercus alba*). Other common trees species include American Holly (*Ilex opaca*), Red Maple (*Acer rubrum*), American Beech (*Fagus grandifolia*), Tulip Poplar (*Liriodendron tulipifera*), Black Gum (*Nyssa sylvatica*), Sweetgum (*Liquidambar styraciflua*), Black Oak (*Quercus velutina*) and Northern Red Oak (*Quercus rubra*) in the canopy. The understory and shrub layer consist of American Holly, American Beech, and Sweetgum. The herbaceous layer was absent in many sample plots, presumably because it was outside the growing season, where present common species included Christmas Fern (*Polystichum acrostichoides*), American Holly, Greenbriar (*Smilax rotundifolia*), American Beech and Lowbush Blueberry (*Vaccinium angustifolium*).

The forest stand contains a moderate diversity of tree species. The percentage of invasive species cover is low at <5%. Field work was conducted outside of the vegetative growing season, a higher percentage of invasives/herbaceous vegetation may occur at other times. FS-A exhibits 5.3 tree species/acre throughout the study area. FS-A basal area is 115. The dominant size class of FS-A is 20 to 29.9-inch DBH. Nine (9) specimen trees (≥30 inches diameter) were identified. The tree canopy and understory coverages are high, with a low understory/shrub coverage within the stand. FS-A exhibits a good structure score (16 out of 21) and is assigned a High Preservation Priority Rating.

**SM RAC, Forest Stand A Summary Table**

STAND VARIABLES	STAND A (40.9-acres)
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STAND VARIABLES	STAND A (40.9-acres)
<b>Forest Type</b>	Mid-Successional Forest
<b>Dominant Species Size Class</b>	20-20.9-inch DBH
<b>Dominant Trees species</b>	White Oak
<b>Forest Association</b>	Deciduous Hardwood
<b>Number of Trees Species/Acre</b>	5
<b>Number of Tree Species</b>	9
<b>Basal Area</b>	115
<b>Common Woody Understory Trees and Shrubs</b>	American Holly, American Beech, and Sweetgum
<b>Common Herbaceous Species and Non-invasive Woody Vines</b>	American Holly, American Beech, Christmas Fern, Lowbush Blueberry and Greenbriar
<b>Common Invasive Vines and Shrubs (incl. native invasive species); Percent Coverage</b>	None <5%
<b>% Canopy Coverage</b>	75%
<b>% Understory Coverage</b>	75%
<b>% Herbaceous Coverage</b>	35%
<b>Number of Standing Snags</b>	3.3
<b>% Invasive Species Coverage</b>	<5%
<b>Forest Structure Value</b>	16
<b>Comments:</b>	Forest Stand A (FS-A) is a 40.9-acre, mid-successional stand, and is dominated by White Oak ( <i>Quercus alba</i> ) with American Holly, Red Maple, American Beech, Tulip Poplar Black Gum, Sweetgum, Black Oak, and Northern Red Oak in the canopy. FS-A contains steep slopes. FS-A is contiguous to a riparian forest corridor and is mapped FID Habitat. FS-A exhibits moderate diversity of tree species, low invasive species cover, with 5 tree species/acre, basal area is 115, and dominant size class of 20 to 29.9-inch DBH. Nine specimen trees occur on-site near the proposed activity. FS-A exhibits a good structure score (16 out of 21) and is assigned a High Preservation Priority Rating.

**5.2 OFF-STUDY AREA VEGETATION**

Land cover surrounding the study area consists of state highway, commercial, public lands (school and parks) and continuation of forest with utility right-of-way. The unnamed tributary of Killpeck Creek drains to Killpeck Creek and the Patuxent River to the north beyond the study area.

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## APPENDICES

### **Appendix A: Mapping Data**

- Project Location Map
- USGS Topographic Map
- Hydric Soils Map
- National Wetlands Inventory Map
- Waters of the US Map

### **Appendix B: Forest Stand Delineation Datasheets**

- Stand Summary Sheet
- Forest Sampling Data Worksheets
- Significant Tree Table
- Forest Structure Scoresheet

### **Appendix C: Agency Correspondence**

- US Fish & Wildlife Service
- State Historic Preservation Office
- Maryland DNR, Wildlife & Heritage Service

### **Appendix D: Forest Stand Delineation Plan**



**SAINT MARY'S: REGIONAL AGRICULTURAL CENTER  
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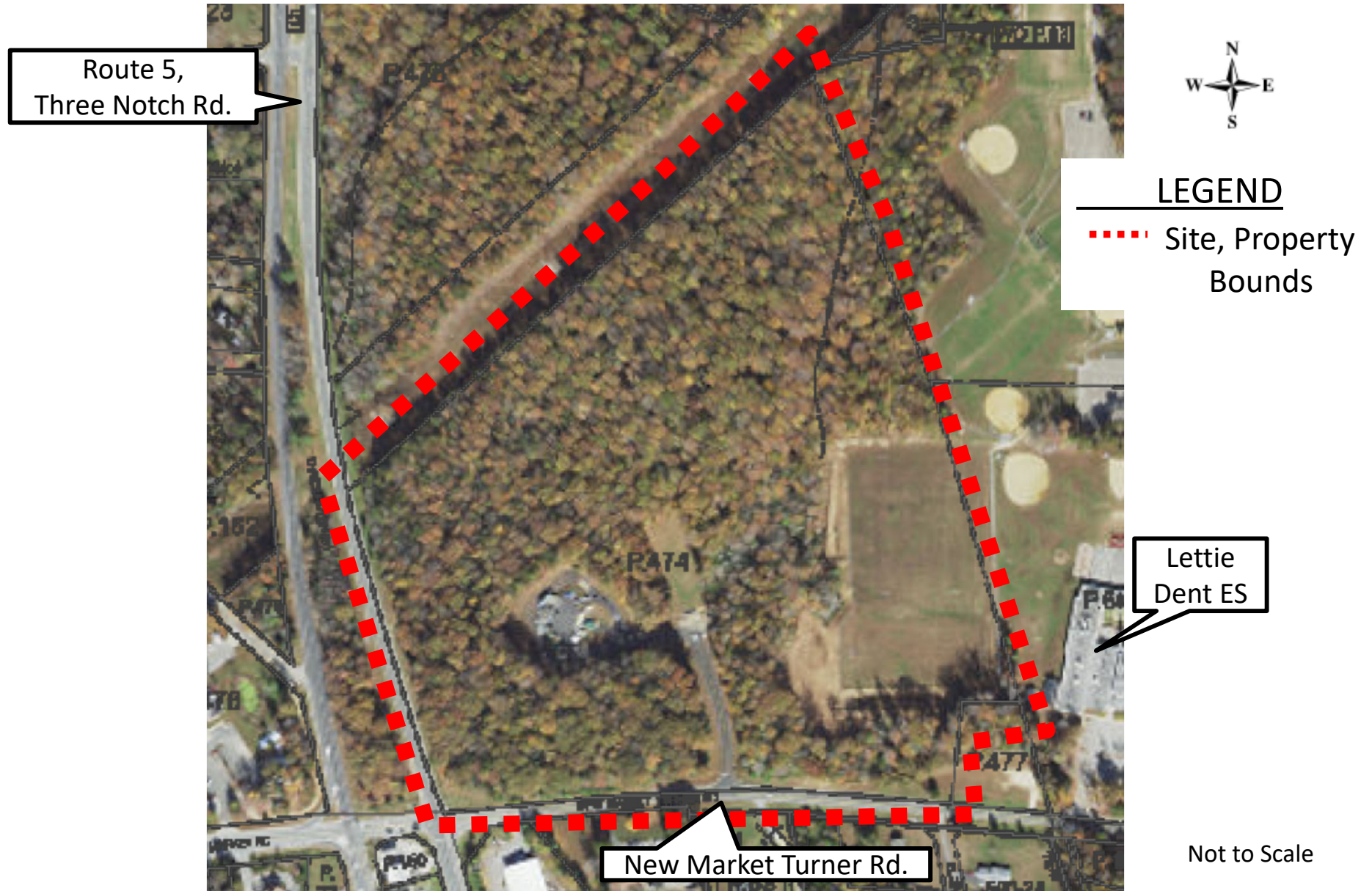
**APPENDIX A**

**MAPPING DATA**

Project Location Map  
USGS Topographic Map  
Hydric Soils Map  
National Wetlands Inventory Map  
Waters of the US Map

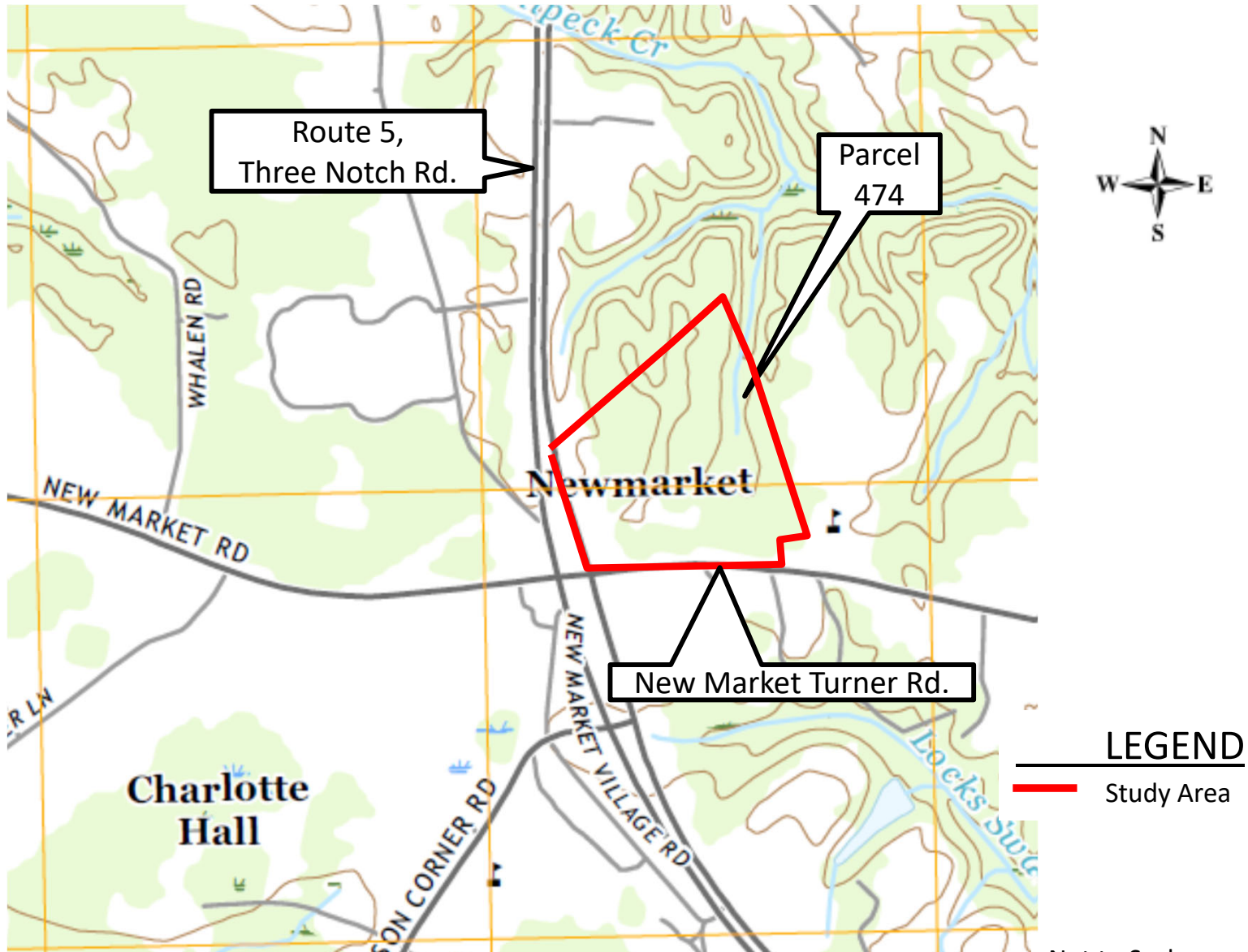
# BAI, Saint Marys Rural Agricultural Center, Project Location & Property Map

37707 New Market Turner Road, Mechanicsville, MD, 20659. Saint Marys Co., tax map 4, parcel 47.4, 47.75-acres.



# BAI, Saint Marys Co. Rural Agricultural Co-op, USGS Topographic Map

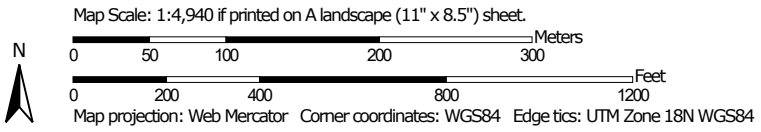
37707 New Market Turner Road, Mechanicsville, MD, 20659. Saint Marys Co., tax map 4, parcel 474, 47.75-acres.



Not to Scale


Date: 03/01/2023

Hydric Rating by Map Unit—St. Mary's County, Maryland  
(37766 NEW MARKET RD, CHARLOTTE HALL)









## 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 1:20,000.

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: St. Mary's County, Maryland  
Survey Area Data: Version 18, Aug 27, 2021

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

Date(s) aerial images were photographed: Nov 23, 2020—Nov 28, 2020

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

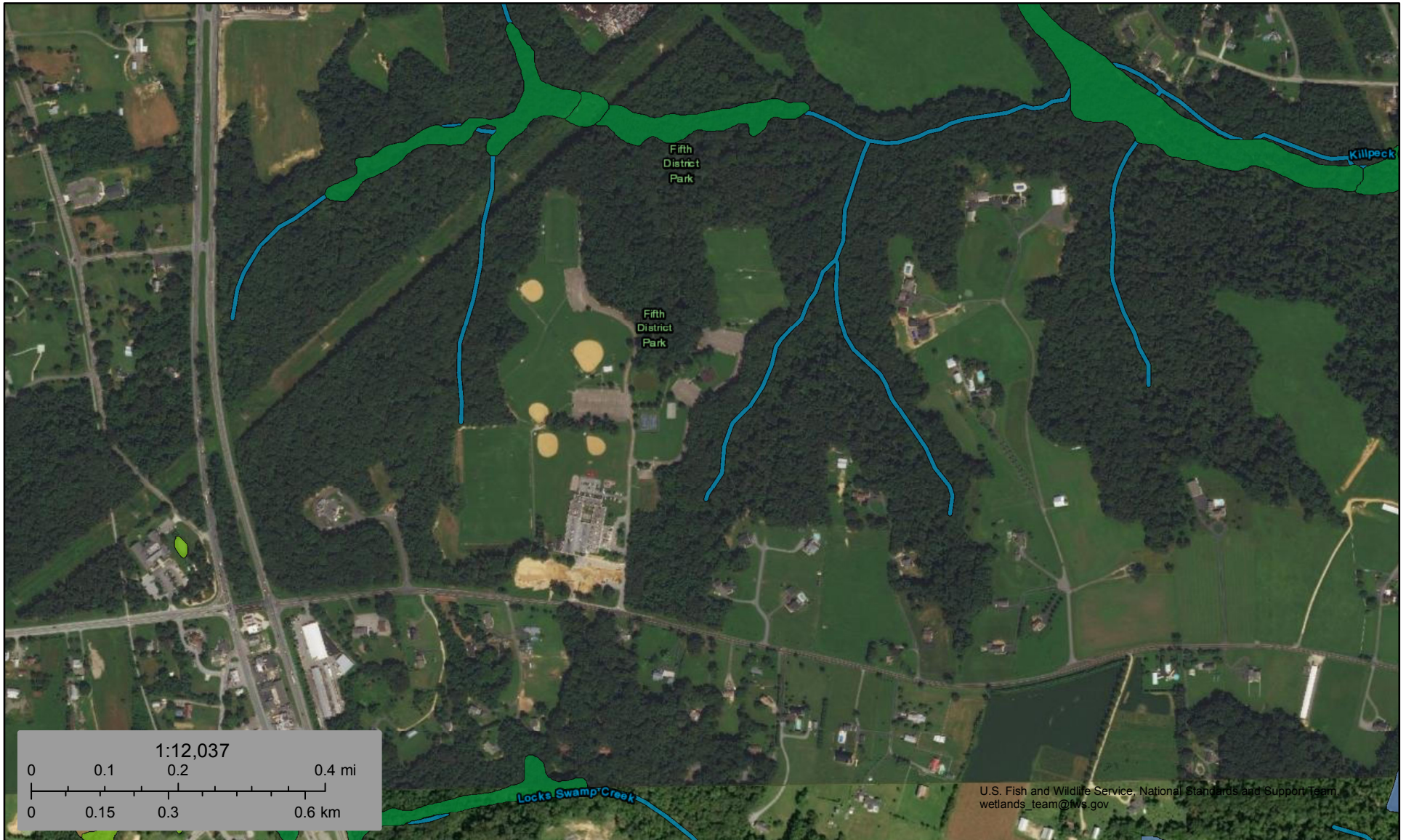
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BIB2	Beltsville silt loam, 2 to 5 percent slopes, moderately eroded	5	5.6	11.3%
BIB3	Beltsville silt loam, 2 to 5 percent slopes, severely eroded	5	0.1	0.2%
BIC3	Beltsville silt loam, 5 to 10 percent slopes, severely eroded	5	9.3	18.7%
BrB2	Bourne fine sandy loam, 2 to 5 percent slopes, moderately eroded	5	14.8	29.8%
EwD2	Evesboro-Westphalia complex, 12 to 20 percent slopes, moderately eroded	0	2.8	5.6%
EwE2	Evesboro-Westphalia complex, 20 to 45 percent slopes, moderately eroded	0	1.4	2.8%
KeC2	Kempsville fine sandy loam, 5 to 10 percent slopes, moderately eroded	0	2.6	5.3%
KeD2	Kempsville fine sandy loam, 10 to 15 percent slopes, moderately eroded	0	4.8	9.5%
RuB	Rumford loamy sand, 0 to 5 percent slopes	0	7.2	14.4%
SaaB	Sassafras sandy loam, 2 to 5 percent slopes, Northern Coastal Plain	4	1.2	2.3%
<b>Totals for Area of Interest</b>			<b>49.9</b>	<b>100.0%</b>

## Rating Options

*Aggregation Method: Percent Present*

*Component Percent Cutoff: None Specified*

*Tie-break Rule: Lower*



May 12, 2022

**Wetlands**

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

# BAI, Saint Marys Co. Regional Agricultural Center, Waters of the US Map 1

37707 New Market Turner Road, Mechanicsville, MD, 20659. Saint Mary's Co., tax map 4, parcel 47.4, 47.75-acres.



Inset WOTUS  
Map 2

## LEGEND

- Stream
- Wetland
- Wetland Datapoint
- Property Limits

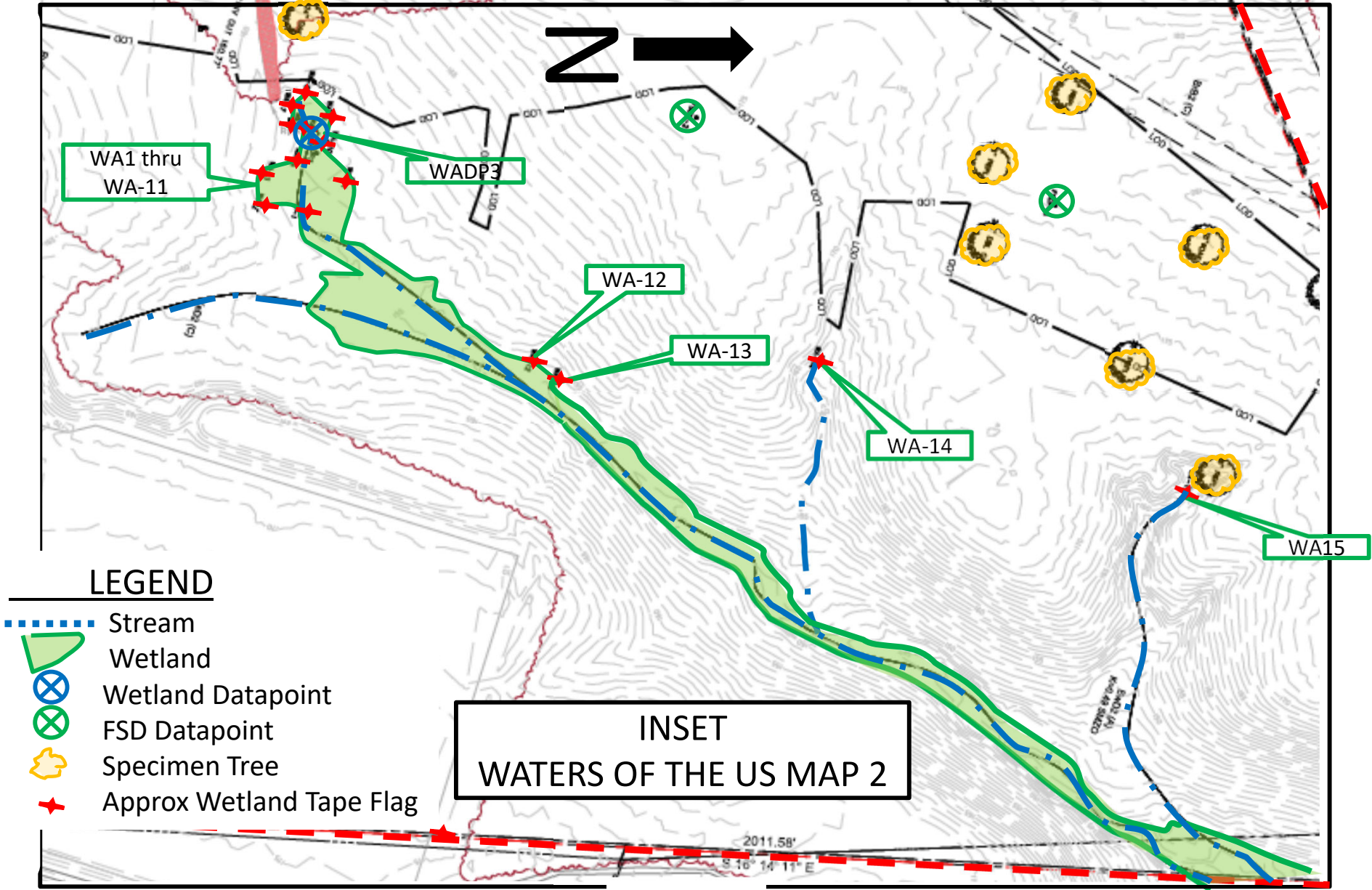
Not to Scale

Date: 04/28/2023



# BAI, Saint Marys Co. Regional Agricultural Center, Waters of the US Map 2

37707 New Market Turner Road, Mechanicsville, MD, 20659. Saint Mary's Co., tax map 4, parcel 47.4, 47.75-acres.



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**APPENDIX B**


**FOREST STAND DELINEATION DATASHEETS**

Stand Summary Sheet  
Forest Sampling Data Worksheets  
Significant Tree Table  
Forest Structure Scoresheet

## FOREST STAND SUMMARY WORKSHEET


<b>Property Name : Saint Mary's RAC</b> Location : <u>New Market Turner Road, Mechanicsville, St. Mary's County</u> Prepared By : <u>EnviroProjects Keel/Tawney</u> <span style="float: right;">Date: <u>March 14, 2023</u></span>		
Stand Variable	Stand #: <u>A</u> / <u>40.9</u> Acres	Stand #: <u>   </u> / <u>   </u> Acres
1 Dominant Species/ Codominant Species	White Oak	
2 Successional Stage	Mid-successional	
3 Basal area (sf/ac)	115	
4 Size Class of Dominant Species	20 " - 30 "	" - "
5 Percent Canopy Closure	75%	%
6 Number of Tree Species/acre	5	
7 Common understory species/acre	American Holly Sweetgum American Beech	
8 Percent understory cover 3'-20' tall	75%	%
9 Number of woody plant species 3'-20' tall	3	
10 Common Herbaceous species 0'-3' tall	American Holly    Greenbriar American Beech Christmas Fern Lowbush Blueberry	
11 Percent of herbaceous & woody plant cover - 0'-3' tall	35%	%
12 List of major invasive plant species & percent of cover	None	
	<u>&lt;5 %</u>	<u>   </u> %
13 Number of standing snags 6" dbh or greater/acre	3.3	
14 Comments	Forest Stand A (FS-A) is a 40.9-acre, mid-successional stand, and is dominated by White Oak ( <i>Quercus alba</i> ) with American Holly, Red Maple, American Beech, Tulip Poplar Black Gum, Sweetgum, Black Oak, and Northern Red Oak in the canopy. FS-A contains steep slopes. FS-A is contiguous to a riparian forest corridor and is mapped FID Habitat. FS-A exhibits moderate diversity of tree species, low invasive species cover, with 5 tree species/acre, basal area is 115, and dominant size class of 20 to 29.9-inch DBH. Nine specimen trees occur on-site near the proposed activity. FS-A exhibits a good structure score (16 out of 21) and is assigned a High Preservation Priority Rating.	
Sheet <u>1</u> of <u>1</u> Forest Stand Summary Worksheet <span style="float: right;">Adapted Figure 2:11</span>		

## FOREST SAMPLING DATA WORKSHEET

<b>Property/Site Name:</b> Saint Mary's RAC		<b>Prepared By:</b> EnviroProjects Keel/Tawney						
<b>STAND #:</b> A		<b>Plot #:</b> FSDP1		<b>Plot Size:</b> 1/10-acre				
<b>FSD jur. authority:</b> St. Mary's County		<b>Date:</b> March 14, 2023						
<b>Basal Area (sf/ac)</b>		<b>SIZE CLASS OF TREES &gt; 20' HEIGHT WITHIN SAMPLE PLOT</b>						
115								
<b>Tree Species</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b>Total</b>		
	2"-5.9" dbh	6"-11.9" dbh	12"-19.9" dbh	20"-29.9" dbh	>30" dbh			
<b>Crown Position</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>			
White Oak <i>Quercus alba</i>		1		4	1	6		
American Holly <i>Ilex opaca</i>			6	2		8		
Black Gum <i>Nyssa sylvatica</i>		1			2	3		
Red Maple <i>Acer rubrum</i>			1	2	1	4		
Sweetgum <i>Liquidambar styraciflua</i>				1		1		
						0		
						0		
						0		
						0		
<b>Tot. trees/size class</b>	0	9	5	7	1	22		
<b>#/size standing snags</b>		2				2		
<b>List of Common Understory Species 3'-20'</b>		<b>% of Canopy Closure</b>				<b>% Invasive Cover per Plot (all layers)</b>		
American Holly		C	N	E	S		W	Total
American Beech		Y	Y	N	N	Y	60%	< 5 %
		<b>% of Understory Cover</b>				<i>Inv. Spp. List</i> None		
		C	N	E	S			W
<b>List of Herbaceous Species 0'-3'</b>		Y	N	Y	Y	Y	80%	
None observed		<b>% of Herbaceous Cover</b>				<b>Plot Successional Stage</b> Mid-successional		
		C	N	E	S			W
		N	N	N	N	N	0%	
<b>COMMENTS</b>								
Beech nearby but outside observation area								
Study conducted outside growing season								
<div style="display: flex; justify-content: space-between; align-items: center;"> <span><b>EnviroProjects</b> ©</span> <span>BAF 10 Tally 13 WO #: 20230304</span> <span>Sheet 1 of 4</span> </div>								
<b>Forest Sampling Data Worksheet</b>		<b>Adapted Figure 2:10</b>						

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## FOREST SAMPLING DATA WORKSHEET

<b>Property/Site Name:</b> Saint Mary's RAC		Prepared By: EnviroProjects Keel/Tawney									
<b>STAND #:</b> A		Plot #: FSDP2	Plot Size: 1/10-acre	Date: March 14, 2023							
<b>FSD jur. authority:</b> St. Mary's County											
<b>Basal Area (sf/ac)</b>		<b>SIZE CLASS OF TREES &gt; 20' HEIGHT WITHIN SAMPLE PLOT</b>									
115											
<b>Tree Species</b>	<b># of Trees</b> 2"-5.9" dbh	<b># of Trees</b> 6"-11.9" dbh	<b># of Trees</b> 12"-19.9" dbh	<b># of Trees</b> 20"-29.9" dbh	<b># of Trees</b> >30" dbh	<b>Total</b>					
<b>Crown Position</b>	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.						
American Beech <i>Fagus Grandfolia</i>		1	3	2		6					
American Holly <i>Ilex opaca</i>			2			2					
White Oak <i>Quercus alba</i>			2	4		6					
Black Oak <i>Quercus velutina</i>				1		1					
Sweetgum <i>Liquidambar styraciflua</i>		1	1			2					
American Holly <i>Ilex opaca</i>		1	1			2					
Red Maple <i>Acer rubrum</i>						0					
						0					
						0					
<b>Tot. trees/size class</b>	0	3	9	7	0	19					
<b>#/size standing snags</b>	1	1	4			6					
<b>List of Common Understory Species 3'-20'</b>		<b>% of Canopy Closure</b>			<b>% Invasive Cover per Plot (all layers)</b>						
American Holly	C	N	E	S	W	Total					
American Beech	Y	Y	N	Y	N	60%					
Sweetgum	<b>% of Understory Cover</b>					<b>Inv. Spp. List</b>					
	C	N	E	S	W	Total					
	Y	Y	Y	Y	Y	100%					
<b>List of Herbaceous Species 0'-3'</b>		<b>% of Herbaceous Cover</b>			<b>Plot Successional Stage</b>						
None observed		C	N	E	S	W					
		N	N	N	N	N					
		0%					Mid-successional				
<b>COMMENTS</b>											
Study conducted outside growing season											
											
EnviroProjects ©		BAF	10	Tally	9	WO #:	20230304	Sheet	2	of	4
<b>Forest Sampling Data Worksheet</b>							<b>Adapted Figure 2:10</b>				

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## FOREST SAMPLING DATA WORKSHEET

<b>Property/Site Name:</b> Saint Mary's RAC		<b>Prepared By:</b> EnviroProjects Keel/Tawney					
<b>STAND #:</b> A		<b>Plot #:</b> FSDP4		<b>Plot Size:</b> 1/10-acre		<b>Date:</b> March 14, 2023	
<b>FSD jur. authority:</b> St. Mary's County							
<b>Basal Area (sf/ac)</b>		<b>SIZE CLASS OF TREES &gt; 20' HEIGHT WITHIN SAMPLE PLOT</b>					
115							
<b>Tree Species</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b># of Trees</b>	<b>Total</b>	
	2"-5.9" dbh	6"-11.9" dbh	12"-19.9" dbh	20"-29.9" dbh	>30" dbh		
<b>Crown Position</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>	<b>Dom CoD Oth.</b>		
Tulip Poplar <i>Liriodendron tulipifera</i>					7	7	
White Oak <i>Quercus alba</i>			2	1		3	
American Beech <i>Fagus Grandfolia</i>		1	1			2	
Black Gum <i>Nyssa sylvatica</i>		2	3			5	
N. Red Oak <i>Quercus rubra</i>					2	2	
						0	
						0	
						0	
						0	
<b>Tot. trees/size class</b>	0	3	6	10	0	19	
<b>#/size standing snags</b>		1				1	

<b>List of Common Understory Species 3'-20'</b>	<b>% of Canopy Closure</b>						<b>% Invasive Cover per Plot (all layers)</b>
	C	N	E	S	W	Total	
	American Holly						
American Beech	Y	Y	N	Y	Y	80%	< 5 %
	<b>% of Understory Cover</b>						<i>Inv. Spp. List</i>
	C	N	E	S	W	Total	
		Y	N	N	Y	N	40%
<b>List of Herbaceous Species 0'-3'</b>	<b>% of Herbaceous Cover</b>						<b>Plot Successional Stage</b>
	C	N	E	S	W	Total	
	Christmas Fern						
American Holly	Y	Y	Y	Y	N	80%	Mid-successional
Greenbriar							

**COMMENTS**


Study conducted outside growing season

EnviroProjects ©

BAF 10	Tally	16	WO #:	20230304	Sheet	3 of 4
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**Forest Sampling Data Worksheet** Adapted Figure 2:10

## FOREST SAMPLING DATA WORKSHEET

<b>Property/Site Name:</b> Saint Mary's RAC		<b>Prepared By:</b> EnviroProjects Keel/Tawney					
<b>STAND #:</b> A		<b>Plot #:</b> FSDP5		<b>Plot Size:</b> 1/10-acre			
<b>FSD jur. authority:</b> St. Mary's County		<b>Date:</b> March 14, 2023					
Basal Area (sf/ac)	<b>SIZE CLASS OF TREES &gt; 20' HEIGHT WITHIN SAMPLE PLOT</b>						
115							
Tree Species	# of Trees 2"-5.9" dbh	# of Trees 6"-11.9" dbh	# of Trees 12"-19.9" dbh	# of Trees 20"-29.9" dbh	# of Trees >30" dbh	Total	
Crown Position	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.	Dom CoD Oth.		
American Beech <i>Fagus Grandfolia</i>		2	1			3	
N. Red Oak <i>Quercus rubra</i>				1		1	
White Oak <i>Quercus alba</i>		1		2		3	
Black Gum <i>Nyssa sylvatica</i>			3			3	
Red Maple <i>Acer rubrum</i>		1	2			3	
						0	
						0	
						0	
						0	
<b>Tot. trees/size class</b>	0	4	6	3	0	13	
<b>#/size standing snags</b>	1	2	1			4	
<b>List of Common Understory Species 3'-20'</b>		<b>% of Canopy Closure</b>				<b>% Invasive Cover per Plot (all layers)</b>	
American Holly		C	N	E	S	W	Total
American Beech		Y	Y	Y	Y	Y	100%
		<b>% of Understory Cover</b>				<b>Inv. Spp. List</b>	
		C	N	E	S	W	Total
		N	Y	Y	Y	Y	80%
<b>List of Herbaceous Species 0'-3'</b>		<b>% of Herbaceous Cover</b>				<b>Plot Successional Stage</b>	
Greenbriar		C	N	E	S	W	Total
Lowbush Blueberry		N	N	Y	Y	N	60%
American Beech							
<b>COMMENTS</b>							
Study conducted outside growing season Heavy deer browse							
EnviroProjects ©		BAF 10 Tally	8	WO #:	20230304	Sheet	4 of 4
<b>Forest Sampling Data Worksheet</b>					<b>Adapted Figure 2:10</b>		

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**Saint Mary's RAC  
Forest Stand Delineation**

EP#: 20230304

FSD Jur. authority: **St. Mary's County**

Specimen Tree Standard  
30 " dbh

**Specimen and Significant Tree Study Table**

	Label	Size	Species	Common	Condition	Stand	Note
1	50	30	<i>Quercus alba</i>	White Oak	Good	A	poison ivy
2	51	32	<i>Quercus alba</i>	White Oak	Good	A	split @ +8'
3	52	31.5	<i>Quercus alba</i>	White Oak	Good	A	split @ +8'
4	53	33	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
5	54	32	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
6	55	30	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
7	56	37	<i>Liriodendron tulipifera</i>	Tulip Poplar	Good	A	
8	57	30	<i>Quercus alba</i>	White Oak	Good	A	
9	58	40	<i>Quercus alba</i>	White Oak	Good	A	



Site Name: **Saint Mary's RAC**

**Forest Stand Priority: Stand Structure and Condition Worksheet**

Forest Structure Rating Scale	Range
Priority Forest Structure	15-21
Good Forest Structure	7-14
Poor Forest Structure	0-6

**STAND: A**

**STAND: N/A**

**STAND SCORE: 16** of 21

**STAND SCORE: 0** of 21

1. Percent canopy closure		SCORE
70-100%	3	<b>3</b>
40-69%	2	
10-39%	1	
0-9%	0	
2. # Understory species (<20' tall)/plot		
15 or more	3	<b>1</b>
11-14	2	
5-10	1	
0-4	0	
3. #. of tree species =/+6" DBH /plot		
6 or more	3	<b>3</b>
4-5	2	
2-3	1	
0-1	0	
4. Size class of dominant trees		
Greater than 20"	3	<b>3</b>
6-19.9"	2	
3-5.9"	1	
Less than 3"	0	
5.% herbaceous and shrub ground cover (under 3')		
75-100%	3	<b>2</b>
25-74%	2	
5-24%	1	
0-4%	0	
6. Invasive species coverage (%)		
<10%	3	<b>3</b>
11%-15%	2	
16%-24%	1	
>/=25%	0	
7. Average # standing snags /plot		
0-1	3	<b>1</b>
2	2	
3-5	1	
5 or more	0	

1. Percent canopy closure		SCORE
70-100%	3	0
40-69%	2	
10-39%	1	
0-9%	0	
2. # Understory species (<20' tall)/plot		
15 or more	3	0
11-14	2	
5-10	1	
0-4	0	
3. #. of tree species =/+6" DBH /plot		
6 or more	3	0
4-5	2	
2-3	1	
0-1	0	
4. Size class of dominant trees		
Greater than 20"	3	0
6-19.9"	2	
3-5.9"	1	
Less than 3"	0	
5.% herbaceous and shrub ground cover (under 3')		SCORE
75-100%	3	0
25-74%	2	
5-24%	1	
0-4%	0	
6. Invasive species coverage (%)		
<10%	3	0
11%-15%	2	
16%-24%	1	
>/=25%	0	
7. Average # standing snags /plot		
0-1	3	0
2	2	
3-5	1	
5 or more	0	

**SAINT MARY'S: REGIONAL AGRICULTURAL CENTER  
Natural Resources Inventory & Forest Stand Delineation Report**

**APPENDIX C**

**AGENCY CORRESPONDENCE**

US Fish & Wildlife Service  
Maryland DNR, Wildlife & Heritage Service  
Maryland Historic Trust, State Historic Preservation Office



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Chesapeake Bay Ecological Services Field Office  
177 Admiral Cochrane Drive  
Annapolis, MD 21401-7307  
Phone: (410) 573-4599 Fax: (410) 266-9127

In Reply Refer To:  
Project Code: 2023-0063072  
Project Name: Saint Marys Regional Agricultural Center

March 31, 2023

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.*).

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>

**Migratory Birds:** In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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 Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List

## **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:

**Chesapeake Bay Ecological Services Field Office**

177 Admiral Cochrane Drive

Annapolis, MD 21401-7307

(410) 573-4599

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## PROJECT SUMMARY

Project Code: 2023-0063072  
Project Name: Saint Marys Regional Agricultural Center  
Project Type: Federal Grant / Loan Related  
Project Description: Local Government sponsored Cooperative Agricultural Production Processing Center

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@38.4771219,-76.7712639339372,14z>



Counties: St. Mary's County, Maryland

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## ENDANGERED SPECIES ACT SPECIES

There is a total of 1 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. Note that 1 of these species should be considered only under certain conditions.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, 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.

## INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. This species only needs to be considered under the following conditions: <ul style="list-style-type: none"> <li>▪ The monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (FAQ found here: <a href="https://www.fws.gov/savethemonarch/FAQ-Section7.html">https://www.fws.gov/savethemonarch/FAQ-Section7.html</a>).</li> </ul> Species profile: <a href="https://ecos.fws.gov/ecp/species/9743">https://ecos.fws.gov/ecp/species/9743</a>	Candidate

## CRITICAL HABITATS

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

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## **IPAC USER CONTACT INFORMATION**

Agency: County of St. Mary's  
Name: Aaron Keel  
Address: 93 Eastway  
City: Severna Park  
State: MD  
Zip: 21146  
Email: info@enviroproj.com  
Phone: 4105995335

## **LEAD AGENCY CONTACT INFORMATION**

Lead Agency: Army Corps of Engineers

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Wes Moore, Governor  
Aruna Miller, Lt. Governor  
Josh Kurtz, Secretary  
David Goshorn, Deputy Secretary

April 27, 2023

Mr. Aaron M. Keel  
EnviroProjects, LLC  
93 Eastway  
Severna Park, Maryland 21146

**RE: Environmental Review for Saint Marys Co: Rural Agricultural Cooperative, 37707 New Market Turner Road, Mechanicsville - Parcel 474, Project No: 20230304, St. Mary's County, Maryland.**

Dear Mr. Keel:

The Wildlife and Heritage Service has determined that the project site overlaps with a rare species' habitat on the northern portion of the site. The powerline right-of-way along the northern portion of the project site is known to support occurrences of White-bracted Boneset (*Eupatorium leucolepis*) and Northern Pitcher-plant (*Sarracenia purpurea*), both state-listed threatened species. There is also a record for the watchlist species Whip Nutch (*Scleria triglomerata*) in this rare species' habitat, and it is important to note that the *Sarracenia* population is an introduced population. We would encourage the applicant to focus on avoidance of impacts to the area in close proximity to the powerline right-of-way in order to help reduce the likelihood of adverse impacts to any rare, threatened or endangered species.

Please be sure to let us know if the limits of proposed disturbance or overall site boundaries change and we will provide you with an updated evaluation. Thank you for allowing us the opportunity to review this project. If you should have any further questions regarding this information, please contact me at [lori.byrne@maryland.gov](mailto:lori.byrne@maryland.gov) or at (410) 260-8573.

Sincerely,

Lori A. Byrne,  
Environmental Review Coordinator  
Wildlife and Heritage Service  
MD Dept. of Natural Resources

ER# 2023.0425.sm  
Cc: K. McCarthy, DNR

202301156

F  
CEE  
DLH

# EnviroProjects

March 20, 2023

Ms. Beth Cole  
Maryland Historical Trust  
100 Community Place  
Crownsville, MD 21032

Re: **Saint Marys Co: Rural Agricultural Cooperative**  
37707 New Market Turner Road, Mechanicsville, Md, 20659, Saint Marys Co. 48-acres  
Project No: 20230304

Dear Ms. Cole:

On behalf of the Brudis & Associates, Inc & Saint Marys County, EnviroProjects is conducting a review of sensitive environmental resources in the vicinity of the proposed Saint Marys Co: Rural Agricultural Cooperative facility, parcel 474, located at 37707 New Market Turner Road, Mechanicsville, Md, 20659, Saint Marys County, 48-acres. The project is mapped on the Charlotte Hall, MD, 7.5-minute topographic quadrangle map. A copy USGS map with the Study Area boundary identified is attached for your review.

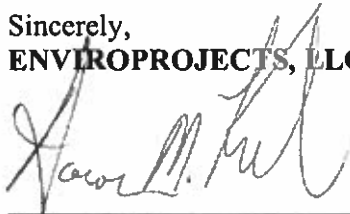
Maryland GIS MEDUSA databases shows no Historic or Cultural records on-site.

**A more detailed Conceptual Site Development Plan is available, upon request.**

We are requesting any information you may have regarding sensitive historic structures, archeological resources, or culturally significant sites that may be protection under Section 106 of the National Historic Preservation Act within the project area.

Please respond to the address below or email [akeel@EnviroProj.com](mailto:akeel@EnviroProj.com). Thank you for your assistance in this matter.

Sincerely,  
**ENVIROPROJECTS, LLC**



Aaron M. Keel, AICP, Principal

The Maryland Historical Trust has determined that there are no historic properties affected by this undertaking.

*Dixie Henry* Date 4/16/2023

Enclosure: USGS topographic map with study boundaries

cc: Dan Tice, BAI

C:\ENVIROPROJECTS\2023\20230304-BAI-SMcoRAC\Correspondence\LTR01b MHT-SIIPOTrilogy SM-RAC.doc\

DLH  
4/16/23  
(16)

**SAINT MARY'S: REGIONAL AGRICULTURAL CENTER  
Natural Resources Inventory & Forest Stand Delineation Report**

**APPENDIX D**

**FOREST STAND DELINEATION PLAN**

FSD NOTES

1. WETLANDS AND WATERS OF THE US ON SITE DELINEATED BY ENVIROPROJECTS, REFER TO WATER OF THE US WETLAND DELINEATION REPORT, APRIL 28, 2023.
2. NO HISTORIC SITES OR CULTURAL RESOURCES ARE AFFECTED, PER MHT-SHPO CORRESPONDENCE, APRIL 10, 2023, SEE NRI/ FSD REPORT.
3. SPECIMEN TREES AND FOREST STANDS ON-SITE DELINEATED BY ENVIROPROJECTS, LLC IN MARCH 2023, REFER TO NATURAL RESOURCES INVENTORY/ FOREST STAND DELINEATION REPORT.
4. NO CRITICAL HABITATS OR PROTECTED SPECIES ARE LOCATED ON-SITE, PER USFWS & DNR-WHS CORRESPONDENCE, APRIL 27, 2023. DNR INDICATES PROTECTED SPECIES ARE LOCATED NEARBY, OFF-SITE IN THE NORTHERN POWERLINE. SEE NRI/FSD REPORT.
5. NO FEMA 100-YEAR FLOODPLAINS ARE LOCATED ON-SITE; PER FEMA FIRM PANEL 24037C0057E.
- 6.

STAND NARRATIVE:

FOREST STAND A (FS-A) IS A 40.9-ACRE, MID-SUCCESSIONAL STAND, DOMINATED BY WHITE OAK (QUERCUS ALBA) WITH AMERICAN HOLLY, RED MAPLE, AMERICAN BEECH, TULIP POPLAR BLACK GUM, SWEETGUM, BLACK OAK, AND NORTHERN RED OAK IN THE CANOPY. FS-A CONTAINS STEEP SLOPES. FS-A IS CONTIGUOUS TO A RIPARIAN FOREST CORRIDOR AND IS MAPPED FID HABITAT. FS-A EXHIBITS MODERATE DIVERSITY OF TREE SPECIES, LOW INVASIVE SPECIES COVER, WITH 5 TREE SPECIES/ ACRE, BASAL AREA IS 115, AND DOMINANT SIZE CLASS OF 20 TO 29.9-INCH DBH. NINE SPECIMEN TREE OCCUR ON-SITE NEAR THE PROPOSED ACTIVITY. FS-A EXHIBITS A GOOD STRUCTURE SCORE (16 OUT OF 21) AND IS ASSIGNED A HIGH PRESERVATION PRIORITY RATING. REFER TO NRI-FSD REPORT.

SITE DATA TABLE	
GROSS TRACE ACREAGE	47.71 Ac.
FLOODPLAIN ACREAGE ON SITE	0 Ac.
FOREST COVER ON-SITE	40.9 Ac.

LEGEND

25 FT WETLAND BUFFER

WETLAND

SPECIMEN TREE WITH CRITICAL ROOT ZONE

STEEP SLOPES > 25%

STREAM LINE

EX. STORM DRAIN

EX. SEWER

EX. ELECTRICAL

EX. COMMUNICATION

EX. CONTOUR

WATERS OF THE US

50' STREAM BUFFER

PROPERTY/LOT LINE

STAND LABEL

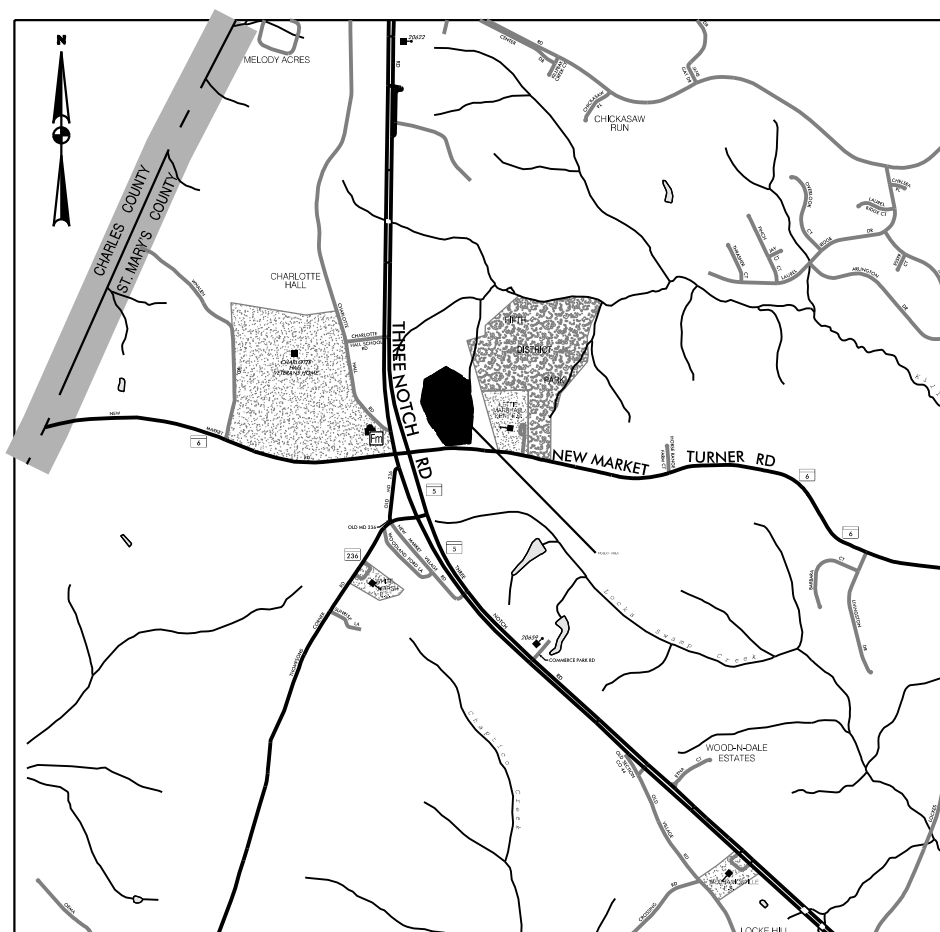
WETLAND DATAPoint

FSD DATAPoint

SOIL BOUNDARIES

SOIL SERIES

FS-A

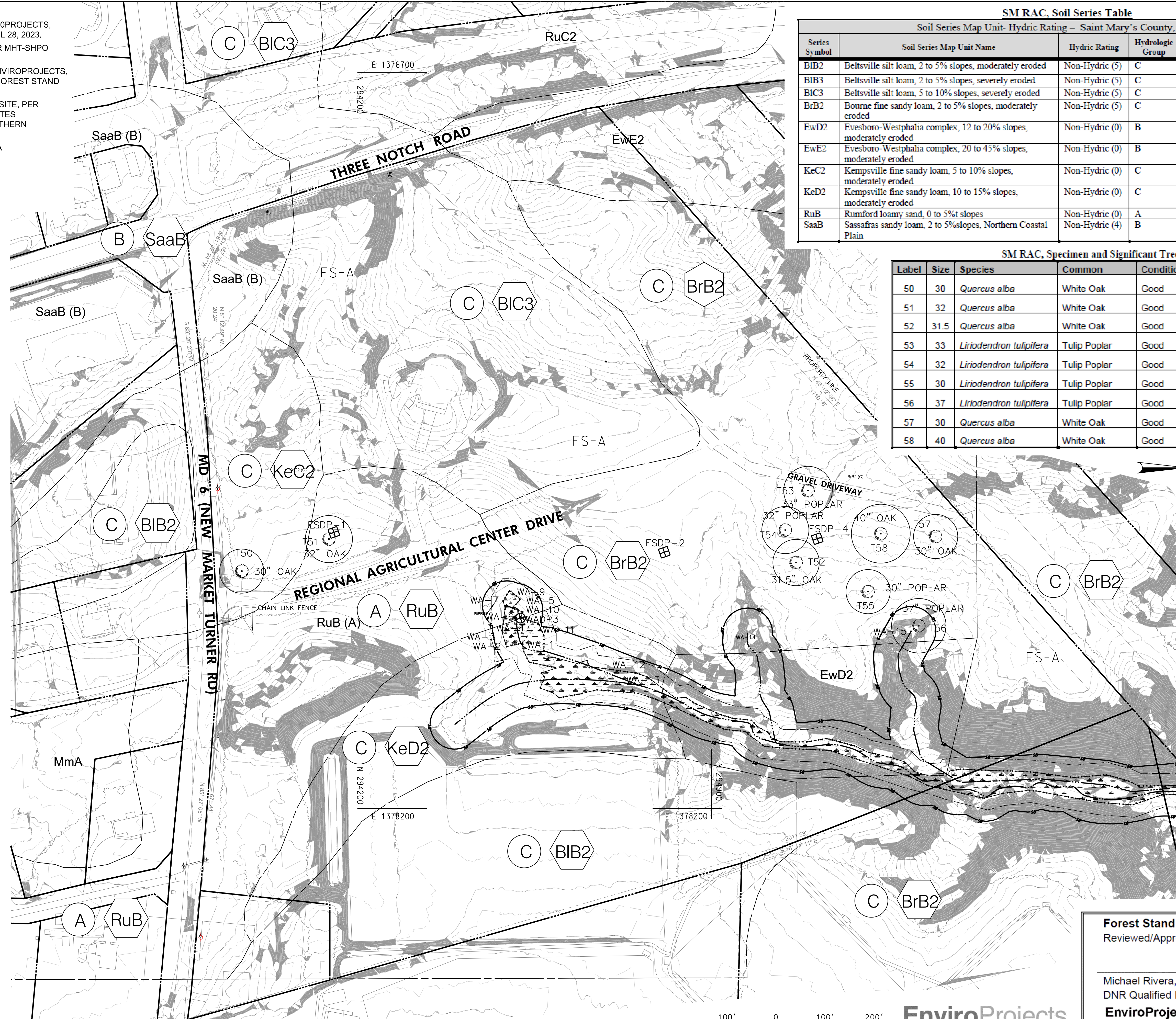


SMRAC, Soil Series Table

Soil Series Map Unit- Hydric Rating - Saint Mary's County, Maryland					
Series Symbol	Soil Series Map Unit Name	Hydric Rating	Hydrologic Group	K-Factor Whole	Drainage Class
BIB2	Beltsville silt loam, 2 to 5% slopes, moderately eroded	Non-Hydric (5)	C	0.37	Moderately Well Drained
BIB3	Beltsville silt loam, 2 to 5% slopes, severely eroded	Non-Hydric (5)	C	0.43	Moderately Well Drained
BIC3	Beltsville silt loam, 5 to 10% slopes, severely eroded	Non-Hydric (5)	C	0.43	Moderately Well Drained
BrB2	Bourne fine sandy loam, 2 to 5% slopes, moderately eroded	Non-Hydric (5)	C	0.28	Moderately Well Drained
EwD2	Evesboro-Westphalia complex, 12 to 20% slopes, moderately eroded	Non-Hydric (0)	B	0.15	Well Drained
EwE2	Evesboro-Westphalia complex, 20 to 45% slopes, moderately eroded	Non-Hydric (0)	B	0.15	Well Drained
KeC2	Kempsville fine sandy loam, 5 to 10% slopes, moderately eroded	Non-Hydric (0)	C	0.28	Well Drained
KeD2	Kempsville fine sandy loam, 10 to 15% slopes, moderately eroded	Non-Hydric (0)	C	0.28	Well Drained
RuB	Runford loamy sand, 0 to 5% slopes	Non-Hydric (0)	A	0.1	Well Drained
SaaB	Sassafras sandy loam, 2 to 5% slopes, Northern Coastal Plan	Non-Hydric (4)	B	0.2	Well Drained

SMRAC, Specimen and Significant Trees Table

Label	Size	Species	Common	Condition	Stand	Note
50	30	Quercus alba	White Oak	Good	A	poison ivy
51	32	Quercus alba	White Oak	Good	A	split @ +8'
52	31.5	Quercus alba	White Oak	Good	A	split @ +8'
53	33	Liriodendron tulipifera	Tulip Poplar	Good	A	
54	32	Liriodendron tulipifera	Tulip Poplar	Good	A	
55	30	Liriodendron tulipifera	Tulip Poplar	Good	A	
56	37	Liriodendron tulipifera	Tulip Poplar	Good	A	
57	30	Quercus alba	White Oak	Good	A	
58	40	Quercus alba	White Oak	Good	A	



**Forest Stand Delineation Plan**  
Reviewed/Approved by:

Michael Rivera, QP  
DNR Qualified Professional  
EnviroProjects, LLC

Date

**CONTRACT DOCUMENT ONLY**  
**NOT FOR CONSTRUCTION**

**BAI** BRUDIS & ASSOCIATES, INC.  
Consulting Engineers  
11000 Broken Land Parkway, Suite 450  
Columbia, Maryland 21044  
Phone 410-864-3607  
www.brudis.com

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL UNDER THE LAW OF THE STATE OF MARYLAND.  
LICENSE NUMBER 52748  
EXPIRATION DATE 06/03/2024

DESIGNED: JCS				
DRAWN: SLM				
CHECKED: PK				
DATE: 5/31/2023				
SCALE: AS SHOWN	BY	NO.	REVISION	DATE

DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION  
ST. MARY'S COUNTY, MARYLAND  
P.O BOX 508, CALIFORNIA, MARYLAND 20619

**DRAFT FOREST DELINEATION PLAN**

REGIONAL AGRICULTURAL CENTER  
CONTRACT NO. SMC-20-DPWT-112618R  
LUGM NO. :MJSP21-0225

DWG NO. FC-01  
SHEET OF 143

PLOT/REV: 5/30/2023 FILE: P:\20-001-AL-COX & Professional Services (P20-DPWT-112618R)\Working\FC-0101\1\05 - Regional Agricultural Center\Drawings\CAD\DWG\Working\FC-0101-RegionalAgriculturalCenter100.dgn