219 Meyersdale to Old Salisbury Rd

Terrestrial Habitat Assessment

July 2023 (Amended Project Description - April 2025)

US 6219, Section 050
Transportation Improvement Project
Meyersdale, PA to Old Salisbury Road, MD

pennsylvania DEPARTMENT OF TRANSPORTATION

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION

AMENDED 2025 PROJECT DESCRIPTION REVISIONS

Based on the design change from the Draft Environmental Impact Statement (2024) to the Final Environmental Impact Statement (2025) at the northern end of the project area, the description of the Common Segment Improvements has been updated and included below.

It has been confirmed that these updates fall within the current study area discussed in this report.

All impact information for this subject Appendix is discussed in Chapter 3 of the Final Environmental Impact Statement.

2 DETAILED ALTERNATIVES

2.3 Common Segment Improvements

The northern three miles in Pennsylvania all follow the same alignment, starting from the existing Meyersdale interchange. In addition to the three miles being on the same alignment, other improvements described below are being proposed. These improvements include upgrades to portions of Mason-Dixon Highway, an extension of Mountain Road from its northern terminus to Fike Hollow Road on the east side of U.S. 219, in addition a cul-de-sac of Hunsrick Road, and cul-de-sacs on the bisected Clark Road are proposed. These improvements are intended to ensure that local traffic has continued access. These improvements are included with all alternatives being considered, other than the No Build Alternative. The scope of these proposed improvements is outlined below and depicted in **amended Figure 1**. The numbers below correspond to the number on the figure, illustrating the location of the improvement. Stormwater management facilities, which would result in the need for additional right-of-way and environmental impacts have also been incorporated into the design, as shown on **amended Figure 1**.

2.3.1 Mountain Road

As a result of the Hunsrick Road Bridge removal, a new roadway would be constructed: the Mountain Road Extension. This new roadway would connect existing Mountain Road (T-824) with Fike Hollow Road (T-363) and would parallel the new U.S. 219 alternative along the eastern side. This new connector roadway would provide access from Mountain Road to U.S. Business Route 219 (SR 2047) near the Meyersdale Interchange. The proposed typical section for the Mountain Road Extension includes two 9-foot travel lanes and 2-foot outside shoulders. The design speed is anticipated to be 25 miles per hour.

Prior to the opening of the Meyersdale Bypass, Mason-Dixon Highway carried U.S. 219. After the Meyersdale Bypass opened, PennDOT transferred ownership and maintenance of Mason-Dixon Highway to Summit Township. Following completion of a new U.S. 219

alternative proposed under this study, ownership of Mason-Dixon Highway is to be transferred back to PennDOT as part of re-routed traffic patterns in the area.

2.3.2 Clark Road

Clark Road (T-353) extends west from Mountain Road (T-824) to existing U.S. 219. Due to topographical and geometric constraints, providing a grade separated crossing of a new U.S. 219 alternative proposed under this study was not practical. It was determined Clark Road should be bisected where it crosses a new alternative of U.S. 219 proposed under this study. A cul-de-sac would be placed at each end of the roadway where it intersects the U.S. 219 right-of-way. The eastern side of Clark Road would maintain access to U.S. Business 219 near the Meyersdale interchange via Mountain Road, the Mountain Road Extension, and Fike Hollow Road.

2.3.3 Hunsrick Road Extension

Improvements made to tie a new U.S. 219 alternative into existing U.S. 219 require the removal of the existing Hunsrick Road Bridge (SR 2102). Due to geometric and intersection sight distance constraints at the intersection of Hunsrick Road (T -355) and Mason-Dixon Highway (T-355), it was determined that the Hunsrick Road Bridge would not be replaced and Hunsrick Road would terminate on the east side of U.S. 219.

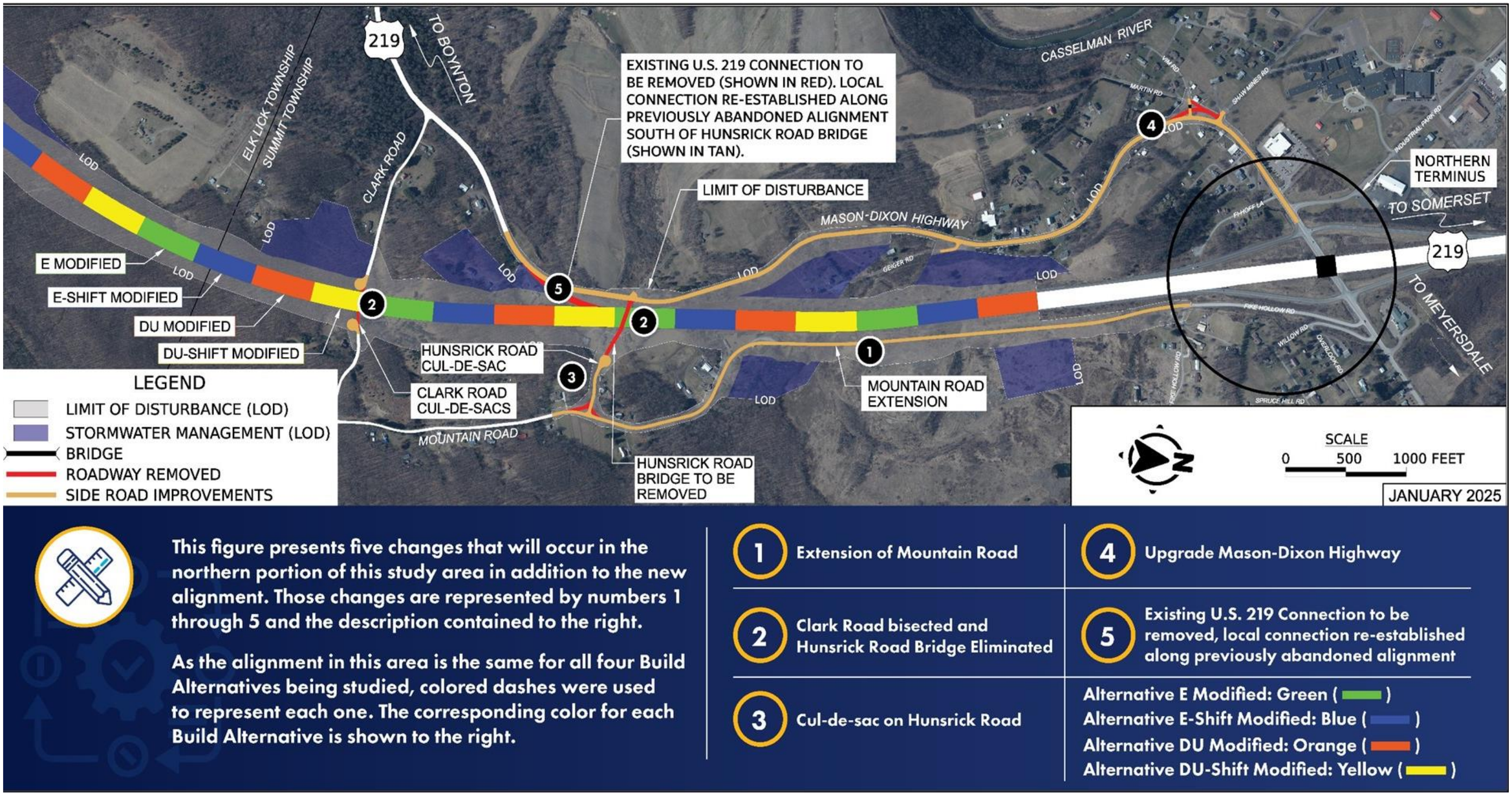
Hunsrick Road currently extends northwest from the intersection with Mountain Road to the Hunsrick Road Bridge. With the removal of the Hunsrick Road Bridge and proposed improvements associated with the Mountain Road Extension, a cul-de-sac would be placed at the northern end of Hunsrick Road. The intersection of Mountain Road with Hunsrick Road would be realigned and maintained. Access to property along Chipmonk Lane would be maintained from Mason-Dixon Highway.

2.3.4 Mason-Dixon Highway

The Mason-Dixon Highway (T-355) would be improved between Hunsrick Road and the U.S. 219 Meyersdale Interchange in accordance with PennDOT's Resurfacing, Restoration, and Rehabilitation (3R) design criteria, using a design speed transition from 55 mph to 35 mph. The upgrades are roughly 1.3-miles in length, starting near Hunsrick Road and ending at the U.S. 219 Meyersdale Interchange.

2.3.5 Existing U.S. 219 Connection to be Removed

Existing U.S. 219 would be severed, and a local connection would be re-established immediately south of the existing Hunsrick Road bridge along the previously abandoned roadway alignment. This new roadway would become Business U.S. 219.



This figure presents five changes that will occur in the northern portion of this study area in addition to the new alignment. Those changes are represented by numbers 1 through 5 and the description contained to the right.

As the alignment in this area is the same for all four Build Alternatives being studied, colored dashes were used to represent each one. The corresponding color for each Build Alternative is shown to the right.

1. Extension of Mountain Road
2. Clark Road bisected and Hunsrick Road Bridge Eliminated
3. Cul-de-sac on Hunsrick Road
4. Upgrade Mason-Dixon Highway
5. Existing U.S. 219 Connection to be removed, local connection re-established along previously abandoned alignment

Alternative E Modified: Green ( )
Alternative E-Shift Modified: Blue ( )
Alternative DU Modified: Orange ( )
Alternative DU-Shift Modified: Yellow ( )

Amended Figure 1: Additional Improvements in Northern Portion of Study Area

Table of Contents

1.0 INTRODUCTION

1.1 Project History

The "US 219, I-68 (Maryland) to Somerset, Pennsylvania Needs Analysis", prepared by the Pennsylvania Department of Transportation (PennDOT) in 1999, identified two projects with independent utility and logical termini on US 219. These projects were: US 219, Section 019 (currently Section 050) (from I-68 in Maryland to the southern terminus of the Meyersdale Bypass in Pennsylvania) and US 219, Section 020 (from the northern terminus of the Meyersdale Bypass to Somerset, Pennsylvania).

Preliminary engineering and work towards a Draft Environmental Impact Statement (DEIS) for US 219, Section 019, originally began in 2001 by PennDOT and the Maryland Department of Transportation/ Maryland State Highway Administration (MDOT/SHA) but was put on hold in 2007 due to funding constraints. Since that time, PennDOT has completed construction of US 219, Section 020, Meyersdale to Somerset, which opened to traffic in 2018.

The US 219, Section 020 project involved construction of a new 11 mile, four-lane, limited access roadway extending from the northern end of the Meyersdale Bypass of US 219 (a four-lane limited access roadway) to the southern end of the existing four-lane limited access US 219, south of Somerset.

The US 219 Section 050 project was re-started in 2014 as a Planning and Environmental Linkage (PEL) study. The study was completed in July 2016 and recommended two alignments that could move forward into the National Environmental Policy Act (NEPA) process: Alignments E and E-Shift. The PEL study also identified an independent, stand-alone breakout project within these two alignments in Maryland: from I-68 to Old Salisbury Road. This 1.4 mile project was advanced, and construction was completed in 2021.

1.2 Study Area Description and Location

This project was re-started in 2020 and includes the proposed construction of an eight mile (six miles in Pennsylvania and two miles in Maryland) four-lane limited access facility on new alignment from the end of the Meyersdale Bypass in Somerset County, Pennsylvania to the newly constructed portion of US 219 in Garrett County, Maryland.

The study area extends approximately eight miles from the southern end of the Meyersdale Bypass in Somerset County, Pennsylvania south to US 40 in Garrett County, Maryland. The study area encompasses portions of Elk Lick and Summit Townships in Somerset County, Pennsylvania, and the northeastern corner of Garrett County, Maryland. The Borough of Salisbury, Pennsylvania is also located within the central portion of the study area, as shown in Appendix A: Project Location Map. The study area is mostly rural, with residential and small commercial facilities, as well as larger amounts of forested areas and farmland.

This terrestrial habitat assessment was a joint effort between RETTEW and the Markosky Engineering Group, Inc. (Markosky). Markosky performed the habitat assessment of the Pennsylvania portions of the alignment and RETTEW performed the habitat assessment of the Maryland portions, following each state's respective guidance and accepted methodologies.

1.3 Project Purpose & Need

The purpose of the US 219 Section 050 Meyersdale to Old Salisbury Road project is to complete Corridor N of the Appalachian Development Highway System (ADHS), to improve the system linkage in the region, provide safe and efficient access for motorists, and provide a transportation infrastructure to support economic development within the Appalachian Region.

The project needs identified for this project are that existing US 219 does not provide efficient mobility for trucks and freight, there are numerous roadway and geometric deficiencies present along the existing US 219 alignment, and the existing roadway infrastructure is a limiting factor in economic development opportunities in the Appalachian Region.

2.0 DETAILED ALTERNATIVES

2.1 Segment Overview

The proposed project alternatives have been divided into three segments; Segment 1, Segment 2, and Segment 3. Segment 1 is also known as Segment 1 DU-E. Segment 2 has segment options, Segment 2 DU and Segment 2 E, and Segment 3 has two segment options, Segment 3 DU-E and Segment 3 DU-E Shift. When combined, these segments make up the four alternatives under consideration. These four alternatives, along with the No Build Alternative, are being evaluated for the project. A map depicting the segments is included in Appendix B: Detailed Alternatives Mapping. A detailed drawing showing additional improvements in the northern portion of the study area is also included in Appendix B. The alternatives under consideration include:

No Build Alternative

Segment 1 DU-E + Segment 2 DU + Segment 3 DU-E

Segment 1 DU-E + Segment 2 DU + Segment 3 DU-E Shift

Segment 1 DU-E + Segment 2 E + Segment 3 DU-E

Segment 1 DU-E + Segment 2 E + Segment 3 DU-E Shift

Segment 1 DU-E, Segment 2 DU, Segment 2 E, Segment 3 DU-E, and Segment 3 DU-E Shift are each being evaluated with a consistent roadway layout, also known as a typical section. The typical section for each segment provides a four-lane divided limited access highway with 12 feet wide travel lanes, 8 feet wide inside shoulders, and 10 feet wide outside shoulders. The width of the median between the inside edges of northbound and southbound travel lanes is 60 feet. In cut sections, where excavation will be required for construction, a proposed swale is located 15 feet outside the edge of the roadway shoulder. The backslope of the swale extends for 5 feet at a 4:1 slope, then continues at a 2:1 slope, until intersecting the existing ground. In fill sections, where fill must be placed for construction, a 10:1 slope extends from the outside roadway shoulder for 6 feet, then continues at a 2:1 slope until intersecting existing ground.

2.2 No Build Alternative

The No Build Alternative involves taking no action, except routine maintenance, along US 219. The existing two-lane alignment of US 219 between Meyersdale, Pennsylvania and Garrett County, Maryland would remain. No new alignments or additional roadway would be constructed. The No Build Alternative does not meet the approved Purpose and Need for the project.

2.3 Segment 1 DU-E

Segment 1 DU-E is a three mile portion of the proposed alternative, beginning in the northern end of the study area, at the existing Meyersdale interchange. The segment

includes portions of the existing US 219 roadway and the surrounding area, including along Mountain Road and Hunsrick Road. The segment continues to the south of Hunsrick Road, where it diverges from existing US 219 and crosses Clark Road. The segment then turns slightly west, minimizing impacts to the Pennsylvania State Gamelands 231. The segment then traverses along the bottom of Meadow Mountain. Stormwater management facilities have also been incorporated into the design.

As part of this segment, portions of several local roadways will be improved. These local improvements include: Improvements to the existing US 219 roadway (Mason-Dixon Highway), Hunsrick Road Extension, Mountain Road, and Clark Road. These are proposed as part of the construction of Segment 1 DU-E. These improvements are intended to ensure that local traffic has continued access. The scope of these proposed improvements is outlined below.

2.3.1 Mason-Dixon Highway

The Mason-Dixon Highway (T-355) will be improved between Hunsrick Road and the US 219 Meyersdale Interchange in accordance with PennDOT's Resurfacing, Restoration, and Rehabilitation (3R) design criteria, using a design speed transfer from 55 MPH to 35 MPH. The improvement corridor is roughly 1.3 miles in length, starting at the south near Hunsrick Road and ending at the US 219 Meyersdale Interchange.

Prior to the opening of the Meyersdale Bypass, Mason-Dixon Highway carried US 219. After the Meyersdale Bypass opened, PennDOT transferred ownership and maintenance of Mason-Dixon Highway to Summit Township. Following completion of the new US 219 alternative, ownership of Mason-Dixon Highway is to be transferred back to PennDOT as part of re-routed traffic patterns in the area.

2.3.2 Hunsrick Road Extension

Improvements made to tie the new US 219 alternative into existing US 219 necessitates the removal of the existing Hunsrick Road Bridge (SR 2102). Due to geometric and intersection sight distance constraints at the intersection of Hunsrick Road (T-355) and Mason-Dixon Highway (T-355), it was determined not to replace the Hunsrick Road Bridge and terminate Hunsrick Road on the east side of US 219.

As a result of the Hunsrick Road Bridge removal, a new roadway will be constructed; identified as the Hunsrick Road Extension. This new roadway will connect existing Hunsrick Road with Fike Hollow Road (T-363) and generally runs parallel to the new US 219 alternative along the eastern side. This new connector roadway will provide access from Hunsrick Road to US Business Route 219 (SR 2047) near the Meyersdale Interchange.

The proposed typical section for Hunsrick Road Extension includes 2- 10 feet travel lanes and 4 feet outside shoulders. The design speed is anticipated to be 25 miles per hour.

2.3.3 Mountain Road

Mountain Road (T-824) currently extends north from the intersection with Hunsrick Road to a cul-de-sac adjacent to existing US 219. With the associated improvements of the Hunsrick Road Extension, the northern end of Mountain Road will be connected to Hunsrick Road Extension and the existing cul-de-sac will be removed. The existing intersection of Mountain Road with Hunsrick Road will be maintained.

To avoid the steep grade (14%) on the existing Mountain Road, a portion of Mountain Road is to be closed to traffic. Access to property along Mountain Road will be maintained and cul-de-sacs will be placed where the road will be closed. As noted above, the northern segment of Mountain Road will be accessible from the Hunsrick Road Extension while the southern segment of Mountain Road will be accessible from the existing intersection with Hunsrick Road.

2.3.4 Clark Road

Clark Road (T-353) extends west from Mountain Road (T-824) to existing US 219. Due to topographical and geometric constraints, providing a grade separated crossing of the new US 219 alternative was not practical. It was determined Clark Road should be bisected where it crosses the new alternative of US 219. A cul-de-sac will be placed at each end of the roadway where it intersects the US 219 right-of-way. The eastern side of Clark Road will maintain access to US Business Route 219 near the Meyersdale Interchange via Mountain Road, Hunsrick Road Extension, and Fike Hollow Road.

2.4 Segment 2 DU

Segment 2 DU turns west from Segment 1 DU-E, towards existing US 219 (Mason-Dixon Highway), and is sited between existing US 219 and Segment 2 E for about three miles. Segment 2 DU runs west across Piney Run Road and Piney Creek until it crosses Greenville Road, about 0.5 miles southeast of Salisbury Borough, and turns south. Segment 2 DU rejoins Segment 2 E at the Pennsylvania/Maryland border. From the Pennsylvania/Maryland border, Segment 2 DU and Segment 2 E continue south and west towards existing US 219. About 0.1 mile north of the Pennsylvania/Maryland border, there are preliminary plans for a PennDOT maintenance facility along Segment 2 DU, on the western side of the proposed US 219 alternative, with access to US 219 from the southbound lanes. Stormwater management facilities have also been incorporated into the design as appropriate.

2.5 Segment 2 E

After separating from Segment 1 DU-E, Segment 2 E continues southwest for approximately one mile before spanning Piney Run Road. As Segment 2 E crosses Piney Creek and Greenville Road, it continues west towards existing US 219 and Segment 2 DU for 1.3 miles. Subsequently, Segment 2 E rejoins Segment 2 DU at the Pennsylvania/Maryland border. Segment 2 E and Segment 2 DU follow approximately the same path for approximately 0.8 miles, from the Pennsylvania/Maryland border until

the beginning of Segment 3. Approximately 0.1 mile north of the Pennsylvania/Maryland border, there are preliminary plans for a PennDOT maintenance facility along Segment 2 E, along the eastern side of the proposed alternative, with access to US 219 from the northbound lanes. Stormwater management facilities have also been incorporated into the design.

2.6 Segment 3 DU-E

Segment 3 DU-E continues the proposed alternative south of the Pennsylvania/Maryland border and ties back into the newly constructed section of US 219, south of Old Salisbury Road. The Segment 3 DU-E alternative is located approximately 0.05 miles (264 feet) east of Old Salisbury Road and skirts the border of the Little Meadows Historic District.

2.7 Segment 3 DU-E Shift

Based on feedback from the public, the Team examined a shift to DU-E to move it further away from the homes along Old Salisbury Road. Segment 3 DU-E Shift is situated slightly southwest of Segment 3 DU-E. This segment ties into the newly constructed section of US 219 at the same location as Segment 3 DU-E. However, Segment 3 DU-E Shift is shifted slightly eastward, farther from Old Salisbury Road; and does encroach slightly more into the Little Meadows Historic Site.

3.0 PENNSYLVANIA METHODOLOGY

3.1 Anderson Method

A Land Use and Land Cover Classification System for Use with Remote Sensor Data (Anderson, et. al., 1976) (Anderson) was utilized to classify habitat units in the project area. The Anderson Method allows for classification to four levels of detail, Level I being the least detailed and Level IV being the most detailed. The target of this study was to classify terrestrial habitat in the study area to a Level III which is the most detailed Level with the exception of Level IV, which is a customizable Level used only if required for specific projects. The Land Use Classification types identified within the study area are shown in Table 5.1: Anderson Land Use Classifications.

This method begins with an identification of land cover types within the study area utilizing readily available aerial photography. For this study, the ESRI World Imagery aerial photography dated October 24, 2022 was used. Land cover types were classified to Level II utilizing aerial photography and a draft Anderson terrestrial habitat map was created. This map was utilized by field crews for a ground truthing. Field crews then walked the project area to confirm the Level II classifications and further classify the habitats within the study area to a Level III classification. Field work was conducted on numerous days between the spring of 2022 and spring of 2023. The results of the field investigations and land cover classifications were then used to develop final Level III Anderson mapping.

3.2 Fike Method

Terrestrial and palustrine plant communities of Pennsylvania (Fike, 1999) method was used for the second part of the terrestrial habitat assessment. Markosky environmental scientists utilized the methodologies described in this classification method to identify different plant communities within the project study area. The Fike method divides the state into 11 Ecological Regions of Pennsylvania. The project site is located within the Western Allegheny Mountains region. The differing plant communities were recorded with GPS survey technology with sub-meter accuracy and recorded on hard copy field maps. Finally, a specific habitat type appropriate for the region was assigned to each area.

3.3 Wildlife Crossing Study

The scope of this project also called for the identification of well used wildlife trails. The wildlife trail information will be used to determine the appropriate placement of wildlife highway crossing structures along the alignment. During field reconnaissance, any highly used wildlife trails, scat, etc, which were observed, were located with GPS. To better help evaluate the best potential wildlife crossing areas, only highly used wildlife trails were delineated. Additional field visits to the site also took place after prolonged snow cover which allowed for easier identification of well used trails in the winter months. These GPS points along with field notes were used to create a wildlife trail drawing (Appendix E).

4.0 MARYLAND METHODOLOGY

4.1 Regulatory Context and Methods- Terrestrial Habitat

Terrestrial habitats identified within the project alternatives include forest land, agricultural land, and urban or built-up land. Wetlands exist within the project alternatives however they are discussed in the Wetland Identification and Delineation Report.

Forest land is the most common terrestrial habitat within the project alternatives boundaries. The Code of Maryland Regulations (COMAR) defines a forest as, "a biological community dominated by trees and other woody plants covering a land area of 10,000 square feet or greater. It includes areas that have at least 100 live trees per acre with at least 50 percent of those trees having a 2-inch or greater diameter at 4.5 feet above the ground and larger, and forest areas that have been cut but not cleared (8.19.03.01)." State Funded highway construction projects that involve cutting and clearing of forest land are regulated under the Maryland Reforestation Law, a regulation that protects Maryland's forests from removal without adequate replacement. If the total area of forest cut or cleared as a result of the project equals 1 acre or more, the constructing agency shall locate an equivalent area of State owner or other publicly owned land to be reforested. Replacement of forest land cleared for highway construction must be accomplished on an acre-for-acre, one to one ratio on public lands and within two years or three growing seasons of the completion of the project.

The detailed study area for the terrestrial habitat investigation consisted of the proposed limits of disturbance for the project alternatives. Vegetative communities within the study area were identified and mapped via aerial mapping using Anderson's Land Use and Land Cover Classification System for Use with Remote Sensor Data (Anderson et al., 1976) level III rationale. Terrestrial level III land use / land cover types that qualified as wildlife habitats included deciduous forestland, evergreen forestland, herbaceous rangeland, scrub/shrub rangeland, and agricultural land. As part of the study a review of historic aerial photographs was conducted to identify any historic changes in land use / land cover. Aquatic land use / land cover types were identified during the aquatic resources investigations and included on the terrestrial mapping. Urban built-up land was identified as part of this investigation but were not considered as wildlife habitat. Field verification was conducted to verify cover types and boundaries. Detailed forest stand data was collected within each forested cover type using randomly located 1/10-acre plots, with a minimum of one plot per 4-acres of forest stand area. The dominant and co-dominant tree species within each plot were recorded, including the total number dominant and codominant by species and the total number of trees per size class. Percent canopy closure was determined using a Model A spherical densiometer and basal area was determined using a 10x prism. Common understory species, herbaceous species, percent of invasive species, and successional stage were noted. Forest stand characterization datasheets are compiled in Appendix H, and representative photographs of each land use / land cover type are compiled in Appendix I.

Specimen trees, defined as those trees having a diameter at breast height (DBH) of 30 inches or greater, or trees having 75% or more of the diameter of the current state champion tree, were identified in the field, measured using a dbh tape, and located and mapped using a Global Positioning Survey (GPS) receiver.

Rangeland and cropland cover types were characterized based on dominant species. Field datasheets are compiled in Appendix H, and representative photographs of each compartment are compiled in Appendix I.

Common species of wildlife were identified in the field by visual sightings, songs, calls, tracks, and other marks or indicators (scat, nests, cavities, etc). A list of wildlife sightings, by compartment, is provided in Appendix J.

Targeted Ecological Areas (TEAs) are lands and watersheds of high ecological values and have been identified as conservation priorities by the DNR for natural resource protection. These areas which include Green Infrastructure (GI) hubs and corridors when appropriate, represent the most ecologically valuable areas in the State: they are the "best of the best".

To identify TEAs and GI hubs and corridors Maryland's Watershed Registry (WRR) interactive mapping tool was consulted. Layers of reviewed included protected lands, priority conservation areas, nature's network, and biota.

The presence of protected lands was investigated through the Maryland iMAP ArcGIS Online for Maryland, Maryland Protected Act – Forest Conservation Easements dataset and the Maryland Department of Natural Resources (MD DNR), Maryland Environmental Resource & Land Information Network (MERLIN) online GIS system. No protected lands were identified.

4.2 Regulatory Context and Methods- Terrestrial Wildlife

Terrestrial wildlife species in Maryland are regulated under several provisions. The protection of all migratory birds is governed by the Migratory Bird Treaty Act (MBTA) (16 U.S.C. 703-712), under which it is illegal to "take, kill, possess, transport, or import migratory birds or any part, nest, or egg of such bird: unless authorized by a valid permit (16 U.S.C. 703) A list of migratory birds protected by the MBTA is included in 50 CFR 10.13, and includes most species within Maryland. However, on December 22, 2017, the Solicitor of the Department of Interior issued Solicitor's Memorandum M-37050 that declares that only activities deliberately intended to kill or take migratory birds may be subject of regulation or enforcement under the MBTA.

Although the bald eagle is no longer a listed species under the Endangered Species Act, it is still protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668-668c). The Bald and Golden Eagle Protection Act prohibits the take, possession, sale, purchase, barter, transport, export, or import of any bald or golden eagle (alive or dead), including any part, nest, or egg without a valid permit issued by the Secretary of the Interior (50 CFR 22.3). The Act prohibits disturbing any bald or golden eagle, which includes agitating or bothering "to a degree that causes, or is likely to cause, based on scientific information

available, 1) injury to an eagle, 2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or 3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior."

Forest Interior Dwelling Bird Species (FIDS) are regulated as a protected resource within the Chesapeake Bay Critical Area (Critical Area) (COMAR 27.01.09.04). Although there are no Critical Areas within or near the US 219 Corridor, and FIDS are not specifically regulated outside of the Critical Area, MD DNR encourages avoidance of impacts to FIDS habitat throughout the state. FIDS habitat includes documented FIDS breeding areas within existing riparian forests that are at least 300 feet in width and that occur adjacent to streams, wetlands, or the Chesapeake Bay shoreline, and other forest areas used as breeding areas by forest interior dwelling birds. Potential FIDS habitat was identified using GIS data obtained from Maryland's Environmental Resources and Land Information Network (MERLIN) mapping system, Living Resources layer. This layer identifies potential FIDS habitat that is the result of modeling depicting where FIDS habitat might occur based on certain criteria but has not been field tested. Following the identification and mapping of potential FIDS habitats the areas were evaluated using ArcGIS to determine if the project area contained forests of at least 50 acres in size with 10 or more acres of forest interior habitat (i.e., forest greater than 300 feet from the nearest forest edge).

A detailed wildlife habitat study was conducted by L. Robert Kimball & Associates, Inc. and McCormick Taylor, Inc. for the US 219, Section 019 (Meyersdale, Pennsylvania to I-68 in Maryland) between 2003 and 2005. Data on types of wildlife habitats and likely and observed wildlife species from this study was reviewed and verified to still be applicable to the current overall project study area. Although direct and indirect observations of wildlife were noted during the terrestrial fieldwork conducted for the current US 219 Improvement Study, no additional specific field assessment of terrestrial wildlife was completed during the current study.

5.0 FINDINGS PENNSYLVANIA

5.1 Anderson Method

The completion of the Anderson Method with the alignment determined that nineteen (19) Anderson Level III habitat types are located within the proposed alignment. A summary of the total acreage of each is provided below.

Table 5.1: Anderson Land Use Classifications

Level 1	Level II	Level III	Acreage
1. Urban or Built-up Land	11. Residential	111. Single Family Units	37.8
	14. Transportation, Communications, and Utilities	141. Highway ROW	51.3
		145. Roadway ROW	13.2
		151. Commercial Complex	1.9
	17. Other Urban or Built-up Land	171. Sediment Pond (Water Control Structure)	0.7
2. Agricultural Land	21. Cropland and Pasture	212. Pastureland	2.2
		213. Hayfield	12.9
3. Rangeland	31. Herbaceous Rangeland	312. Early Succession Old Field	46.1
	33. Mixed Rangeland	331. Moderate- Dense	17.2
		332. Grazed or Thin	40.2
4. Forest Land	41. Deciduous Forest Land	415. Mature Stage, Shrub Moderate- Dense	178.1
		416. Mature Stage, Shrub Grazed or Shrub Sparse.	141.3
	42. Evergreen Forest Land	425. Mature Stage, Shrub Moderate- Dense	11.4
	43. Mixed Forest Land	435. Mature Stage, Shrub Moderate- Dense	217.6
		436. Mature Stage, Shrub Grazed or Shrub Sparse	116.4
5. Water	51. Streams and Canals	511. Streams	11.9
7. Barren Land	75. Strip Mines, Quarries, and Gravel Pits	751. Strip Mine Total	21.7
	76. Transitional Areas	761. Fill Slope Total	1.6
NA	Wetland	Wetland	17.5
		Total	**941.1**

Mapping showing the Anderson Level III classifications is included in Appendix C.

5.2 Fike Method

The completion of the Fike Method with the alignment determined that nine (9) Fike habitat types are located within the proposed alignment. A summary of the total acreage of each is provided below.

Table 5.2: Fike Classifications

Fike Habitat Type	Acreage
Aspen/ Gray (Paper) Birch Forest	1.2
Dry Oak- Heath Forest	49.8
Dry Oak- Mixed Hardwood Forest	152.4
Hemlock- Northern Hardwood Forest	51.3
NA* (No Fike Category)	258.9
Red Maple Terrestrial Forest	190.3
Red Maple Terrestrial/ Red Oak- Mixed Hardwood Forest	69.4
Red Oak- Mixed Hardwood Forest	150.3
Wetland	17.5
Total	**941.1**

* NA indicates that no applicable Fike Habitat category is available for these areas.

Mapping showing the Fike classifications is included in Appendix D.

5.3 Wildlife Crossing Evaluation

The evaluation of potential wildlife crossings in the Pennsylvania sections revealed a widespread variety of species and concentrations throughout the study area. Wildlife use of the entire project area is evident from observation of individuals and scat as well as through the observation of wildlife trails. Deer, bear, rabbit, fox, coyote, and raccoon track were the dominant species tracks observed during field work. Large portions of the study area are open forest and the concentration of wildlife trails is sporadic in these areas. Trails appear in confining areas such as rhododendron stands, steep valleys or along field edges only to dissipate as the trails return to open forests. The location of the heaviest wildlife trails are presented on Wildlife Crossing map in Appendix E.

6.0 FINDINGS MARYLAND

6.1 Existing Conditions Terrestrial Habitat

The Maryland section of the project is located east of US 219 and north of US 40. Areas adjacent to US 219 and US 40 are dominated by residential, commercial, and institutional uses. As shown on the Anderson Terrestrial Habitat Mapping (Appendix C) the project alternatives are dominated by forests and managed agricultural fields. A review of historical aerial photographs from 1960 to 2017 revealed evidence of surface mining and logging throughout the study area from approximately 1967 through the mid-1990s. Review of the 2004, 2008, and 2013 aerial photographs showed that the study area looked much the same during those time periods as it did when fieldwork was conducted in summer of 2022 and the spring of 2023 (Appendix K).

The following non-habitat land use / land cover types were identified within the project alternatives: residential, commercial, and transportation/communication and are described below.

Residential/Commercial/Services (Anderson land cover classifications 111/151) – Residential, commercial, and service areas are located along US 219 on the southern portion of the project area. Residential areas consist of single-family homes with manicured lawns, landscape plantings, and small forest stands that do not meet the COMAR definition of a forest. One, small, commercial complex was identified on the west side of old US 219, as well as one service provider, the Cherry Grove Church of the Brethren, east of old US 219 and south of Old Salisbury Road. Residential/Commercial/ Services accounts for 3.8 acres within the detailed study area.

Transportation/Communication (Anderson land cover classification 141) – This cover type consists of the areas of old US 219, the newly constructed 4-lane US 219, and a cellular tower in the southern portion of the alternative alignments. Transportation/communication accounts for 19.9 acres within the detailed study area.

The following wildlife habitat land use / land cover types were identified within the project alternatives: agricultural cropland; herbaceous and shrub-brush rangeland; deciduous forestland, evergreen forestland, and mixed forestland and below is a brief description.

Agricultural (Anderson land cover classification 211 and 213) – Agricultural land is located throughout the study area, totals 78.6 acres and comprises approximately 43 percent of the detailed study area. In Maryland these areas consist of active farmland and current crops include soybean, corn, oats, and hayfield.

Herbaceous Rangeland (Anderson land cover classification 312) – This land cover type is located in the central portion of the Maryland study area. The area is in a transitional state between a hayfield and an old field community and is dominated by naturally occurring grasses and forbs. This cover type consists of 0.8 acres within the study area and is dominated by grasses (*Poa spp.)*, goldenrods (*Solidago spp.)*, (*Cirseum spp.*)

thistle, and Queen Anne's lace (*Daucus carota*). Herbaceous rangeland comprises less than 1 percent of the detailed study area.

Shrub-Brush Rangeland (Anderson land cover classification 331) – This land cover type is in a transitional state between and old field and a pioneer forest and is located at the southern portion of the alternatives adjacent to the newly constructed 4-lane section of US 219. This cover type consists of 1.6 acres and includes naturally occurring grasses and forbs with patches of saplings throughout the area. The common tree saplings include red maple (Acer rubrum), green ash (Fraxinus pennsylvanica), black cherry (Prunus serotina), and Eastern white pine (pinus strobus). The herbaceous layer is comprised of grasses, goldenrods, and various other species. Shrub-brush rangeland comprises less than 1 percent of the detailed study area.

Forested land represents approximately 40 percent, 74.1 acres, and is the second highest percentage of land cover within the study area. Deciduous forestland accounts for 71.5 acres, mixed forestland accounts for 0.7 acres, and evergreen forestland accounts for 1.9 acres. Thirteen distinct Anderson land use / land cover compartments were identified within the alternative alignments, nine deciduous, three evergreen, and one mixed. In addition, 28 specimen trees were identified. These trees are mostly concentrated in the northern portion of the study area. Forest cover compartments are described below and the locations of compartments and specimen trees are located in Appendix C.

Compartment 416-1 is a deciduous forest stand consisting of 43.3 acres within the project alternatives. This stand is a Sugar Maple/Red Maple/Black Cherry Association located in the northern portion of the study area. This early-mid successional forest is dominated by sugar maple (*Acer saccharum*), red maple (*Acer rubrum*), and black cherry (*Prunus* serotina) with inclusions of mockernut hickory (*Carya tomentosa*), yellow birch (*Betula alleghaniensis*), basswood (*Tilia americana*), and green ash (*Fraxinus pennsylvanica*). Canopy closure is approximately 85 percent and the dominant size class ranges from 2.5 to 20-inch DBH. The common understory species include sugar maple, red maple, spicebush (*Lindera benzoin*), and witch hazel (*Hamamelis virginiana*). Common species in the herbaceous layer include hay-scented fern (*Dennstaedtia punctiloba*), Christmas fern (*Polystichum acrostichoides*), wood nettle (*Laoprtea canadensis*), maple-leaf viburnum (*Viburnum acerifolium*), and jack-in-the-pulpit (*Arisaema triphyllum*). There was evidence of past logging and several trees have recently been girdled. The forest is in good condition and portions of this compartment are being used for maple syrup production. Invasives are minimal.

Compartment 416-2 is a deciduous forest stand consisting of 8.2 acres within the project alternatives. This stand is a Sugar Maple/Black Cherry Association and is located north of Old Salisbury Road. This early-mid successional forest is dominated by sugar maple and black cherry with inclusions of red oak (*Quercus rubra*) and cucumber tree (*Magnolia acuminata*). Canopy closure is approximately 80 percent and the dominant size class ranges from 2.5 to 20-inch DBH. The common understory species include sugar maple, striped maple (*Acer pensylvanicum*), and black cherry. Common species in the herbaceous layer include hay-scented fern, violets (*viola spp.*), zigzag goldenrod

(*Solidago flexicaulis*), sessile-leaf bellwort (*Uvularia sessilifolia*), wild yam (*Dioscorea villosa*), sedges (*Caerx spp*.), and jack-in-the-pulpit. The forest is in good condition and most of the trees are of the same size. Invasives are minimal.

Compartment 415-3 is a deciduous forest stand consisting of 13.1 acres within the project alternatives. This stand is a Sugar Maple/Black Cherry/Red Oak Association and is located east of Old Salisbury Road. This early successional forest was recently logged of oaks and cherry and is currently dominated by young sugar maple. Canopy closure is approximately 25 to 40 percent and the dominant size class ranges from 2 to 12-inch DBH. The common understory species include sugar maple, black gum (*Nyssa sylvatica*), yellow birch, and black birch (*Betula Lenta*). Common species in the herbaceous layer include intermediate wood fern (*Dryopteris intermedia*), Canada mayflower (*Maianthemum canadense*), blackberry (*Rubus spp.*), pokeweed (*Phytolacca americana*), and hay-scented fern. The forest is disturbed due to recent logging with piles of brush throughout. Invasives are minimal.

Compartment 415-5 is a deciduous forest stand consisting of 4.8 acres within the project alternatives. This stand is a Hawthorne/Black Locust Association and is located east of the new US 219 4-lane section on a hillslope. This mid-late successional forest is dominated by hawthorns and black locust with inclusions of black cherry and white ash. Canopy closure is approximately 75 to 90 percent and the dominant size class ranges from 2 to 30-inch DBH. The common understory species include Hawthorne (*Crataegus spp.*). Common species in the herbaceous layer include white snakeroot (*Ageratina altissima*), garlic mustard (*Alliaria petiolata*), goldenrod, Canada germander (*Teucrium canadense*), white aster (*Symphyotrichum ericoides*), and wild basil (*Clinopodium vulgare*). This compartment has had recent disturbance along the western edge by the building of the new 4-lane 219, however overall, the forest is in good condition with minimal invasives.

Compartment 415-6 is a deciduous forest stand consisting of 0.2 acres within the project alternatives. This stand is a Red Maple/Black Birch Association and is located at the southern portion of the alternative alignments east of the new US 219 4-lane section. This mid-late successional forest is dominated by red maple and black birch with inclusions of black cherry and green ash. Canopy closure is approximately 80 percent and the dominant size class ranges from 2 to 20-inch DBH. The common understory species include red maple, black birch, and Chinese privet (*Ligustrum sinense*) and covers approximately 50 percent of the understory. Common species in the herbaceous layer include green ash, bigleaf aster (*Eurybia macrophylla*), and multiflora rose (*Rosa multiflora*). The herbaceous layer is dense and covers approximately 90 percent of the ground. The forest is in good condition with minimal invasives.

Compartments 415-7 and 416-8 are deciduous forest stands consisting of 1.2 and 0.1 acres within the project alternatives. These stands are a Red Maple/Black Birch Association and are located at the southern portion of the alternative alignments east of the new US 219 4-lane section. This early-mid successional forests are dominated by red maple and black birch with inclusions of Hawthorne species and black cherry. Canopy

closure is approximately 77 percent and the dominant size class ranges from 2 to 20-inch DBH. The common understory species include red maple, Hawthorne species, and autumn olive (*Elaeagnus umbellate*) and covers approximately 44 percent of the understory. Common species in the herbaceous layer include Solidago species, grasses, and garlic mustard. The forest is in good condition with minimal invasives.

Compartments 416-9 and 416-10 are deciduous forest stands each consisting of 0.3 acres within the project alternatives. These stands are a Red Maple/Black Cherry Association and are located at the far eastern limits of the alternative alignments in the middle of the study area. These mid-late successional forests are dominated by red maple and black cherry with inclusions of Hawthorne species and black locust. Canopy closure ranges from 70 – 90 percent and the dominant size class ranges from 2 to 20-inch DBH. The common understory species include Hawthorne species, autumn olive, and rubus species and covers approximately 24 percent of the understory. Common species in the herbaceous layer include Solidago species, grasses, garlic mustard and stinging nettle (*Urtica dioica*). The forest is in good condition with minimal invasives.

Compartments 426-1, 426-2, and 426-3 are evergreen forest stands consisting of 0.9, 0.5, and 0.5 acres within the project alternatives. These stands are Eastern White Pine Associations and are located east of the new US 219 4-lane roadway on the north facing ridge slope. These late successional forests are dominated by eastern white pine (*Pinus* strobus) and Scots pine (*Pinus sylvestris*). Other species include black locust (*Robinia pseudoacacia*) and white ash although these areas are heavily dominated by pines. Canopy closure is approximately 80-85 percent and the dominant size class ranges from 2 to 30-inch DBH. The common understory species are minimal and include green ash, Hawthorne species, and black locust. Common species in the herbaceous layer include wood fern, spotted jewelweed (*Impatiens capensis*), green ash, goldenrod, aster, black raspberry (*Rubus occidentalis*), common burdock (*Arctium minus*), and garlic mustard. These areas had numerous standing dead trees and invasives are minimal.

Compartment 436-1 is a mixed forest stand consisting of 0.7 acres within the project alternatives. This stand is a Maple/Birch/Pine Association is located east of the new US 219 4-lane roadway on a south facing slope of the hillside. This early-mid successional forest is dominated by Scots pine, jack pine (*Pinus banksiana*), black birch, red maple, and black locust. Canopy closure is approximately 65-70 percent and the dominant size class ranges from 2 to 12-inch DBH. The common understory species include red maple, jack pine, eastern white pine, green ash, black locust, arrowwood (*Viburnum dentatum*), and black poplar (*Populus nigra*). Common species in the herbaceous layer include goldenrod, lowbush blueberry (*vaccinium angustifolium*), and aster. Herbaceous cover was between 81-100 percent. The forest is in good condition and no invasives were observed.

The table below provides a summary of the land use / land cover types within the study area.

Table 6.1: Anderson Land Use / Land Cover Type Summary

Level 1	Level II	Level III	Acreage
1. Urban or Built-up Land	11. Residential	111. Single Family Units	3.1
	14. Transportation, Communications, and Utilities	141. Highway ROW	19.9
		145. Roadway ROW	0.0
		151. Commercial Complex	0.8
	17. Other Urban or Built-up Land	171. Sediment Pond (Water Control Structure)	0.0
2. Agricultural Land	21. Cropland and Pasture	211. Cropland	47.9
		213. Hayfield	30.7
3. Rangeland	31. Herbaceous Rangeland	312. Early Succession Old Field	0.8
	33. Mixed Rangeland	331. Moderate- Dense	1.6
		332. Grazed or Thin	0.0
4. Forest Land	41. Deciduous Forest Land	415. Mature Stage, Shrub Moderate- Dense	19.4
		416. Mature Stage, Shrub Grazed or Shrub Sparse.	52.1
	42. Evergreen Forest Land	426. Mature Stage, Shrub Grazed or Shrub Sparse.	1.9
	. Mixed Forest Land	435. Mature Stage, Shrub Moderate- Dense	0.0
		436. Mature Stage, Shrub Grazed or Shrub Sparse	0.7
5. Water	51. Streams and Canals	511. Streams	1.0
7. Barren Land	75. Strip Mines, Quarries, and Gravel Pits	751. Strip Mine Total	0.0
	76. Transitional Areas	761. Fill Slope Total	0.0
NA	Wetland	Wetland	1.7
		Total	**181.5**

Specimen Trees

A total of 31 trees of specimen size were found within the study area during field reconnaissance. None of these trees are considered champion trees or are within 75 percent of the state champion tree for a given species. Specimen trees identified are summarized in Table 6.2 and located on Anderson Terrestrial Habitat Mapping located in Appendix C. A total of six different species were identified and the largest tree found was a sugar maple with a 48-inch DBH measurement. Photographs of specimen trees are located in Appendix L.

Table 6.2: Specimen Trees within the US 219 Study Alternatives

Common Name	Scientific Name	# of Specimen (≥30" DBH)	Compartment
Red Maple	Acer rubrum	4	416-1
Sugar Maple	Acer saccharum	13	416-1
Black Cherry	Prunus serotina	5	416-1
Northern Red Oak	Quercus rubra	6	111-1, 416-1
American Basswood	Tilia americana	1	416-1
Cucumber Tree	Magnolia acuminata	2	416-1
Total		31	

TEAs and GI hubs and corridors are present within the study area. As shown in Appendix L, a TEA is mapped east of existing US 219 and Old Salisbury Road. Most of this TEA is located west of existing US 219 and is associated with forested areas outside of the project study area. A GI hub is located east of existing US 219 within the project study area. This hub is associated with Meadow Run and Meadow Mountain to the east of the project area. There is also a GI corridor mapped within the project study area. This area is located east of US 219 and north of Old Salisbury Road within a deciduous forest. This corridor connects the hub to the east of the project study area with a hub west of existing US 219.

6.2 Existing Conditions Terrestrial Wildlife

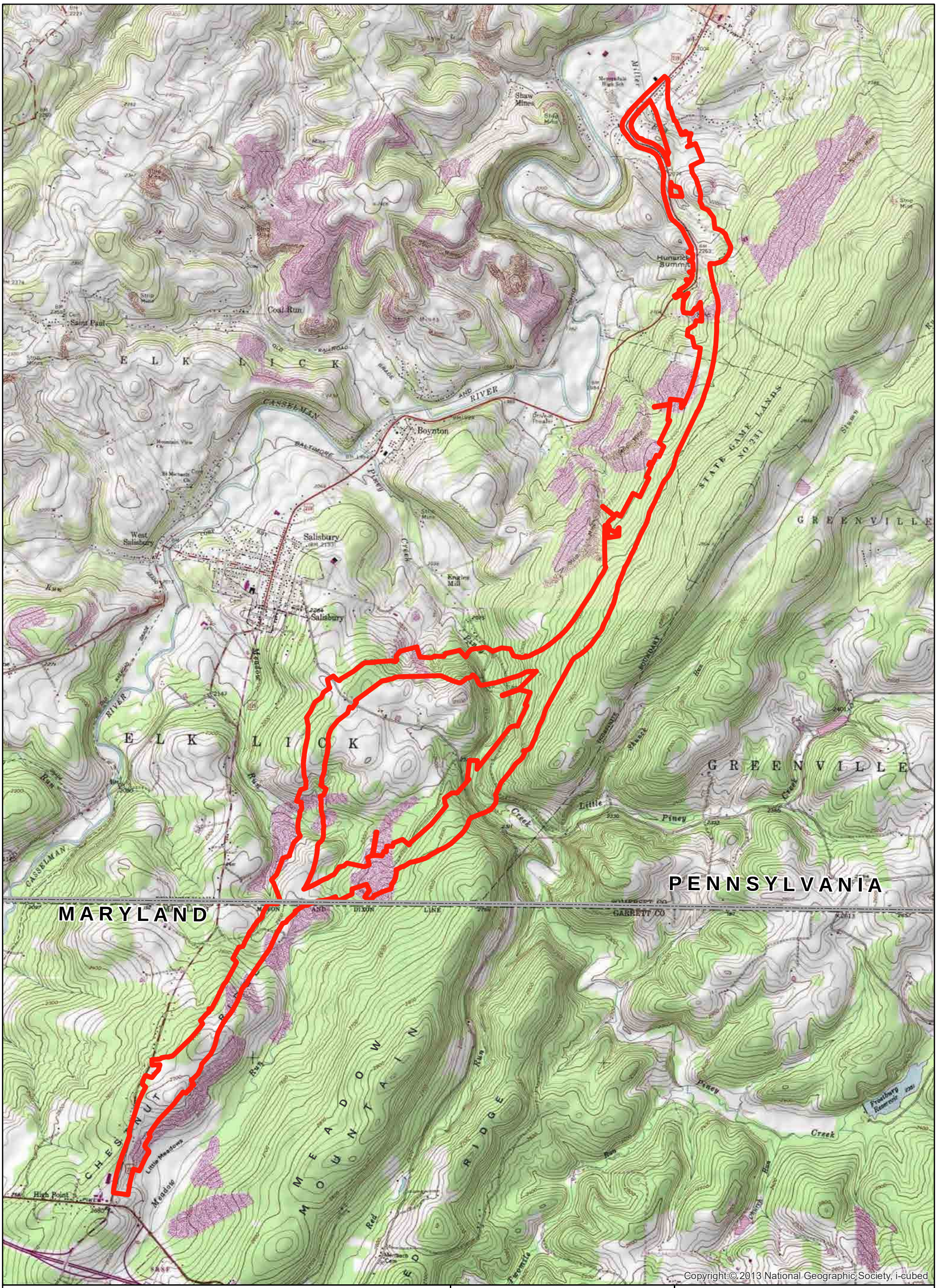
Terrestrial wildlife expected within the project study area reflect the availability of various natural and man-modified habitats. The US 219 Improvement Project Maryland study area is dominated by forests and agricultural fields; however, residential lots are located directly along US 219 where the proposed alternatives tie into existing US 219. While many of the more natural areas remain forested, all the forested habitats have been fragmented by agricultural lands. Terrestrial habitats within the project corridor have not changed considerably since the earlier field studies, and the terrestrial habitats within the US 219 Improvement Project study area are representative of the habitats described for the previous US 6219, Section 019 Project. Appendix J provides a list of observed wildlife species encountered during the US 6219, Section 019 studies.

As noted in Section 6.1 above, the forested areas range from early successional to mid-late successional and contain varying levels of disturbance. Many of these forests are surrounded by agricultural fields and provide habitat for primarily edge adapted and disturbance tolerant wildlife species.

Less disturbed and larger contiguous forests can provide habitat for FIDS. DNR recognizes 25 species of FIDS in Maryland. FIDS require larger forest patches to successfully maintain viable populations. A review of the Maryland Living Resources – Forest Interior Dwelling Species ArcGIS Online indicates that potential FIDS habitat is present within the study area. This data is the result of modeling depicting where FIDS habitat might occur based on certain criteria and has not been field tested. Using ArcGIS, a FIDS analysis for the project area was conducted by identifying interior forested areas that are 300 feet, or greater, from the nearest forest edge. This resulted in the identification of two potential areas located within compartment 416-1 (Appendix C). FIDS Area #1 is located just south of the Maryland/Pennsylvania line and the FIDS habitat consists of approximately 1.0 acre of deciduous forestland. FIDS Area #2 is located approximately 700 feet to the south and the FIDS habitat consists of approximately 8.0 acres of deciduous forestland.

APPENDIX A

PROJECT LOCATION MAP



Overall Study Area

State Boundary

N

Feet
0 1,000 2,000

Meters
0 300 600

219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX A

PROJECT LOCATION MAP

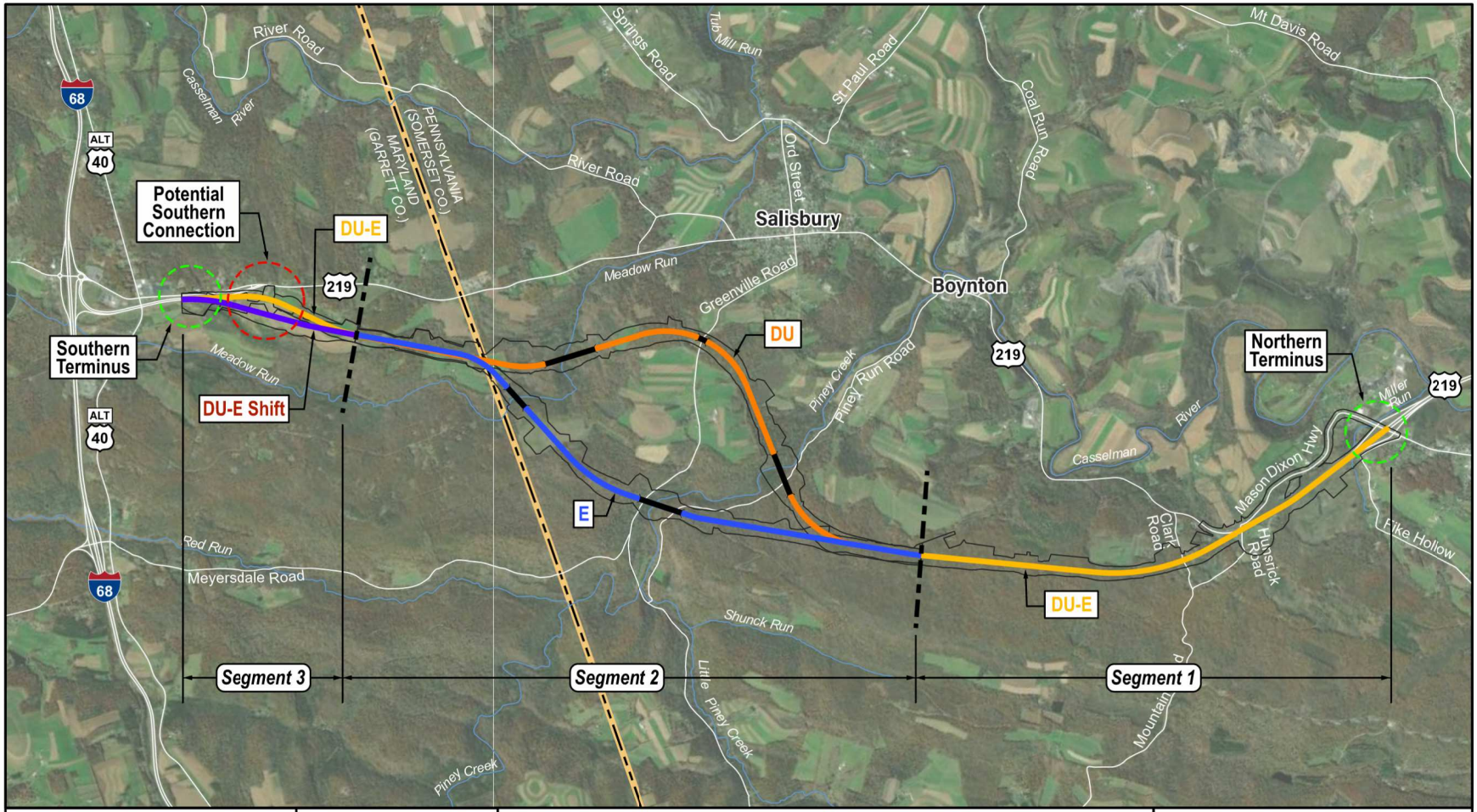
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

APPENDIX B

DETAILED ALTERNATIVES MAP



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

pennsylvania DEPARTMENT OF TRANSPORTATION

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

LEGEND

- Segment 1 - DU-E
- Segment 2 - E
- Segment 2 - DU
- Segment 3 - DU-E
- Segment 3 - DU-E Shift
- Segment Break
- Proposed Bridge
- Limit of Disturbance

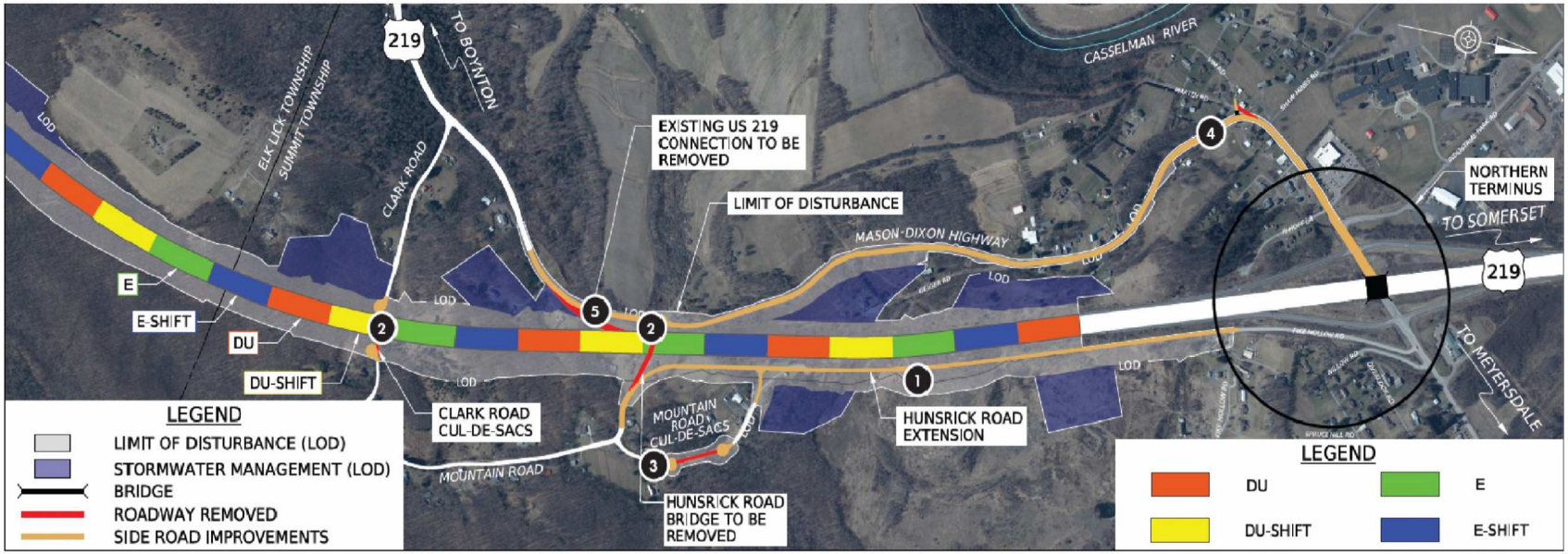
APPENDIX B1

DETAILED ALTERNATIVES MAPPING

N

Miles

0 0.2 0.4 0.8 1.2



1. Extension of Hunsrick Road
2. Clark Road bisected and Hunsrick Road Bridge Eliminated
3. Design a cul-de-sac on Mountain Road
4. Upgrade Old Mason-Dixon Highway
5. Existing US 219 Connection to be removed

219 Meyersdale to Old Salisbury Rd
TRANSPORTATION IMPROVEMENT PROJECT

pennsylvania DEPARTMENT OF TRANSPORTATION
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

This figure presents five changes that will occur in the northern portion of this study area in addition to the new alignment. Those changes are represented by numbers 1 through 5 and the description is contained above.

Because the alignment in this area is the same for all four alternatives being studied, dashes were used to represent the four alternatives. The legend identifies which color corresponds to each alternative.

APPENDIX B2

ADDITIONAL IMPROVEMENTS IN NORTHERN PORTION OF STUDY AREA

N

0 500 1000 Feet

APPENDIX C

ANDERSON TERRESTRIAL HABITAT MAPPING

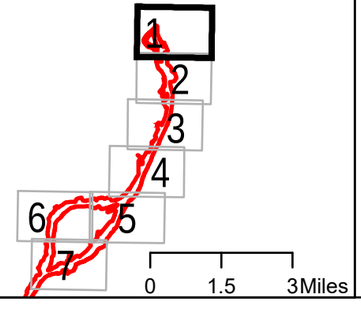
Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	425	Evergreen: mature, shrub mod - dense
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

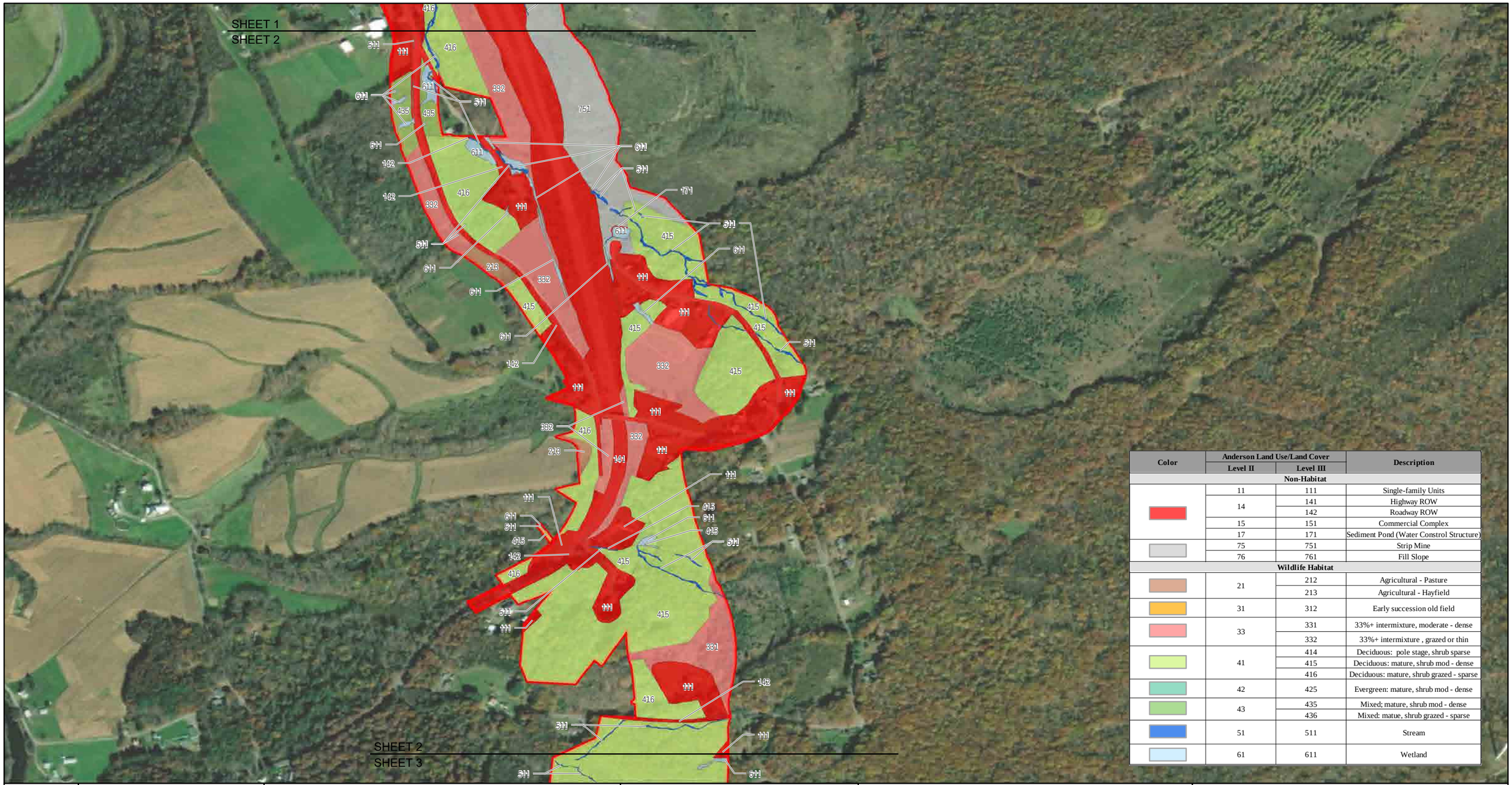
APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY



Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
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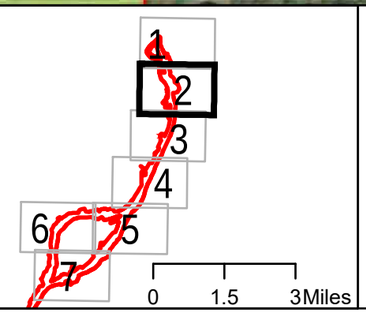
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

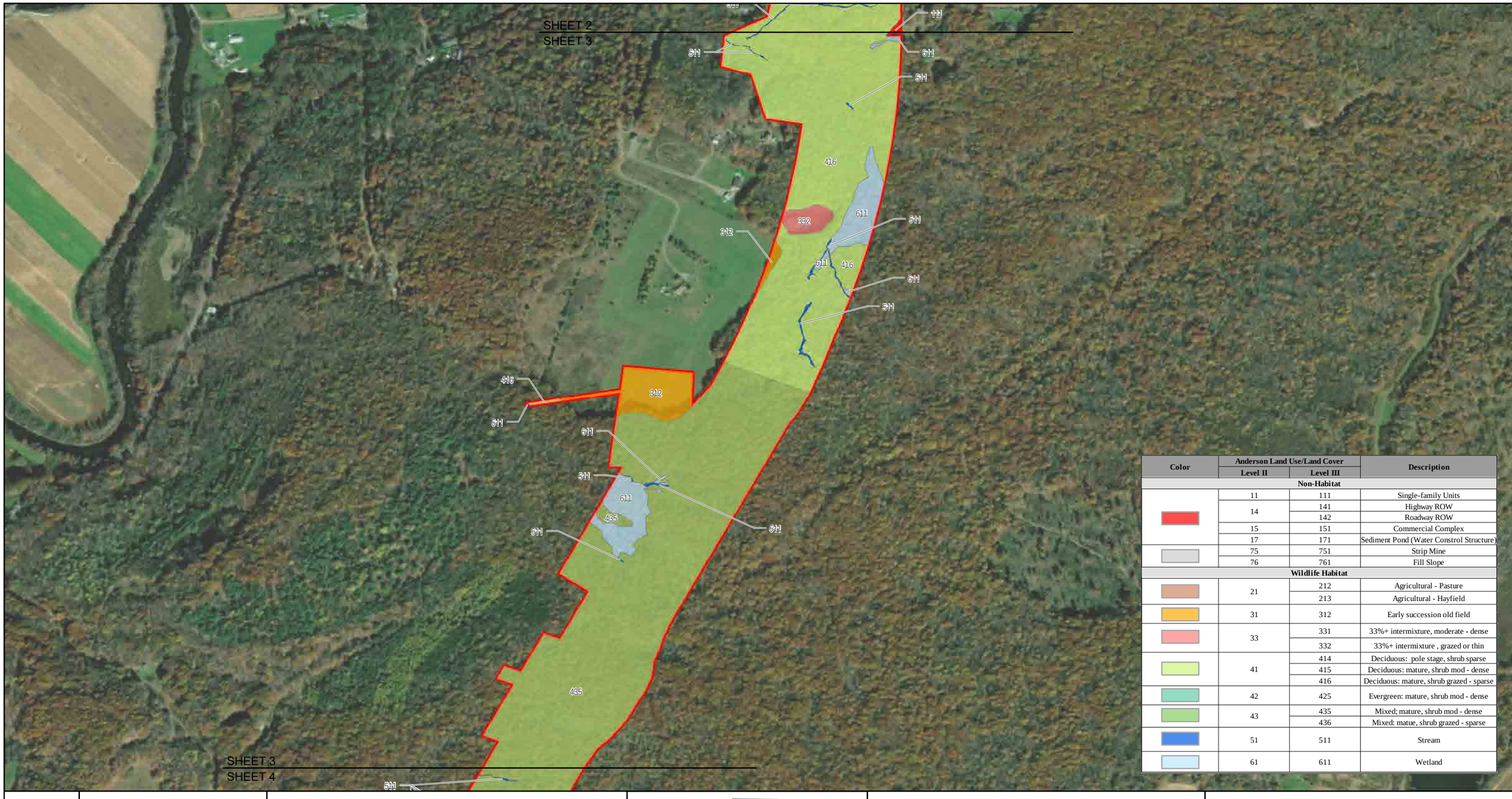
APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY



Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
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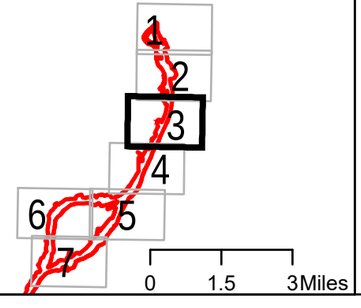
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY

SHEET 3

SHEET 4

SHEET 4

SHEET 5

Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	425	Evergreen: mature, shrub mod - dense
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area

1 2 3 4 5 6 7
0 1.5 3 Miles

219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

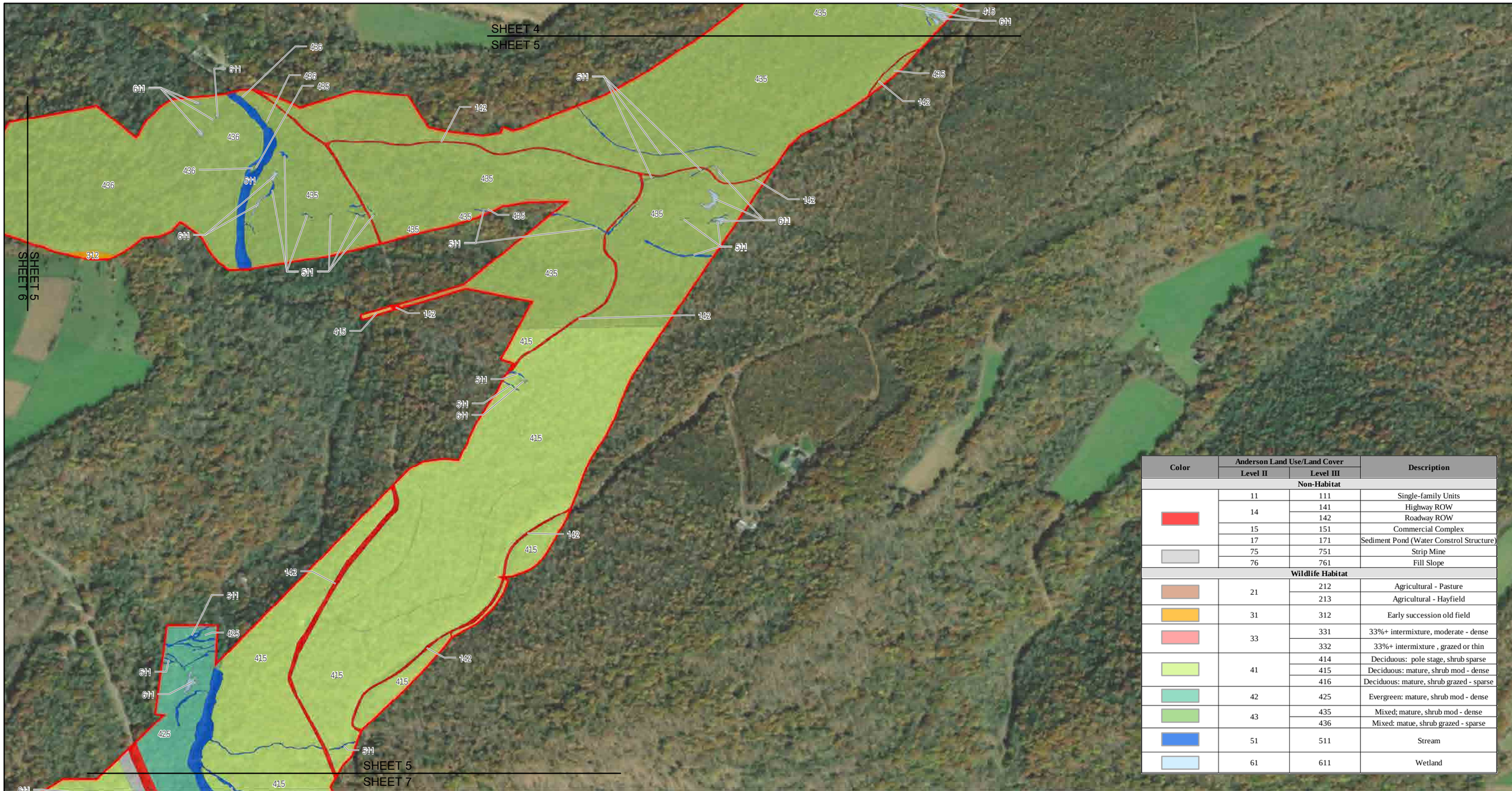
APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY



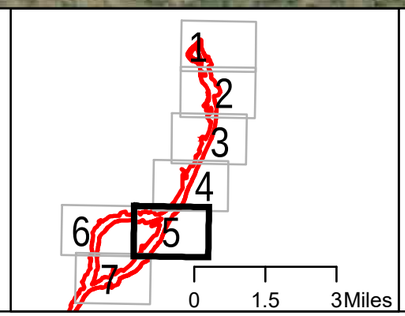
Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	425	Evergreen: mature, shrub mod - dense
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

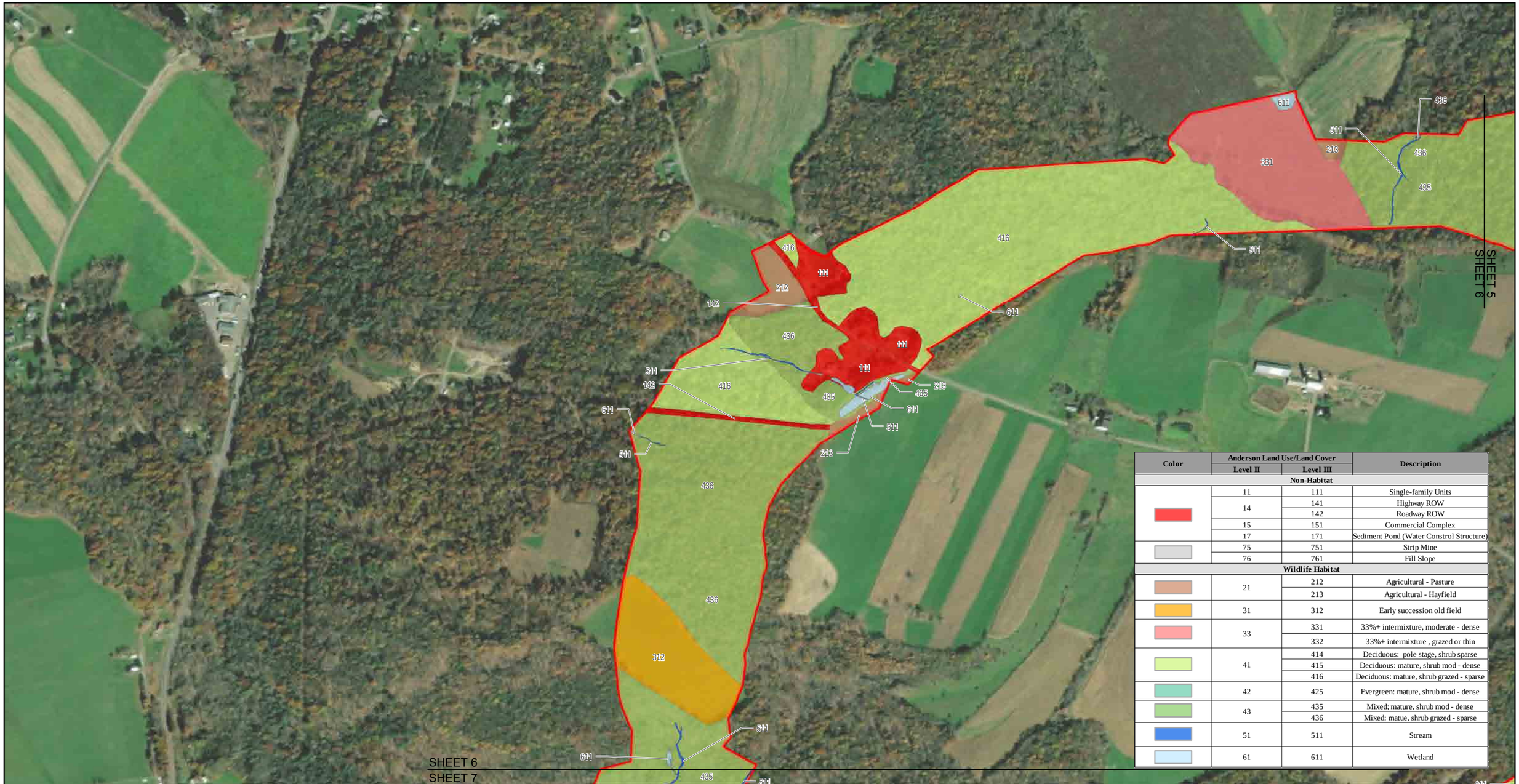
APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY



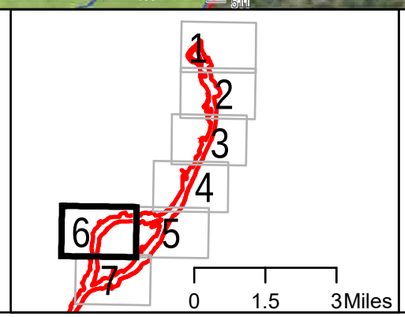
Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	425	Evergreen: mature, shrub mod - dense
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY

SHEET 6
SHEET 7

PENNSYLVANIA
MARYLAND

Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	212	Agricultural - Pasture
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	425	Evergreen: mature, shrub mod - dense
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Study Area

1 2 3 4 5 6 7
0 1.5 3Miles

219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX C
PENNSYLVANIA
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/29/2023

Source: MARKOSKY

PENNSYLVANIA

MARYLAND

SHEET 8

SHEET 9

Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
	14	141	Highway ROW
		142	Roadway ROW
	15	151	Commercial Complex
	17	171	Sediment Pond (Water Constrol Structure)
	75	751	Strip Mine
	76	761	Fill Slope
Wildlife Habitat			
	21	211	Agricultural - Cropland
		213	Agricultural - Hayfield
	31	312	Early succession old field
	33	331	33%+ intermixture, moderate - dense
		332	33%+ intermixture , grazed or thin
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	426	Evergreen: mature, shrub grazed - sparse
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

Specimen Tree
Forest Interior Dwelling Species Habitat (FID)
Study Area

0 1.5 3 Miles

219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

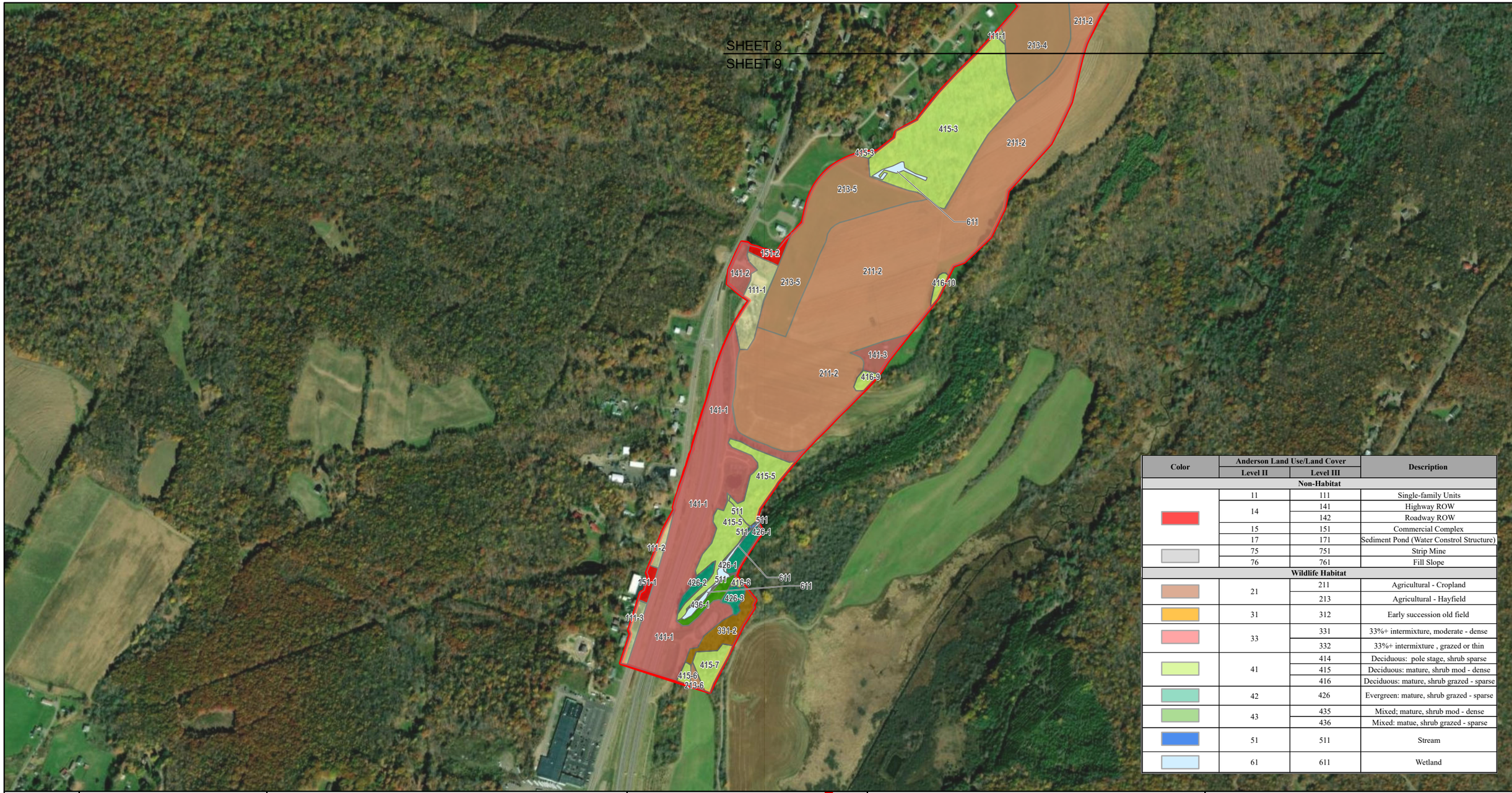
APPENDIX C
MARYLAND
ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 7/12/2023

Source: RETTEW



Color	Anderson Land Use/Land Cover		Description
	Level II	Level III	
Non-Habitat			
	11	111	Single-family Units
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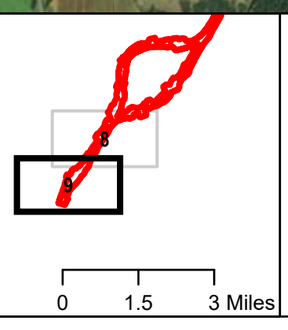
	41	414	Deciduous: pole stage, shrub sparse
		415	Deciduous: mature, shrub mod - dense
		416	Deciduous: mature, shrub grazed - sparse
	42	426	Evergreen: mature, shrub grazed - sparse
	43	435	Mixed; mature, shrub mod - dense
		436	Mixed: matue, shrub grazed - sparse
	51	511	Stream
	61	611	Wetland

N

Feet
0 500 1,000

Meters
0 150 300

- Specimen Tree
- Forest Interior Dwelling Species Habitat (FID)
- Study Area



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX C
MARYLAND ANDERSON TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 7/12/2023

Source: RETTEW

APPENDIX D

FIKE TERRESTRIAL HABITAT MAPPING

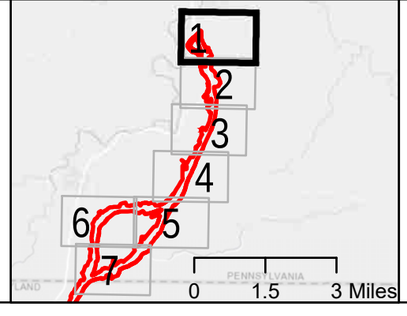
SHEET 1
SHEET 2

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Dry oak - mixed hardwood forest
- Red maple (terrestrial) forest
- Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 1
SHEET 2

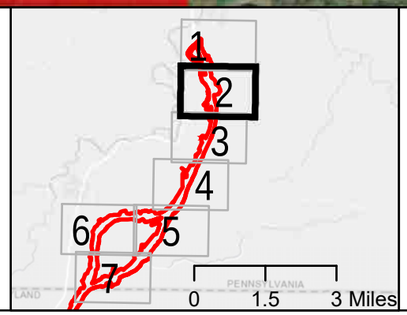
SHEET 2
SHEET 3

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Aspen / gray (paper) birch forest
- Dry oak - mixed hardwood forest
- Red maple (terrestrial) forest
- Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 2
SHEET 3

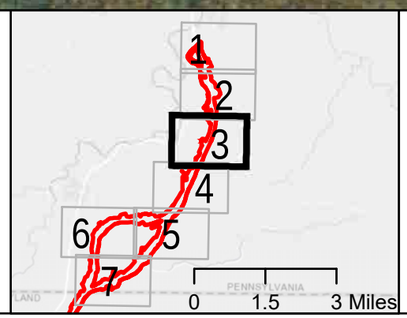
SHEET 3
SHEET 4

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Red maple (terrestrial) forest
- Red maple (terrestrial) forest / Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA
FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 3
SHEET 4

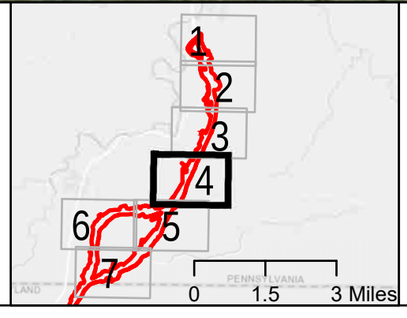
SHEET 4
SHEET 5

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Dry oak - mixed hardwood forest
- Red maple (terrestrial) forest
- Red maple (terrestrial) forest / Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 4
SHEET 5

SHEET 5
SHEET 6

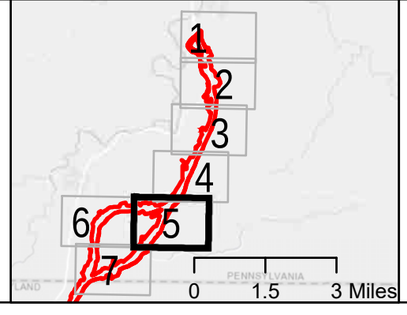
SHEET 5
SHEET 7

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Dry oak - mixed hardwood forest
- Hemlock - northern hardwood forest
- Red maple (terrestrial) forest
- Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 5
SHEET 6

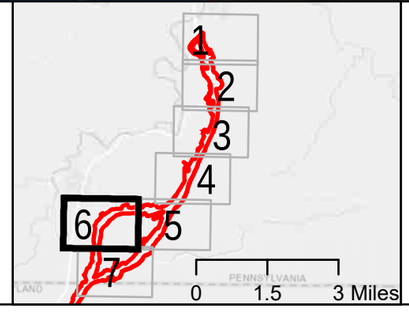
SHEET 6
SHEET 7

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Dry oak - heath forest
- Hemlock - northern hardwood forest
- Red maple (terrestrial) forest
- Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 6
SHEET 7

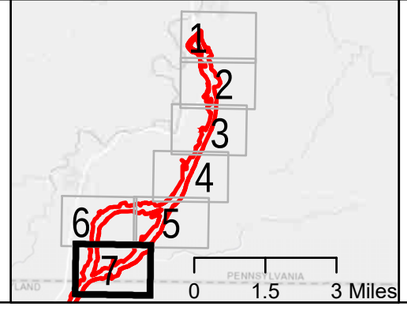
PENNSYLVANIA
MARYLAND

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Dry oak - heath forest
- Hemlock - northern hardwood forest
- Red maple (terrestrial) forest
- Red oak - mixed hardwood forest
- Wetland
- Non-applicable (non-terrestrial or palustrine habitat)



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX D
PENNSYLVANIA FIKE TERRESTRIAL HABITAT MAPPING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

APPENDIX E
WILDLIFE CROSSING

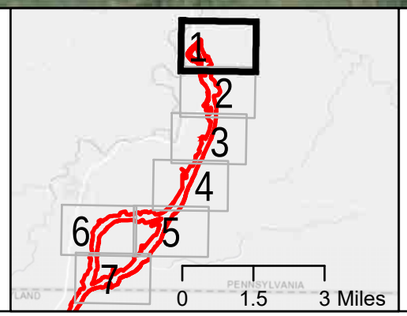
SHEET 1
SHEET 2

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Wildlife Trail
- Stream Habitat
- Wetland Habitat
- Wildlife Observation
- GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 1
SHEET 2

Wildlife trail

Trail along power line

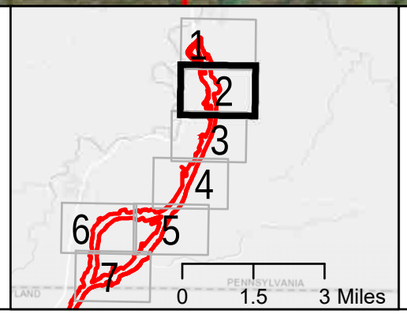
SHEET 2
SHEET 3

N

Feet
0 500 1,000

Meters
0 150 300

Study Area
Wildlife Trail
Stream Habitat
Wetland Habitat
Wildlife Observation
GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

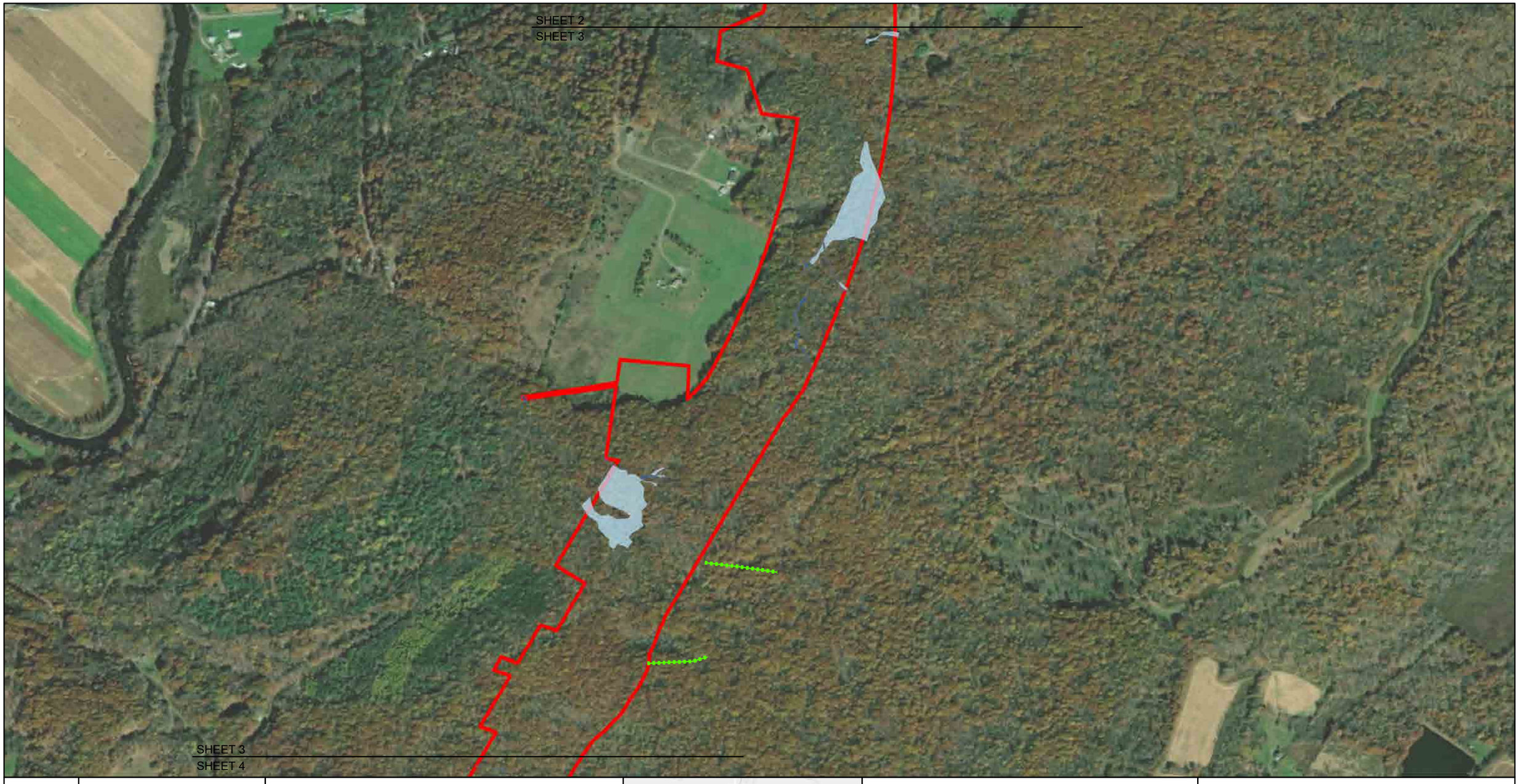
APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

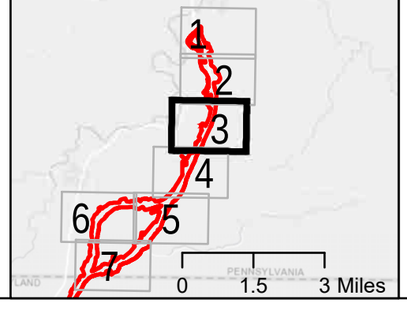


N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Wildlife Trail
- Stream Habitat
- Wetland Habitat
- Wildlife Observation
- GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 3
SHEET 4

Intermittent deer trails throughout dense Mountain Laurel/ Rhododendron understory and boulder field area

SHEET 4
SHEET 5

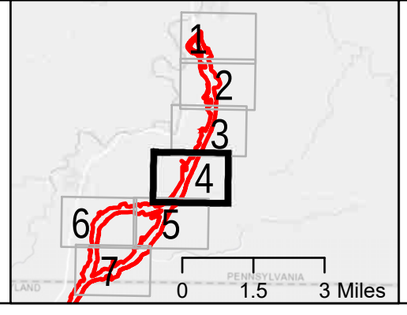
fe trail along tram road

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Wildlife Trail
- Stream Habitat
- Wetland Habitat
- Wildlife Observation
- GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 4
SHEET 5

Wildlife trail along tram road

Wildlife trail to tram road

Wildlife trail along tram road

Wildlife trail to tram road

SHEET 5
SHEET 6

Wildlife trail along tram road

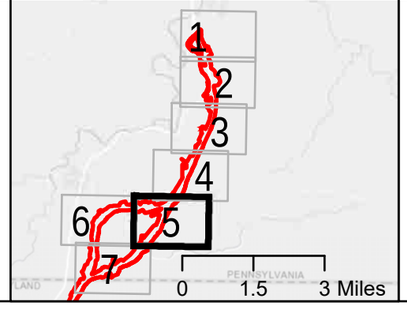
SHEET 5
SHEET 7

N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Wildlife Trail
- Stream Habitat
- Wetland Habitat
- Wildlife Observation
- GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

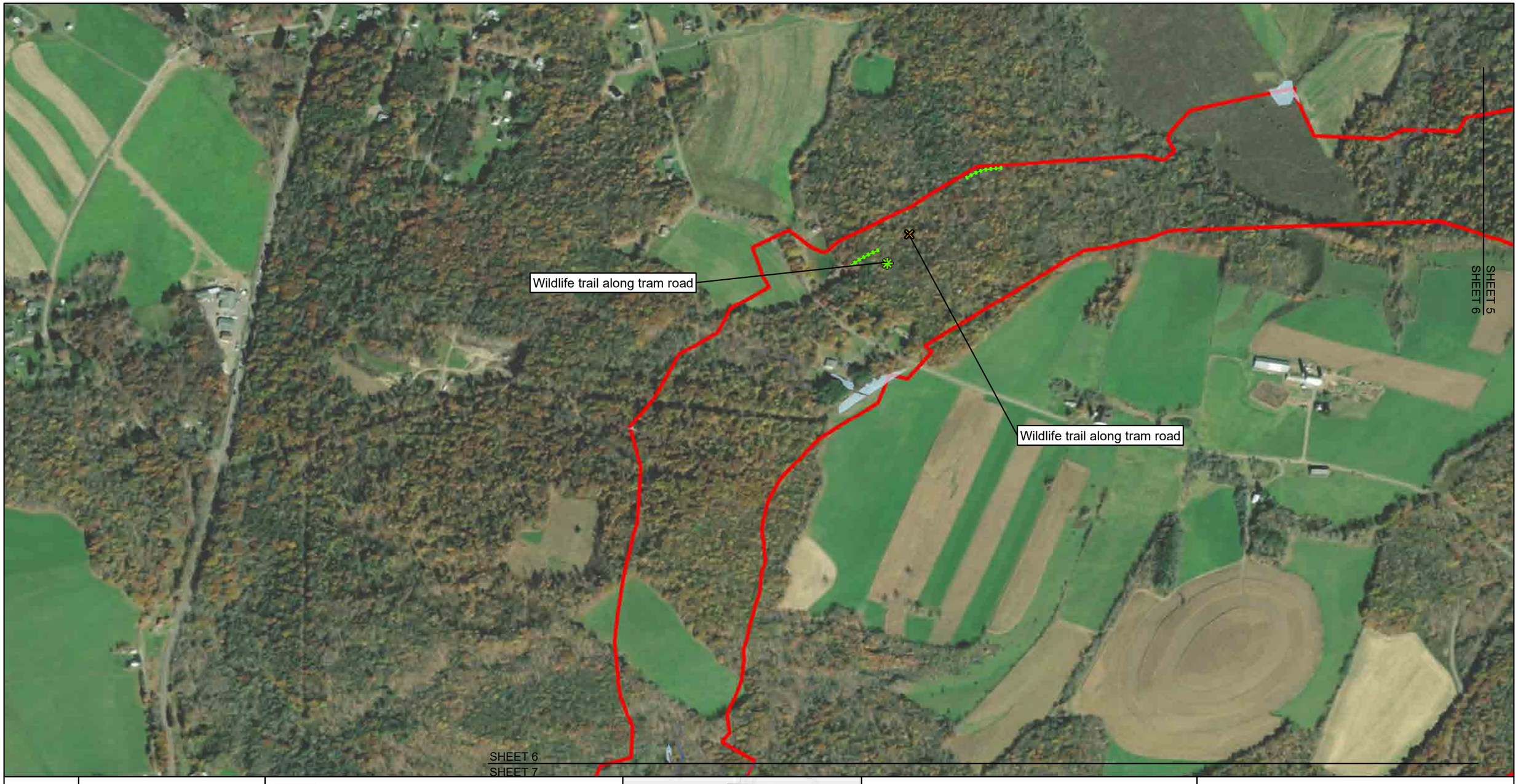
APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

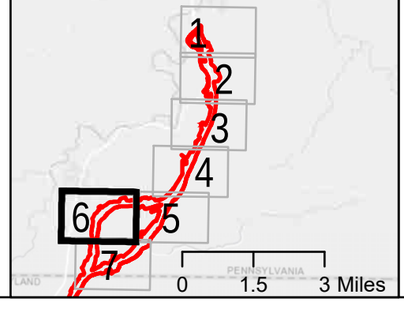


N

Feet
0 500 1,000

Meters
0 150 300

- Study Area
- Wildlife Trail
- Stream Habitat
- Wetland Habitat
- Wildlife Observation
- GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

APPENDIX E
PENNSYLVANIA WILDLIFE CROSSING

MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 6
SHEET 7

Beaver Dam

PENNSYLVANIA

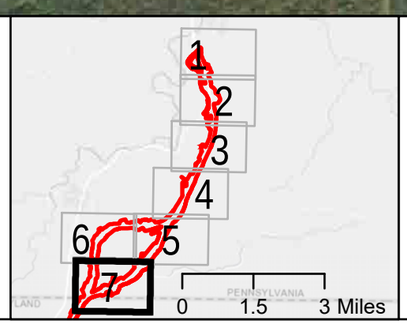
MARYLAND

N

Feet
0 500 1,000

Meters
0 150 300

Study Area
Wildlife Trail
Stream Habitat
Wetland Habitat
Wildlife Observation
GPS point field note



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION
IMPROVEMENT PROJECT

APPENDIX E
PENNSYLVANIA
WILDLIFE CROSSING

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

APPENDIX F
PHOTOS

Photo 1: Field (no Fike Habitat), Facing west (06.23.2023)

Photo 2: Beaver Dam, Facing east (06.23.2023)

Photo 3: Heavily Used Crossing, Facing east (06.23.2023)

Photo 4: Dry Oak Heath Forest, Facing west (09.15.2022)

Photo 5: Dry Oak Heath Forest, Facing north (09.15.2022)

Photo 6: Red Maple Forest, Facing north (06.23.2023)

Photo 7: No Fike habitat, Facing west (06.23.2023)

Photo 8: Red Oak Mixed Hardwood , Facing north (09.16.2022)

Photo 9: Dry Oak Heath Forest, Facing north (09.16.2022)

Photo 10: Red Maple Terrestrial Forest, Facing north (09.16.2022)

Photo 11: Red Oak Mixed Hardwood Forest, Facing east (09.16.2022)

Photo 12: Red Maple Terrestrial Forest, Facing east (09.16.2022)

Photo 13: Red Oak Mixed Hardwood Habitat, Facing west (09.16.2022)

Photo 14: Red Oak Mixed Hardwood Habitat, Facing east (06.23.2023)

Photo 15: Dry Oak Mixed Hardwood Forest, Facing north (07.20.2022)

Photo 16: Dry Oak Mixed Hardwood Forest, Facing northeast (07.20.2022)

Photo 17: Red Maple/Red Oak Mixed Forest, Facing north (06.09.2022)

Photo 18: Red Maple Forest, Facing north (07.20.2022)

Photo 19: Red Maple Forest, Facing south (07.20.2022)

Photo 20: No Fike habitat, Facing north (06.23.2023)

Photo 21: No Fike habitat, Facing north (07.20.2022)

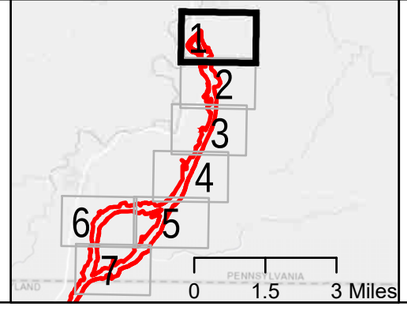
SHEET 1
SHEET 2

N

Feet
0 500 1,000

Meters
0 150 300

Study Area
Photo Location



219 Meyersdale to Old Salisbury Rd

TRANSPORTATION IMPROVEMENT PROJECT

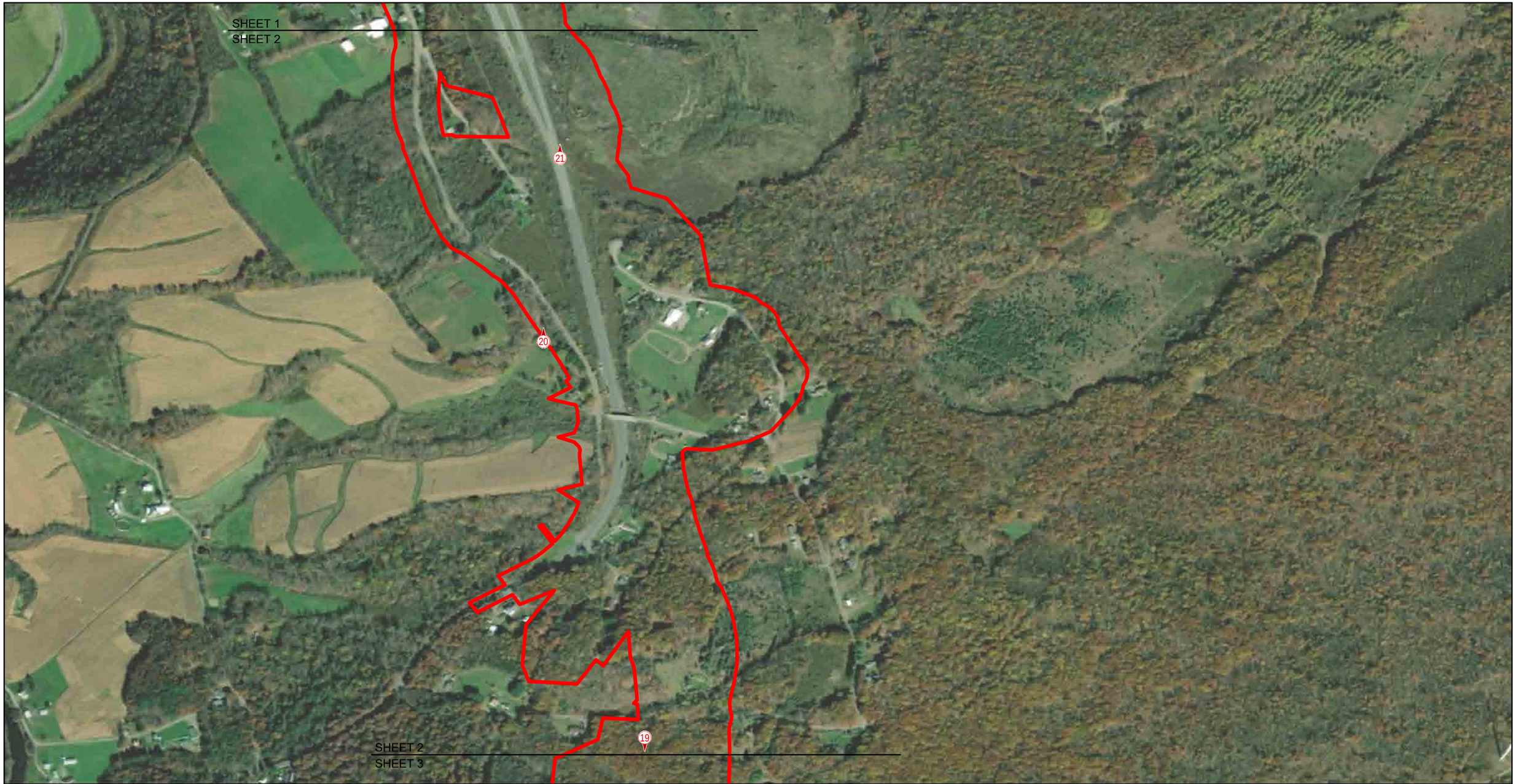
APPENDIX G
PENNSYLVANIA PHOTOS

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY



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Feet
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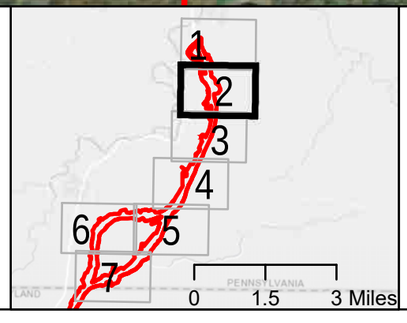
Meters
0 150 300

Study Area
Photo Location



219 Meyersdale to Old Salisbury Rd

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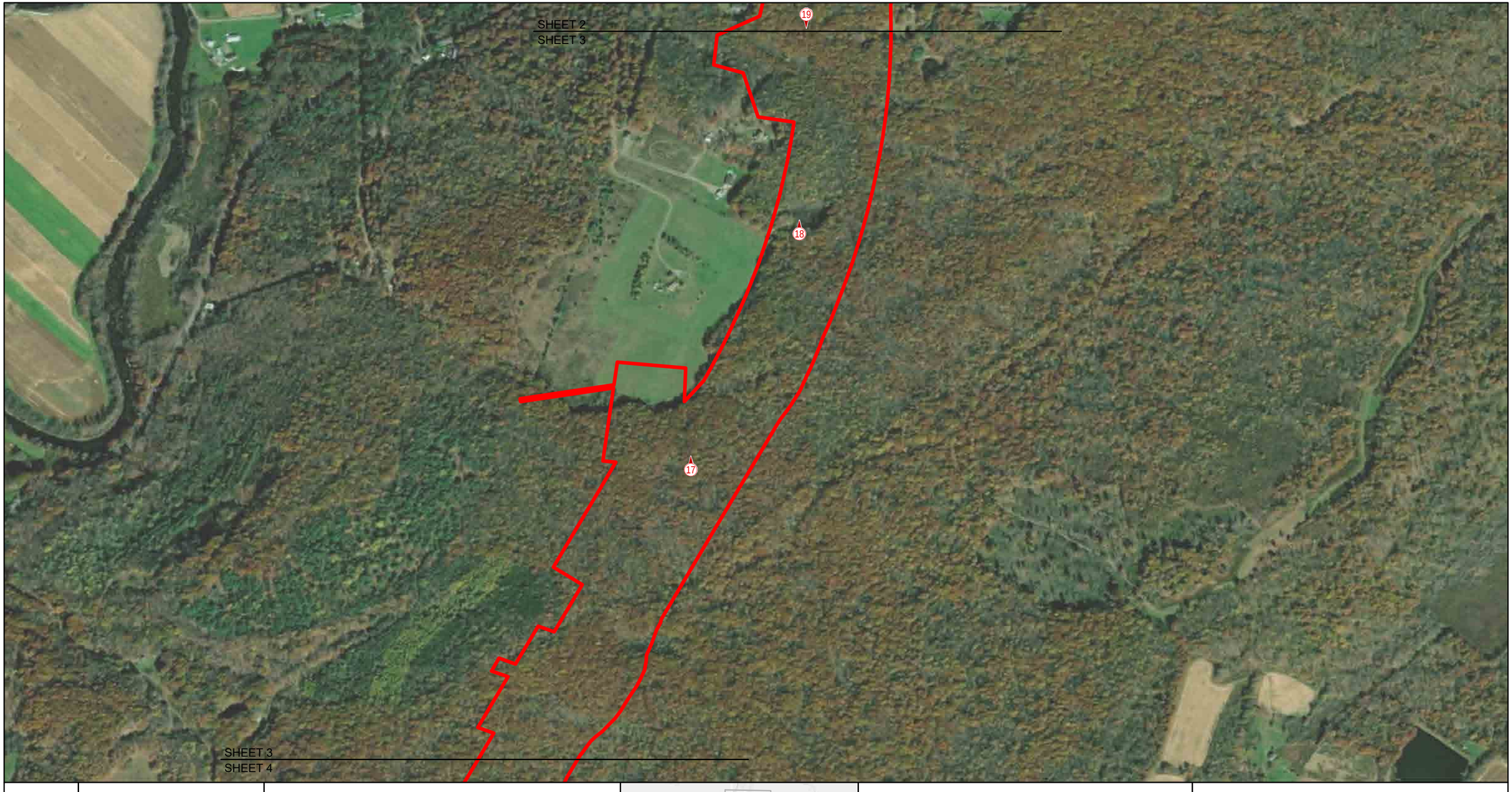
PENNSYLVANIA PHOTOS

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY



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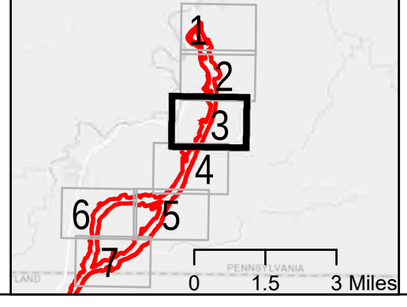
Study Area
Photo Location



219 Meyersdale to Old Salisbury Rd

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MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 3
SHEET 4

16

15

SHEET 4
SHEET 5

N

Feet
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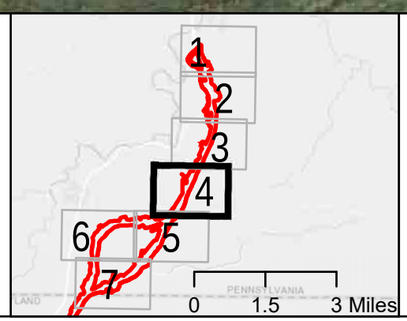
Meters
0 150 300

Study Area
Photo Location



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Date: 6/28/2023

Source: MARKOSKY

SHEET 4
SHEET 5

SHEET 5
SHEET 6

13

14

SHEET 5
SHEET 7

N

Feet
0 500 1,000

Meters
0 150 300

Study Area
Photo Location

219 Meyersdale to Old Salisbury Rd

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PENNSYLVANIA PHOTOS

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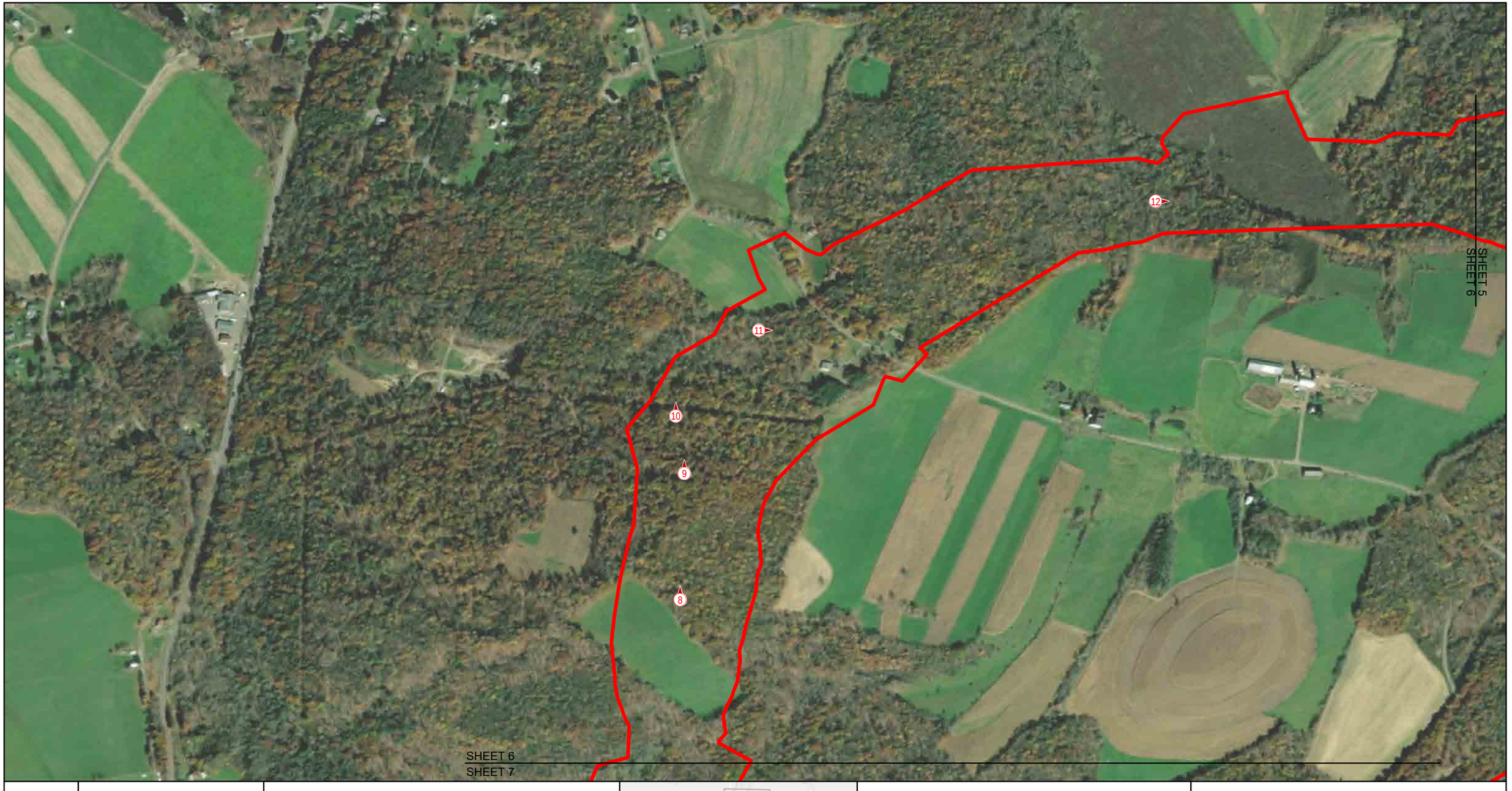
Date: 6/28/2023

Source: MARKOSKY



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Feet
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Meters
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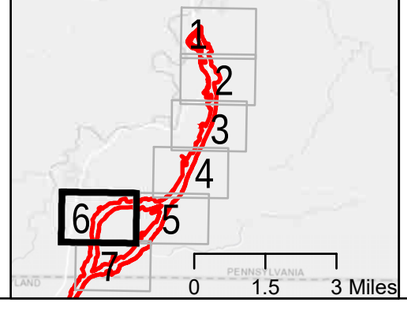
Study Area
Photo Location



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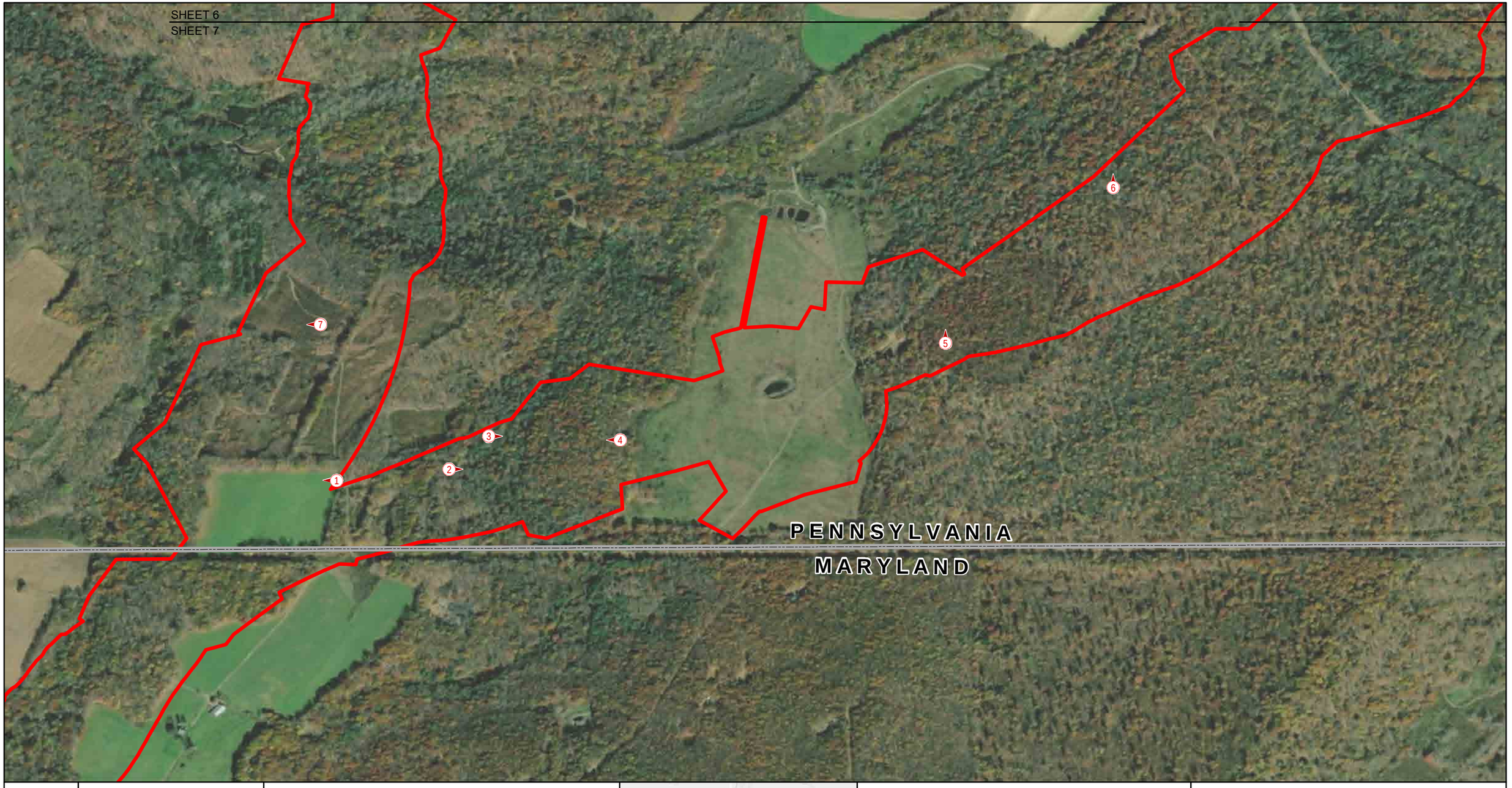
MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

SHEET 6
SHEET 7



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Feet
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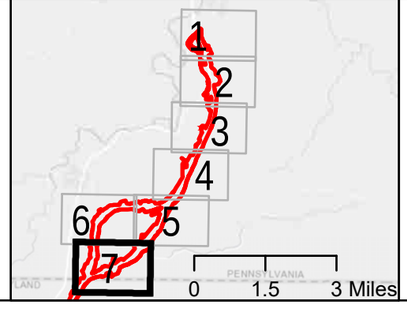
Meters
0 150 300

Study Area
Photo Location



219 Meyersdale to Old Salisbury Rd

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PENNSYLVANIA PHOTOS

MDOT MARYLAND DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

pennsylvania DEPARTMENT OF TRANSPORTATION

Date: 6/28/2023

Source: MARKOSKY

APPENDIX G
FIELD DATA SHEETS

Property: US 219 Alternative E+DU Prepared By BMS BJS, EMA
Stand #: 41-1 Plot #: 1 Plot Size: 1/10thac Date: 9/7/22

Basal Area in sf/acre: 120	Size class of trees > 20' height within sample plot															
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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Black cherry							4									4
Red maple		1		1	1											3
Sugar maple		2		1												3
Yellow birch				1												1
Total Number of Trees per Size Class	3			4			4									11
Number & Size of Standing Dead Trees							1									1

List of Common Understory Species 3'-20':
Yellow birch, red maple

% of Canopy Closure

C	N	E	S	W	Total
83	74	76	77	78	78

Percent of Invasive Cover per Plot (All Layers): None

Plot Successional Stage: early-mid

List of Herbaceous Species 0'-3':
Hay-scented fern
Canada mayflower

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	2	0	0	1	1

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
90	20	95	95	85	77

T U H

Comments: Black cherry-maple community. Open forest with sparse understory & dense fern layer. Rocky substrate, Mesic forest. Gently sloping topography. No invasives, except for some along woods road that runs along eastern section for entire length of wooded area. Trees have been girdled throughout forested area. Mason-Dixon Monument (concrete) - 1767 (dated) present in these woods.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US219 Alternative E & DU Prepared By BMS, BJS, EMA
Stand #: 41-1 Plot #: 2 Plot Size: 1/10th ac Date: 9/7/22

Basal Area in sf/acre: 70	Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		7	1	3												11
Hawthorne			1													1
Black cherry			1													1
Total Number of Trees per Size Class	10			3												13
Number & Size of Standing Dead Trees	1															1

List of Common Understory Species 3'-20':
Sugar maple, spicebush

% of Canopy Closure

C	N	E	S	W	Total
76	78	82	86	79	80

Percent of Invasive Cover per Plot (All Layers): None

Plot Successional Stage: early-mid

List of Herbaceous Species 0'-3':
Violet, green briar, hawthorne, partridgeberry, aster, sensitive fern

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	0	0	15	10	6

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
2	5	2	5	1	3

T U H

Comments This section of forest is adjacent to hayfield. Evidence of logging. Mesic area with sparse understory and herbaceous layers. Piles of rocks (human disturbance). There are some invasives (none in plot) in vicinity of plot including Japanese barberry.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative Ea DU Prepared By BMS, BJS, EMA
Stand #: 41-1 Plot #: 3 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre: 20

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		29		3												32
witch hazel		1														1
Total Number of Trees per Size Class	30			3												33
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20':
Sugar maple, spicebush, witch hazel, japanese barberry*

List of Herbaceous Species 0'-3':
christmas fern, hay-scented fern, maple-leaf viburnum, jack-in-pulpit.

% of Canopy Closure

C	N	E	S	W	Total
86	85	53	89	86	80

% Understory Cover 3'-20'

C	N	E	S	W	Total
50	40	20	15	15	20

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
50	10	50	30	10	30

Percent of Invasive Cover per Plot (All Layers): 3%

T U H

Plot Successional Stage: Early

Comments *= invasive, Young woods with dense sapling layer. Rocky, gradual sloping area adjacent to clearing. Area is mesic with rich soils, Some invasives (barberry + multiflora rose) is present throughout. This area is a sugarbush - collection tubing (extensive) in plot & found throughout this section of woods. Plot adjacent to overhead utility line that goes to a residence east of study area.

Sheet __ of __

Forest Sampling Data Worksheet

C:1

Property: US 219 Alternative E & DL Prepared By: BMS, BJS, EMA
Stand #: 41-1 Plot #: 4 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre: 70

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		2		2			1									5
Witch hazel		2														2
Mockernut hickory							1									1
Total Number of Trees per Size Class	4			2			2									8
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20': Yellow birch, hawthorne, hickory

% of Canopy Closure

C	N	E	S	W	Total
69	72	64	72	71	70

Percent of Invasive Cover per Plot (All Layers): 1%

Plot Successional Stage: early - mid

List of Herbaceous Species 0'-3': christmas fern, sedge, greenbriar, hayscented fern, multiflora rose*, white wood aster

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	0	40	20	10	14

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
15	30	30	45	30	26

T	U	H
0	0	1

Comments: Fairly open maple-oak-hickory community. Rocky with some understory, and moderately sparse herbaceous layer. Gently sloping topography. Mesic area with some multiflora rose (invasive).

Sheet __ of __ * = invasive

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E + DU Prepared By BMS, BJS, EMA

Stand #: 41-1 Plot #: 5 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre: 30

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
sugar maple	25			2												27
Black cherry				1												1
Mockernut hickory	4		1													5
Yellow Birch		6		1												7
Basswood				2												2
Total Number of Trees per Size Class	36			6												42
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20':
Sugar maple, mockernut hickory, grape, witchhazel

% of Canopy Closure

C	N	E	S	W	Total
77	73	77	77	69	75

Percent of Invasive Cover per Plot (All Layers): 0 %

T U H

Plot Successional Stage: Early-mid

List of Herbaceous Species 0'-3':
Hay-scented fern, christmas fern, wood nettle, maple-leaf viburnum, ground ivy.

% Understory Cover 3'-20'

C	N	E	S	W	Total
80	75	80	60	40	67

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
0	30	60	20	60	34

Comments Part of sugar mapling area (sugarbush), young black cherry-sugar maple community, moist with rich soils. Dense saplings, rocky next to stream. Gradually sloping topography

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E + DU Prepared By BMS, BJS, EMA
Stand #: 41-1 Plot #: 6 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre:	Size class of trees > 20' height within sample plot
140	

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Black locust				2			1									3
Sugar maple	8			1												9
Green Ash				1												1
R&D Maple				1												1
Black cherry				1												1
Total Number of Trees per Size Class	8			6			1									15
Number & Size of Standing Dead Trees	11			3												

List of Common Understory Species 3'-20':
Red maple, black cherry, sugar maple, japanese barberry*, multiflora rose*

List of Herbaceous Species 0'-3':
Sedge, hay-scented fern, zig zag goldenrod

% of Canopy Closure

C	N	E	S	W	Total
64	70	73	64	72	69

% Understory Cover 3'-20'

C	N	E	S	W	Total
20	10	15	10	5	12

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
75	60	60	60	75	66

Percent of Invasive Cover per Plot (All Layers): 10%

T	U	H
0	10	0

Plot Successional Stage: early-mid

Comments: Previously disturbed area next to pond and wetlands. Wood's road winds through area. There are mounds of dirt with trees and sapling growing on them. Most of the dead standing trees are black locust. Newt and bull frog using area.

Sheet __ of __

* = invasives

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E + DU Prepared By: BMS, GJS, EMA
Stand #: 41-1 Plot #: 7 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre: 60	Size class of trees > 20' height within sample plot															
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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple	9						2									11
Mockernut hickory				1												1
Black cherry		1		1												2
Total Number of Trees per Size Class	10			2			2									14
Number & Size of Standing Dead Trees	5			1												6

List of Common Understory Species 3'-20': Sugar maple, grape

% of Canopy Closure					
C	N	E	S	W	Total
70	73	83	76	78	76

Percent of Invasive Cover per Plot (All Layers): 0%

Plot Successional Stage: early-mid

List of Herbaceous Species 0'-3': wood nettle, maple-leaf viburnum, hayscented fern, blue cohosh, violet, sedge, christmas fern and plant that looks like sweet cicely, but not sure due to lack of flowers.

% Understory Cover 3'-20'					
C	N	E	S	W	Total
1	5	0	15	10	6

% of Herbaceous Cover 0'-3'					
C	N	E	S	W	Total
5	30	35	20	30	24

T U H

Comments: Rich, mesic area with gradual topography. Fairly open with diverse, dense herbaceous cover. Sugar maple - black cherry community

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US219 Alternative E+ DU Prepared By: BWS, BJS, EMA
Stand #: 41-1 Plot #: 8 Plot Size: 1/10th ac. Date: 9/7/22

Basal Area in sf/acre: 120

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		4		6			2									12
Basswood		1					3			1						5
Green ash												1				1
Total Number of Trees per Size Class	5			6			5			2						18
Number & Size of Standing Dead Trees	2						2									4

List of Common Understory Species 3'-20': sugar maple

% of Canopy Closure

C	N	E	S	W	Total
68	75	65	69	68	69

Percent of Invasive Cover per Plot (All Layers): 10%

Plot Successional Stage: mid

List of Herbaceous Species 0'-3': Christmas fern, garlic mustard*, blue cohosh, northern shorthusk, hay-scented fern

% Understory Cover 3'-20'

C	N	E	S	W	Total
5	2	2	2	5	3

T U H

10

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
1	5	5	5	10	5

Comments: * = invasive. Mesic, rocky area with several dead ash. Open section of forest with little understory and a sparse herbaceous layer. Area slopes toward ponded area adjacent to Plot 6.

Sheet __ of __

Forest Sampling Data Worksheet

C:1

Property: US 219 Alternative E+ DU Prepared By BMS, BJS, EMA
Stand #: 41-1 Plot #: 9 Plot Size: 1/10th ac Date: 9/8/22

Basal Area in sf/acre:	Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		9		4			1			1						15
Total Number of Trees per Size Class	9			4			1			1						15
Number & Size of Standing Dead Trees				3												3

List of Common Understory Species 3'-20':
Sugar maple, grape

% of Canopy Closure

C	N	E	S	W	Total
79	81	83	72	75	78

Percent of Invasive Cover per Plot (All Layers): 1%

Plot Successional Stage: Mid

List of Herbaceous Species 0'-3':
Hay-scented fern, New York fern, wood nettle, violet, jack-in-pulpit.

% Understory Cover 3'-20'

C	N	E	S	W	Total
30	50	15	5	40	28

T U H
1%

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
1	40	50	40	30	32

Comments: Sugar maple forest with gradually sloping topography. Sparse understory, rocky terrain, moist and rich. Minimum invasive plants. Many trees have been girdled throughout the compartment. Most of trees that were girdled are black cherry. Woods road goes through forest. Japanese barberry - invasive - in plot.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E+DU Prepared By BMS, BJS, EMA
Stand #: 41-2 Plot #: 1 Plot Size: 1/10th ac. Date: 9/8/22

Basal Area in sf/acre: 200	Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple	13						2									15
Red oak							2									2
Chestnut oak							2									2
Black cherry				5												5
Total Number of Trees per Size Class	13			5			6									24
Number & Size of Standing Dead Trees	4			1												5

List of Common Understory Species 3'-20':
Sugar maple, striped maple, black cherry

% of Canopy Closure

C	N	E	S	W	Total
80	78	80	77	85	80

Percent of Invasive Cover per Plot (All Layers): 0%

Plot Successional Stage: Early-mid

List of Herbaceous Species 0'-3':
hay-scented fern, ground cedar, early lowbush blueberry, sedge

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	5	0	0	0	1

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
10	80	85	75	55	61

T U H

Comments: Mixed oak-sugar maple community. Xeric. Some rocky areas, open forest with little understory, dense herbaceous layer. Gradual slopes. All trees about the same size/age. No invasive plants.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E+DU Prepared By BMS, BJS, EMA, LY, NW, NS

Stand #: 41-2 Plot #: 2 Plot Size: 1/10th ac Date: 9/6/22

Basal Area in sf/acre:	Size class of trees > 20' height within sample plot															
80																
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**	**Other**	**Dom**	**CoD**	**Other**	**Dom**	**CoD**	**Other**	**Dom**	**CoD**	**Other**	**Dom**	**CoD**	**Other**	
Black cherry	5			4						2						11
Sugar maple		6			1											7
Red oak		2			2			1								5
Cucumber tree					1											1
Total Number of Trees per Size Class	13			8			1			2						24
Number & Size of Standing Dead Trees	5			1												6

List of Common Understory Species 3'-20':
striped maple

% of Canopy Closure

C	N	E	S	W	Total
86	83	80	86	77	82

Percent of Invasive Cover per Plot (All Layers):
None

T U H

Plot Successional Stage:
Early-

List of Herbaceous Species 0'-3':
Hay-scented fern, sessile-leaf bellwort, sedge, zigzag goldenrod starflower, violet, wild yam, jack-in-pulpit

% Understory Cover 3'-20'

C	N	E	S	W	Total
30	15	15	20	10	18

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
0	5	5	10	3	5

Comments Mesic woodland with many young saplings. Black cherry - sugar maple community. Adjacent to agricultural field. No invasive plants observed.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E + OU Prepared By BMS, BJS, EMA
Stand #: 41-3 Plot #: 1 Plot Size: 1/10th ac Date: 9/8/22

Basal Area in sf/acre:	Size class of trees > 20' height within sample plot
10	

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple				2												2
Striped maple	1															1
Red maple				1												1
Total Number of Trees per Size Class	1			3												4
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20':
Yellow birch, black birch

% of Canopy Closure

C	N	E	S	W	Total
11	27	39	25	24	25

Percent of Invasive Cover per Plot (All Layers): 1%

Plot Successional Stage: Early

List of Herbaceous Species 0'-3':
Intermediate wood fern, yellow birch, Canada mayflower blackberry, pokeweed

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	10	5	0	25	8

T U H
1

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
5	20	10	60	30	25

Comments: Recently logged area with only maples still standing. Tree limb brush piles throughout. ATV path goes through center. Oriental ladythumb (invasive plant) dominant along path. Area is rocky and gently sloping.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E + DU Prepared By BMS, BJS, EMA

Stand #: 41-3 Plot #: 2 Plot Size: 1/10th ac Date: 9/8/22

Basal Area in sf/acre: 20

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple		1		2												3
Total Number of Trees per Size Class	1			2												3
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20': Sugar maple, black gum

% of Canopy Closure

C	N	E	S	W	Total
26	29	74	25	36	38

Percent of Invasive Cover per Plot (All Layers): None

Plot Successional Stage: Early

List of Herbaceous Species 0'-3': Hay-scented fern, blackberry, pokeweed buckwheat

% Understory Cover 3'-20'

C	N	E	S	W	Total
10	5	10	0	0	5

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
75	100	95	90	95	91

T	U	H

Comments: Recently logged oak-cherry-maple community with only maples still standing. Dense herbaceous layer. tree limb piles throughout.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E - DU Prepared By BMS, BJS, EMA
Stand #: 41-3 Plot #: 3 Plot Size: 1/10th ac. Date: 9/8/22

Basal Area in sf/acre: 40	Size class of trees > 20' height within sample plot															
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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar maple	1			4												5
Moderncut hickory				1												1
Total Number of Trees per Size Class	1			5												6
Number & Size of Standing Dead Trees																

List of Common Understory Species 3'-20': Sugar maple

% of Canopy Closure

C	N	E	S	W	Total
52	50	42	51	21	43

Percent of Invasive Cover per Plot (All Layers): 5%

Plot Successional Stage: Early

List of Herbaceous Species 0'-3': Wild lettuce, pokeweed, blackberry sedge, various grasses, yellow foxtail grass*, Oriental lady thumb*

% Understory Cover 3'-20'

C	N	E	S	W	Total
10	2	20	0	0	6

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
15	60	40	70	50	47

T	U	H
0	0	5

Comments * = invasive. Recently logged area with brush piles throughout. Just maples are still standing. Good bird + rabbit habitat.

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E+OU Prepared By: NWS, NRW

Stand #: 11-4 Plot #: 1 Plot Size: 1/10 acre Date: 9/8/22

Basal Area in sf/acre: 110

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Sugar Maple	11			4	1		9			1						28
White Ash		4														4
Total Number of Trees per Size Class	19			5			7			1						32
Number & Size of Standing Dead Trees													1 - 30.1" 1 - 37.3"			2

List of Common Understory Species 3'-20':
Sugar maple
White ash

% of Canopy Closure
15.6 37.24 29.12 18.72 28

C	N	E	S	W	Total
84.4	67.76	70.88	81.28	74	75.66

Percent of Invasive Cover per Plot (All Layers):
8%
reed canarygrass
garlic mustard
multiflora (H)

Plot Successional Stage:
Early-Late

List of Herbaceous Species 0'-3':
White Snakeroot
Bigleaf aster
White heath aster

% Understory Cover 3'-20'

C	N	E	S	W	Total
5	15	10	10	20	12

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
55	90	90	60	62	71.4

Comments: Flat hillside forest dominated by sugar maples. Located between croplfield, planted roadside area, and equipment staging area. Herbaceous dominated by white snakeroot.

Sheet 1 of 1

Forest Sampling Data Worksheet

C:1

Property: US 219 Alternative E & DU Prepared By NRCW, NWS

Stand #: 41-5 Plot #: 1 Plot Size: 1/10 ac Date: 9/8/22

Basal Area in sf/acre: 120

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Hawthorne sp.	18			4			2			2						26
Black locust		1			4											5
Black cherry		1			1			1								3
White Ash		3														3
Total Number of Trees per Size Class	23			9			3			2			0			37
Number & Size of Standing Dead Trees	2			0			0			0			0			2

List of Common Understory Species 3'-20':

Hawthorne sp.

% of Canopy Closure

C	N	E	S	W	Total
81	87	92	87	94	88.2

Percent of Invasive Cover per Plot (All Layers):

~ 12% invasive

Garlic mustard (M)

Plot Successional Stage:

Late mid-successional

List of Herbaceous Species 0'-3':

White snakeroot
White Ash
Garlic mustard

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	4	0	8	18	6.0

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
46	40	42	35	24	37.4

Comments: Gentle forested hillslope dominated by Hawthornes. Located adjacent to retention basin area that was recently planted with saplings. Herbaceous primarily dominated by white snakeroot and white ash.

Sheet __ of __ Photos (2): S to N, N to S

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E & D U Prepared By: NRW, NWS
Stand #: 41-5 Plot #: 2 Plot Size: 1/10 ac Date: 9/7/22

Basal Area in sf/acre: 40

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Hawthorne Sp.		5														5
White Ash		2			1											3
Black Locust		3			4											7
Sugar Maple					3											3
Cucumber Tree					1											1
Blackcherry								1								1
Total Number of Trees per Size Class		10			9			1								20
Number & Size of Standing Dead Trees					2											2

List of Common Understory Species 3'-20':
Hawthorne Sp.

% of Canopy Closure: 25, 16, 29, 20

C	N	E	S	W	Total
26	16.64	30.16	20.8	27.04	75.87

Percent of Invasive Cover per Plot (All Layers): none

Plot Successional Stage: Mid

List of Herbaceous Species 0'-3':
Canadian goldenrod
Canada germander
wild basil
white heath aster

% Understory Cover 3'-20'

C	N	E	S	W	Total
7	24	9	30	12	16.4

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
100	100	100	100	100	100

Comments: Plot is located in the mixed forage edge of

Photos (2) S to N, N to S

Sheet 1 of 1

Forest Sampling Data Worksheet

C:1

Property: VS 219 Alternative E & DU Prepared By NRW, NWS

Stand #: 41-Ce Plot #: 1 Plot Size: 1/10 acre Date: 9/7/22

Basal Area in sf/acre: 100

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Red maple	11			9			4									24
Black Cherry		2			4											6
Black Birch		6			3			1								10
Green Ash		2						1								3
Total Number of Trees per Size Class	21			16			6			0			0			43
Number & Size of Standing Dead Trees	1			0			1			0			0			2

List of Common Understory Species 3'-20':
Chinese privet
Black birch
Red maple

% of Canopy Closure

C	N	E	S	W	Total
83	82	80	79	79	80.6

Percent of Invasive Cover per Plot (All Layers): 7%
Rosa multiflora
Chinese privet

Plot Successional Stage: Late-mid successional

List of Herbaceous Species 0'-3':
Green Ash
Bigleaf Aster
Multiflora rose

% Understory Cover 3'-20'

C	N	E	S	W	Total
68	52	54	43	28	

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
95	83	78	95	90	

Comments: Red maple / Black birch community
Dense layer of green ash herbaceous
Photos (2) S to N, N to S looking over plot

Sheet 1 of 1

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E SDU Prepared By NRM, NWF
Stand #: 42-1 Plot #: 1 Plot Size: 1/10 ac Date: 5/7/23

Basal Area in sf/acre: 140

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
eastern white pine	1			10			10									21
Black locust								2								2
Scot's pine					1											1
Black birch					1											1
Total Number of Trees per Size Class	1			12			12			0			0			
Number & Size of Standing Dead Trees	2			6			2			0			0			

List of Common Understory Species 3'-20':
Green ash

% of Canopy Closure

C	N	E	S	W	Total
89	80	87	88	81	85.0

Percent of Invasive Cover per Plot (All Layers):
NO invasives

Plot Successional Stage:
Late Successional

List of Herbaceous Species 0'-3':
Wood fern
Spotted jewelweed
Green ash

% Understory Cover 3'-20'

C	N	E	S	W	Total
4	4	0	0	6	2.8

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
46	40	32	30	42	38.0

Comments: Sphagnum moss present throughout plot
Mature stand of eastern white pine. Little to no understory

2 Photos, S to N, N to S

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E 3 DV Prepared By: NRW, NWS
Stand #: 42-1 Plot #: 2 Plot Size: 1/10 ac Date: 9/7/22

Basal Area in sf/acre: 200

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Eastern white pine	1			13			12			1						27
Sugar maple		1														1
Scot's pine								1								1
Black locust					4											4
Total Number of Trees per Size Class	2			17			13			1			0			33
Number & Size of Standing Dead Trees	3			2			3			0			0			8

List of Common Understory Species 3'-20':
Green ash

% of Canopy Closure

C	N	E	S	W	Total
79	87	92	81	78	83.4

Percent of Invasive Cover per Plot (All Layers):
None

Plot Successional Stage:
Late successional

List of Herbaceous Species 0'-3':
wood fern
Green ash
spotted jewelweed

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	0	0	6	5	2.2

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
18	17	12	13	16	15.2

Comments: Community dominated by mature eastern white pine. Little to no understory.

Sheet __ of __

2 Photos S to N, N to S

Forest Sampling Data Worksheet

C:1

Property: US 219 Alternative E+DM Prepared By NWS, NRW
Stand #: 42-2 Plot #: 1 Plot Size: 1/10 acre Date: 9/8/22

Basal Area in sf/acre: 150	Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Eastern White Pine					IIII			III								8
Yellow Birch					I											1
Scot's Pine					IIII			II								6
Black Locust		III			II			I								6
White Ash		I			II											3
Hawthorne sp.		II														2
Sugar maple		I														1
Total Number of Trees per Size Class	7			14			6									27
Number & Size of Standing Dead Trees	IIII			IIII II												11

List of Common Understory Species 3'-20':
Hawthorne Sp
Amur honeysuckle
Black locust

% of Canopy Closure
24.96 22.28 8.52 23.92 12.72

C	N	E	S	W	Total
75.04	77.12	91.68	76.08	81.28	80.24

Percent of Invasive Cover per Plot (All Layers):
15%
Amur honeysuckle(H) garlic mustard? (H) burdock? (H)

Plot Successional Stage:
Early-Late

List of Herbaceous Species 0'-3':
Canadian goldenrod
Wild basil
White heath aster
Black raspberry

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	9	5	22	5	8.2

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
18	95	17	30	50	42

Comments: Plot is located in an area of planted rows of Scot's and eastern white pine trees along the hillslope between the wetland and the transportation/disturbed area

Sheet 1 of 1 burdock (H) Amur honeysuckle (H) garlic mustard invasive (H) Photos (2) - 8 to N, N to S

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E 5 DU Prepared By: MRW, MWS

Stand #: 42-2 Plot #: 2 Plot Size: 1/10 ac Date: 9/8/22

Basal Area in sf/acre: 140

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
eastern white pine					1			3								4
Scot's pine				5			2	1								7
Chokecherry		1														1
Black locust		2			2											4
White Ash		4			3											7
Sugar maple		1														1
Total Number of Trees per Size Class	8			11			5			0			0			24
Number & Size of Standing Dead Trees	7			4			2			0			0			13

List of Common Understory Species 3'-20':
White ash
Sugar maple

% of Canopy Closure

C	N	E	S	W	Total
83	78	90	89	76	83.2

Percent of Invasive Cover per Plot (All Layers):
Rambler rose 5%
Garlic mustard 7%
12%

Plot Successional Stage: Early
Late
Successional

List of Herbaceous Species 0'-3':
Solidago canadensis
white heath aster
white ash
common burdock
Garlic mustard

% Understory Cover 3'-20'

C	N	E	S	W	Total
5	16	7	10	7	9.0

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
68	70	65	62	70	67.0

Comments: Mature stand of Scot's pine on a steep hillslope

Photos (2) S to N, N to S

Sheet __ of __

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E+ON Prepared By NWS, NRV

Stand #: 43-1 Plot #: 1 Plot Size: 1/10 acre Date: 9/7/22

Basal Area in sf/acre: 20

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Scotts Pine	II	III			II											5
Eastern White Pine		I														1
Jack Pine		IIII			I											6
Black Birch		IIII			III											7
Total Number of Trees per Size Class		13			6											19
Number & Size of Standing Dead Trees	1															1

List of Common Understory Species 3'-20':
Red Maple
Jack Pine
Eastern White Pine

% of Canopy Closure

31.2 28.08 37.44 23.92 33.28

C	N	E	S	W	Total
68.8	71.92	62.56	76.08	66.72	69.2

Percent of Invasive Cover per Plot (All Layers): none

Plot Successional Stage: Early - Mid

List of Herbaceous Species 0'-3':
White Goldenrod
Lowbush Blueberry
Wood Bluegrass

% Understory Cover 3'-20'

C	N	E	S	W	Total
10	8	5	5	5	67

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
11	13	22	34	15	81

Comments: Mixed forestland between a wetland and the disturbed land for the in bioswale/ retention basin. Sphagnum moss present throughout the plot. Rocky terrain.

Sheet 1 of 1

Photos (2) - S to N & N to S looking over plot

Forest Sampling Data Worksheet C:1

Property: US 219 Alternative E+04 Prepared By NWS NAW
Stand #: 43-1 Plot #: 3 Plot Size: 1/10 acre Date: 9/7/22

Basal Area in sf/acre: 20

Size class of trees > 20' height within sample plot

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	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	Dom	CoD	Other	
Red Maple		11			1											3
Black Locust		11			1											3
Green Ash		1			1											2
Black Birch					1											1
Black w. Cherry			1													1
Total Number of Trees per Size Class	6			4												10
Number & Size of Standing Dead Trees	1															1

List of Common Understory Species 3'-20':
Green Ash, Black Locust, Arrowwood Viburnum, Black Poplar

% of Canopy Closure

	C	N	E	S	W	Total
40.56 61.36 17.68 37.14 19.76	59.41	38.64	82.32	62.56	80.24	64.64

Percent of Invasive Cover per Plot (All Layers): none

Plot Successional Stage: Early-Mid

List of Herbaceous Species 0'-3':
Canadian Goldenrod, White Heath Aster

% Understory Cover 3'-20'

C	N	E	S	W	Total
0	12	0	10	75	67.66

% of Herbaceous Cover 0'-3'

C	N	E	S	W	Total
100	100	100	100	100	100

Comments: Edge community, located between wetland and fallow field. Dense layer of goldenrod covering herbaceous layer

Sheet 1 of 1 2 photos South to North & North to South looking over plot

Forest Sampling Data Worksheet

C:1

Cropland/Rangeland
Species List

Compartment Number: 21-1	Investigators: B. Taylor, L. Young, B. Smith, E. Anderson
Date: 9/6/22	

Scientific Name	Common Name
1 Dactylis glomerata	orchard grass (D)
2 Plantago lanceolata	lance-plantain
3 Taraxacum officinale	dandelion
4 Trifolium repens	white clover
5	lance-leaf plantain
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

Notes: Hayfield - routinely cut. Gently sloping fields bordered on both sides by forests. Residence with shed / barn also adjacent to field.
(D) = Dominant

Cropland/Rangeland
Species List

Compartment Number: 21-2	Investigators: LY, BMS, BJS, EMA
Date: 9/6/22	

Scientific Name	Common Name
1 Dactylis glomerata	Orchard grass (D)
2 Plantago lanceolata	Lanceleaf plantain
3 Fragaria virginiana	strawberry
4	Oat
5	Corn
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

Notes: Part hay and part corn with a sliver of oat. The hayfield is routinely cut. Corn & oat doing well & almost ready to be harvested.

Cropland/Rangeland
Species List

Compartment Number: 21-3 (TBD)	Investigators: LY, BMS, BJS, EMA
Date: 9/6/22	

Scientific Name	Common Name
1 Dactylis glomerata	Orchard grass (D)
2 Daucus carota	Queen Anne's lace
3 Plantago lanceolata	Lanceleaf plantain (D)
4 Asclepias syriaca	Common milkweed
5 Coronilla varia	Crown vetch (D)
6 Taraxacum officinale	Dandelion (D)
7 Schedonorus arundinaceus	Meadow fescue (D)
8 Prunella vulgaris	Heal-all
9	
10	
11	
12	
13	
14	
15	

Notes: Cropland-pasture (formerly herbaceous Rangeland 31-1). Hayfield perhaps cut one/year. Gently sloping. Located between forested areas.

Cropland/Rangeland
Species List

Compartment Number: 31-1	Investigators: BMS, LY, BJS, EMA
Date: 9/6/22	

Scientific Name	Common Name
1 Solidago spp.	Goldenrod (D)
2 Cirsium sp.	Thistle (D)
3 Daucus carota	Queen Anne's lace (D)
4 Schedonorus arundinaceus	Meadow Fescue
5 Lotus corniculatus	Bird's-foot trefoil
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

Notes: Herbaceous - Rangeland (formerly mapped as Shrub & Brush Rangeland 32-1)
Meadow dominated with forbs (wildflowers) including thistle, various species of goldenrod, Queen Anne's lace. ~~Some~~ A couple of shrubs. Many butterflies observed on flowers. Saw one monarch, a couple swallowtails and sulfur butterflies. Gently sloping. Borders deciduous forest (41-1) and hayfield (21-?).
(D) = Dominant

Cropland/Rangeland
Species List

Compartment Number: 32 - 2	Investigators: NPW, NWS
Date: 9/6/22	

H= Herb S = Shrub/Sapling T= Tree

	Scientific Name		Common Name
1	Solidago rugosa	H	Wrinkle-leaf goldenrod
2	Solidago canadensis	H	Canadian goldenrod
3	Fraxinus pennsylvanica	S	Green ash
4	Acer rubrum	S	Red maple
5	Prunus serotina	S	Black cherry
6	Daucus carota	H	Queen Anne's-lace
7	Phalaris arundinacea	H	Reed canary grass
8	Rubus argutus	H	Saw-tooth blackberry
9	Spiraea alba	H	White meadowsweet
10	Pinus strobus	S & T	Eastern White pine
11	Clinopodium vulgare	H	Wild basil
12	Panicum virgatum	H	Wand panic grass
13	Solidago bicolor	H	White goldenrod
14	Achillea millefolium	H	Common yarrow
15	Symphyotrichum ericoides	H	White heath American-aster
16	Viburnum dentatum	S	Southern arrow-wood

Notes: Fallow field with patches of sapling trees present.

APPENDIX H

MARYLAND ANDERSON LU-LC PHOTOS

RETTEW Associates, Inc.
Photo Documentation

Client:
Stantec Consulting Services Inc.

Site Name:
US 219 Meyersdale to Old Salisbury Rd

Site Location:
Garrett County, MD

Project Number:
019342063

Photo 1

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-1-1, which characterizes a Black Cherry-Maple association forest located in the northern section of the alternatives E & DU.

Photo 2

Date Taken:
September 6, 2022

Comments:
Looking south at plot 416-1-2, which characterizes a Sugar Maple dominated forest located in the northern section of the AOI near the Pennsylvania Border.

RETTEW Associates, Inc.
Photo Documentation

Client:
Stantec Consulting Services Inc.

Site Name:
US 219 Meyersdale to Old Salisbury Rd

Site Location:
Garrett County, MD

Project Number:
019342063

Photo 3

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-1-4, which characterizes a fairly open maple-oak-hickory association forest located in the northern section of the AOI.

Photo 4

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-1-6, which characterizes a Black Locust – Sugar Maple dominated forest located a previously disturbed area next to a pond and wetlands.

RETTEW Associates, Inc.
Photo Documentation

Client:
Stantec Consulting Services Inc.

Site Name:
US 219 Meyersdale to Old Salisbury Rd

Site Location:
Garrett County, MD

Project Number:
019342063

Photo 5

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-1-7, which characterizes a Black Cherry-Sugar Maple association forest located in a rich mesic area with dense herbaceous cover.

Photo 6

Date Taken:
September 6, 2022

Comments:
Looking south at plot 416-1-8, which characterizes a Sugar Maple dominated forest located in an open section of forest with a sparse herbaceous layer.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 7

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-1-9, which characterizes a Sugar Maple association forest located in the northern section of the AOI.

Photo 8

Date Taken:
September 6, 2022

Comments:
Looking south at plot 416-2-1, which characterizes a mixed Oak-Sugar Maple forest located in the northern section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 9

Date Taken:
September 6, 2022

Comments:
Looking north at plot 416-2-2, which characterizes a Black Cherry-Sugar Maple association forest located adjacent to an agricultural field.

Photo 10

Date Taken:
September 6, 2022

Comments:
Looking north at plot 415-3-1, which characterizes a recently logged Sugar Maple dominated forest located in the central section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:
Stantec Consulting Services Inc.

Site Name:
US 219 Meyersdale to Old Salisbury Rd

Site Location:
Garrett County, MD

Project Number:
019342063

Photo 11

Date Taken:
September 6, 2022

Comments:
Looking south at plot 415-3-2 which characterizes a Sugar Maple dominated forest.

Photo 12

Date Taken:
September 6, 2022

Comments:
Looking south at plot 415-3-3, which characterizes a Sugar Maple dominated forest.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 13

Date Taken:
September 6, 2022

Comments:
Looking south at plot 41-4-1 which characterizes a hillside Sugar Maple-White Ash association forest.

Photo 14

Date Taken:
September 6, 2022

Comments:
Looking south at plot 415-5-1, which characterizes gentle forested hillslope dominated by Hawthorne located in the southern section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 15

Date Taken:
September 6, 2022

Comments:
Looking south at plot 415-5-2 which characterizes a Black Locust-Hawthorne association forest located in the southern section of the AOI.

Photo 16

Date Taken:
September 6, 2022

Comments:
Looking north at plot 415-6-1, which characterizes a Red Maple-Black Birch dominated forest located in the southern section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 17

Date Taken:
September 7, 2022

Comments:
Looking south at plot 426-1-1 which characterizes an Eastern White Pine dominated forest located in the southern section of the AOI.

Photo 18

Date Taken:
September 7, 2022

Comments:
Looking south at plot 426-1-2, which characterizes an Eastern White Pine dominated forest located in the southern section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 19

Date Taken:
September 8, 2022

Comments:
Looking north at plot 426-2-1 which characterizes a mixed forest with planted rows of pines located in the southern section of the AOI.

Photo 20

Date Taken:
September 8, 2022

Comments:
Looking north at plot 426-2-2, which characterizes a Mixed forest located in the southern section of the AOI along a sleep slope.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 21

Date Taken:
September 7, 2022

Comments:
Looking south at plot 436-1-1 which characterizes a mixed forest of evergreen and deciduous trees located in the southern section of the AOI.

Photo 22

Date Taken:
September 7, 2022

Comments:
Looking north at plot 436-1-2, which characterizes an edge forest community along a wetland located in the southern section of the AOI.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 23

Date Taken:
September 7, 2022

Comments:
Looking north at plot 32-1.

Photo 24

Date Taken:
September 7, 2022

Comments:
Typical agricultural field.

APPENDIX I

MARYLAND WILDLIFE SIGHTINGS

Wildlife Sightings
Observations

Investigator: B. Sulon, B. Smith, E. Anderson		Date: 9/6/22
Species	**Compartment**	**Notes**
turkey vulture	21-1	In flight over field
black crow	21-1	In flight over field
Pee wee	41-1	
Hummingbirds	21-1	In flight
turkey	21-1	Flock in field
chipmunks	41-1	
RED EFT NEWT	41-1	Curled next to stick
Deer	41-1	Poop & heard running tracks throughout - Sno trail
Insect (Woodroach)?	41-1	Ben - photo
RED TAIL	41-1	
Flicker	41-1	
Squirrel	41-1	
Butterfly	21-1	Lonnie photo
Stinkbug	41-1	Ben photo
white furry caterpillar	41-1	
HAWK	41-2	Flew from treeedge to cornfield
turkeys	21-2	
Monarchs	31-1	Herb/Rangeland on thistle
Owl or Raptor	21-2/41-2	Feathers + scat noticed at edge of field/woods

Wildlife Sightings
Observations

Investigator: B. Sulon, B. Smith, & Anderson		Date: 9/9/22
Species	**Compartment**	**Notes**
Blue jay	41.1	
turkey	21.1	Flock of 17 using field, flew into 41.1 when flushed
Red-eft newts	41.1	many observed near eastern edge
Downy woodpecker	41.1	seen along forest edge
Chipmunk	41.1	Several seen foraging & sheltering
Chickadee	41.1	flock heard in the morning foraging
Coopers hawk	41.1	Perched at edge
Wood ants	41.1	colony on basswood
Woolly caterpillar	41.1	crawling on tree
Snail	41.1	at plot 5
Bullfrog	41.1	Calling. In pond next to plot 6.
Woodpecker	41.1	cavities in dead trees (ash) in plot 8

* Rained most of the day

Wildlife Sightings
Observations

Investigator: B. Sulon, B. Smith, & Anderson		Date: 9/8/22
Species	Compartment	Notes
~~Pileated~~ Hairy woodpecker	41-3	Pair - foraging
Downy woodpecker	41-3	foraging
Goldfinch	41-3	foraging in brush piles
Yellow ~~-rumped~~ -throated vireo	41-3	flock of approx 5-10
Titmouse	41-3, 1	

Wildlife Sightings
Observations

Investigator: NRW, NWS		Date: 9/6/22
Species	Compartment	Notes
Sparrow	14-2, 43-1, 41-3 21-2	Many visibly seen in each compartment
Catbird	43-1	heard bird call
Yellow finch	14-2, 21-2, 41-3	7 visibly seen
Common yellowthroat Warbler	14-2	1 visibly seen
Carolina Chickadee	14-2, 42-1, 43-1	6 visibly seen
Whitetail deer	32-2	visibly seen 1 deer
Whitetail deer	41-6, 43-1, 42-1 41-5	deer trail
mourning dove	14-2, 41-3	2 visibly seen
Sparrow Species	14-2.	1 visibly seen
Turkey	43-1, 21-2	feather
Whitetail deer	41-6	deer bed
Leopard Frog	61-1	heard frog call
Raccoon	61-1	Scat
Turkey	21-2	Tracks along edge of Ag field.
Monarch butterfly	21-2	2 visibly seen
Turkey Vulture	21-2 & 41-3	1 visibly seen flying over Ag field and forested area
Swallow	21-2	2 visibly seen in Ag field
Eastern wood-peewee	41-3	2 visibly seen
Redtail Hawk	21-2, 41-3	1 visibly seen
Crow	21-2, 41-3, 41-4	5 visibly seen in Ag field and forested area
Catbird	41-3	1 visibly seen
Ruby-throated hummingbird	21-2, 41-3.	3 visibly seen

Wildlife Sightings
Observations

Investigator: NRW, NWS		Date: 9/6/22
Species	Compartment	Notes
Red-bellied woodpecker	41-3	2 visibly seen
Turkey vulture	21-2	feather along edge of Ag field
Hairy Woodpecker	41-3	1 visibly seen
Fox squirrel	41-3	1 visibly seen
American Toad	41-5,	1 visibly seen
Mallard ducks	14-2	8 visibly seen
Wood duck	14-2	1 visibly seen
Groundhog holes	14-2, 41-4	

Table 20.
Phase II Study Area
Observed Wildlife Species

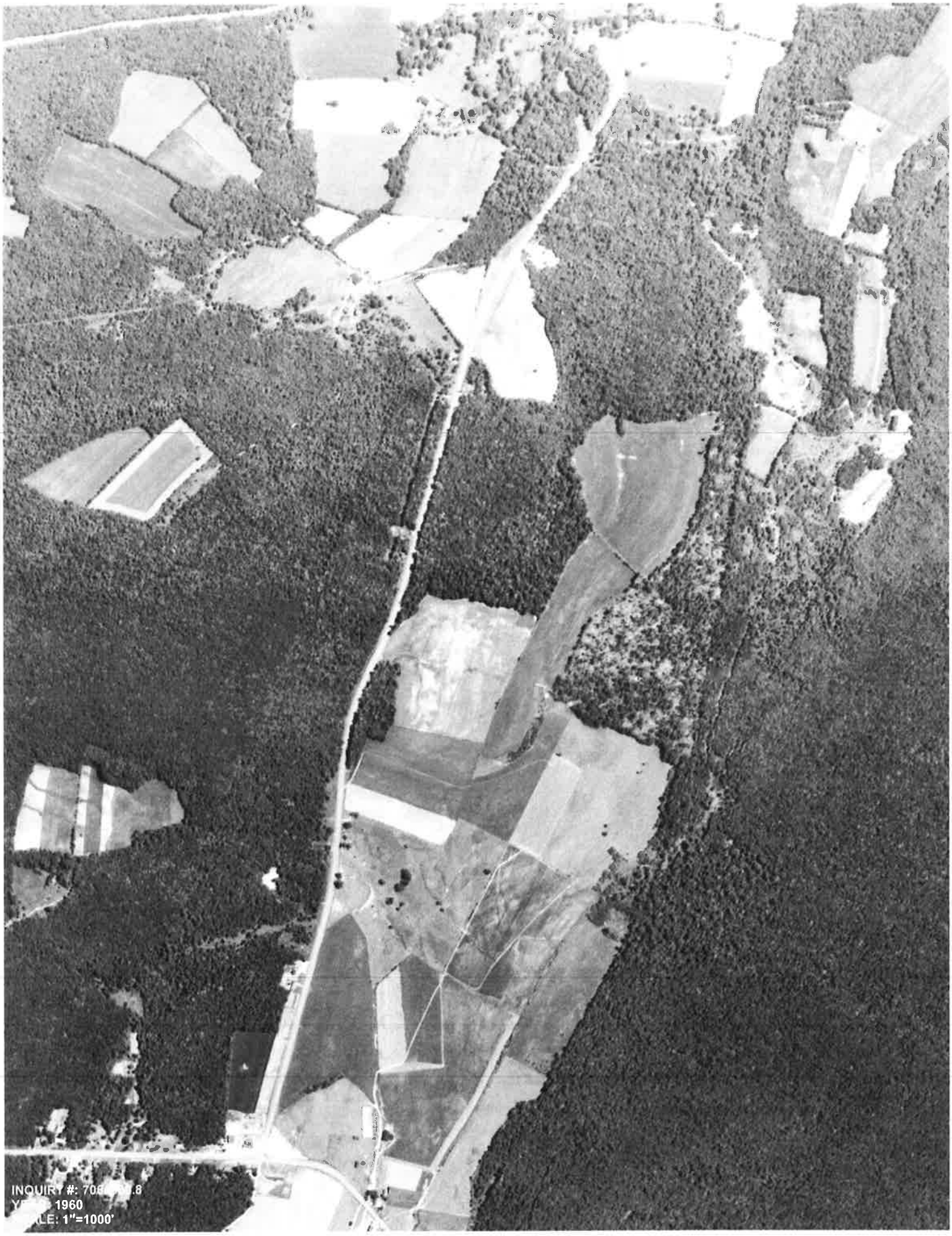
Common Name	Scientific Name
Mammals	
Eastern coyote	*Canis latrans*
Beaver	*Castor canadensis*
Virginia opossum	*Didelphis virginiana*
Groundhog	*Marmota monax*
Striped skunk	*Mephitis mephitis*
Field mouse	*Peromyscus leucopus*
Whitetail deer	*Odocoileus virginianus*
Raccoon	*Procyon lotor*
Grey squirrel	*Sciurus carolinensis*
Fox squirrel	*Sciurus niger*
Eastern cottontail	*Sylvilagus floridanus*
Chipmunk	*Tamias striatus*
Red squirrel	*Tamiasciurus hudsonicus*
Grey fox	*Urocyon cinereoargenteus*
Black bear	*Ursus americanus*
Red fox	*Vulpes vulpes*
Birds	
Cooper's hawk	*Accipiter cooperii*
Sharp-shinned hawk	*Accipiter striatus*
Red-winged blackbird	*Agelaius phoeniceus*
Mallard	*Anas platyrhynchos*
Ruby-throated hummingbird	*Archilochus colubris*
Great blue heron	*Ardea herodias*
Ruffed grouse	*Bonasa umbellus*
Great horned owl	*Bubo virginianus*
Red-tailed hawk	*Buteo jamaicensis*
Broad-winged hawk	*Buteo platypterus*
Green heron	*Butorides striatus*
Northern cardinal	*Cardinalis cardinalis*
American goldfinch	*Carduelis tristis*
House finch	*Carpodacus mexicanus*
Turkey vulture	*Cathartes aura*
Killdeer	*Charadrius vociferus*
Common flicker	*Colaptes auratus*
Rock dove	*Columba livia*
Black vulture	*Coragyps atratus*
Common crow	*Corvus brachyrhynchos*
Blue jay	*Cyanocitta cristata*
Pileated woodpecker	*Dryocopus pileatus*
Gray catbird	*Dumetella carolinensis*
American kestrel	*Falco sparverius*
Barn swallow	*Hirundo rustica*
Baltimore oriole	*Icterus galbula*
Dark-eyed junco	*Junco hyemalis*

Common Name	Scientific Name
Belted kingfisher	*Megaceryle alcyon*
Red-bellied woodpecker	*Melanerpes carolinus*
Wild turkey	*Meleagris gallopavo*
Song sparrow	*Melospiza melodia*
Screech owl	*Otus asio*
Osprey	*Pandion haliaetus*
Black-capped chickadee	*Parus aricapillus*
Tufted titmouse	*Parus bicolor*
House sparrow	*Passer domesticus*
Ring-necked pheasant	*Phasianus colchicus*
Rose-breasted grosbeak	*Pheucticus ludovicianus*
American woodcock	*Philohela minor*
Downy woodpecker	*Picoides pubescens*
Hairy woodpecker	*Picoides villosus*
Common grackle	*Quiscalus quiscula*
Golden-crowned kinglet	*Regulus satrapa*
White-breasted nuthatch	*Sitta carolinensis*
Chipping sparrow	*Spizella passerina*
European starling	*Sturnus vulgaris*
American robin	*Turdus migratorius*
Mourning dove	*Zenaida macroura*
Reptiles	
Snapping turtle	*Chelydraserpentina*
Black racer	*Coluber constrictor*
Ringneck snake	*Diadophis punctatus*
Black rat snake	*Elaphe obsoleta*
Northern water snake	*Nerodia sipedon*
Northern brown snake	*Storeria dekayi*
Garter snake	*Thamnophis sirtalis*
Amphibians	
American toad	*Bufo americanus*
Northern dusky salamander	*Desmognathus fuscus*
Northern two-lined salamander	*Eurycea bislineata*
Spring peeper	*Hyla crucifer*
Red spotted newt	*Notophthalmus viridescens*
Redback salamander	*Plethodon cinereus*
Slimy salamander	*Plethodon glutinosis*
Green frog	*Rana clamitans*
Pickerel frog	*Rana palustris*
Wood frog	*Rana sylvatica*

Source: Terrestrial Wildlife ans Species of Special Concern Habitat Report:
L. Robert Kimball & Associates, inc. 2006

APPENDIX J

MARYLAND HISTORIC AERIAL PHOTOS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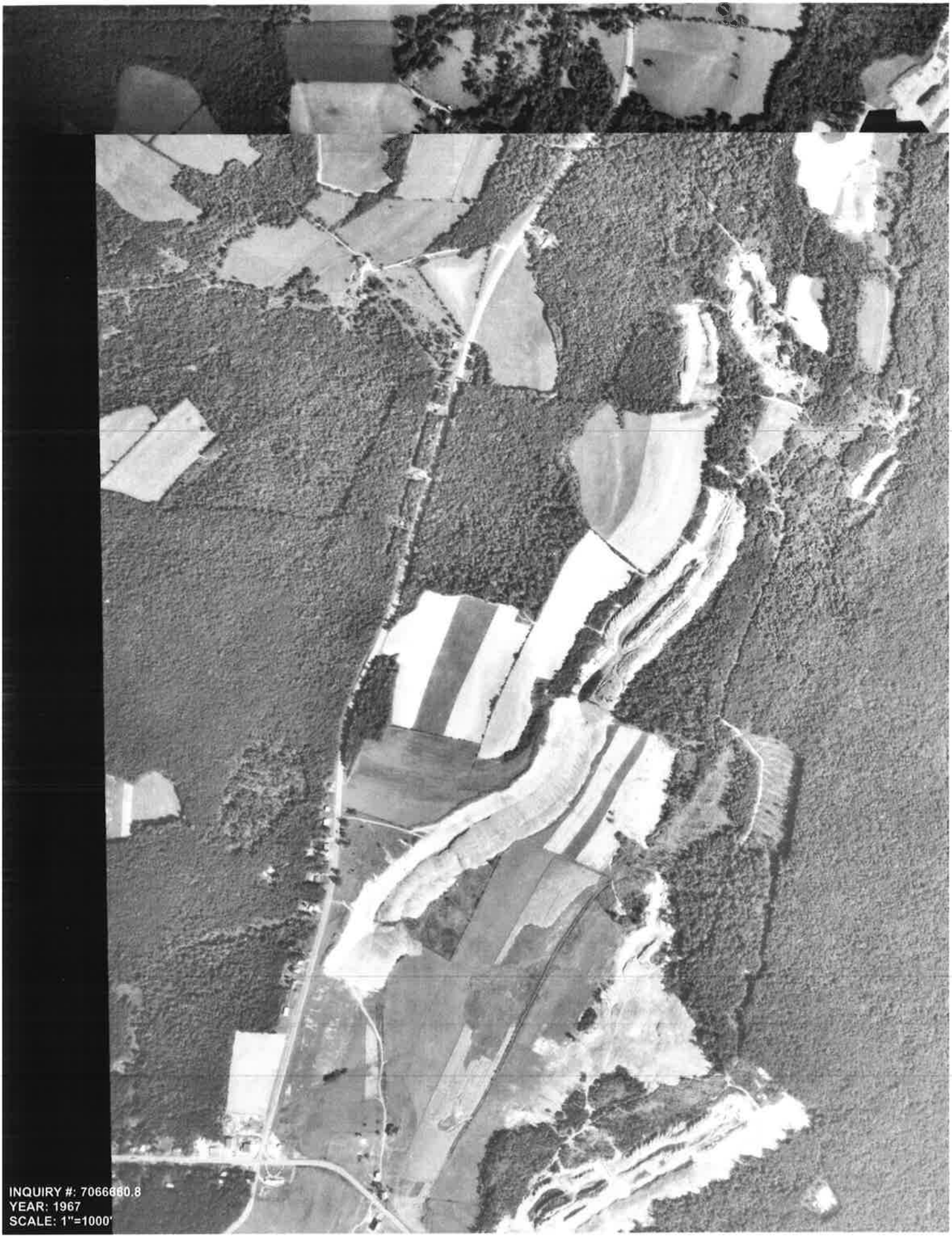
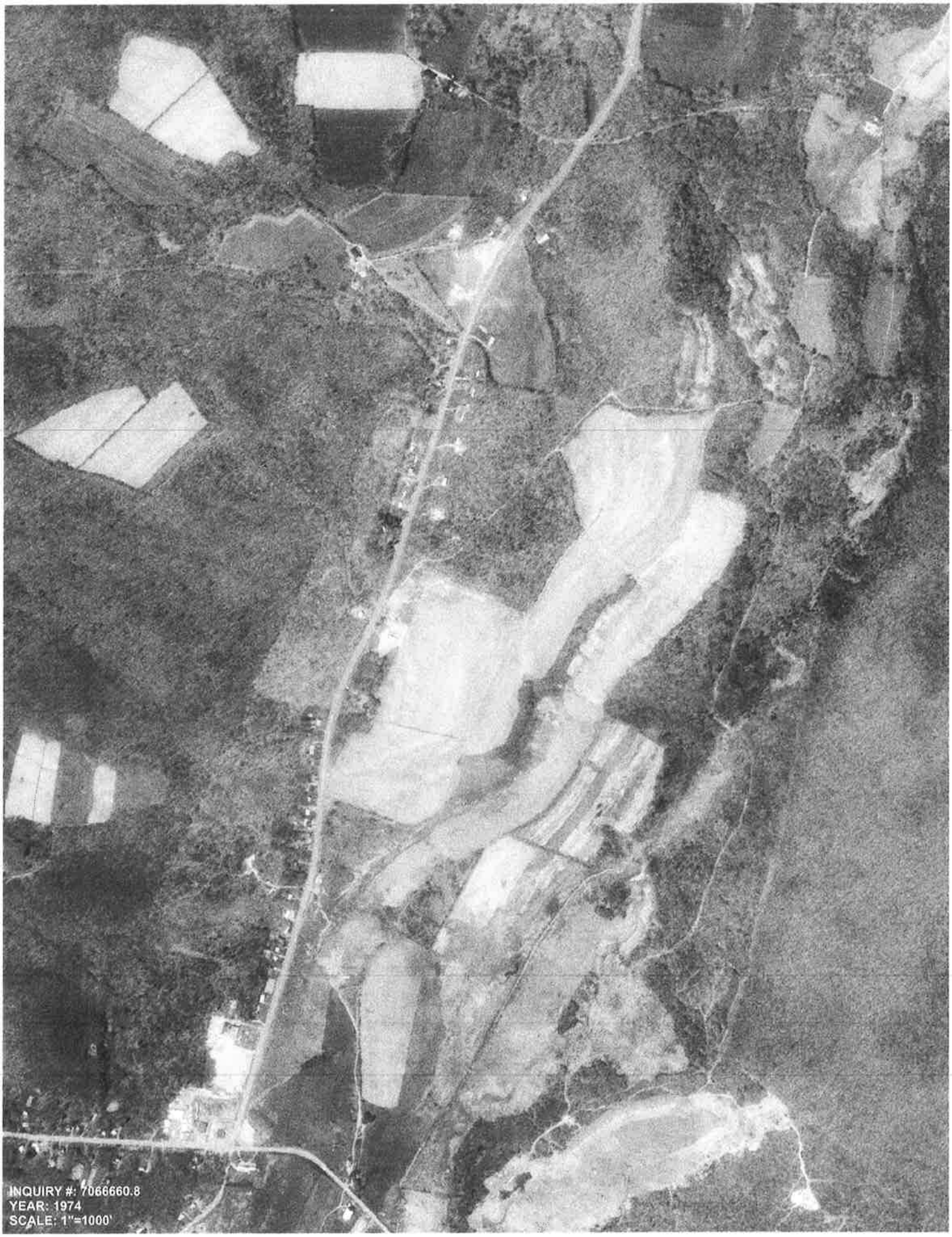
1960
LE: 1"=1000'

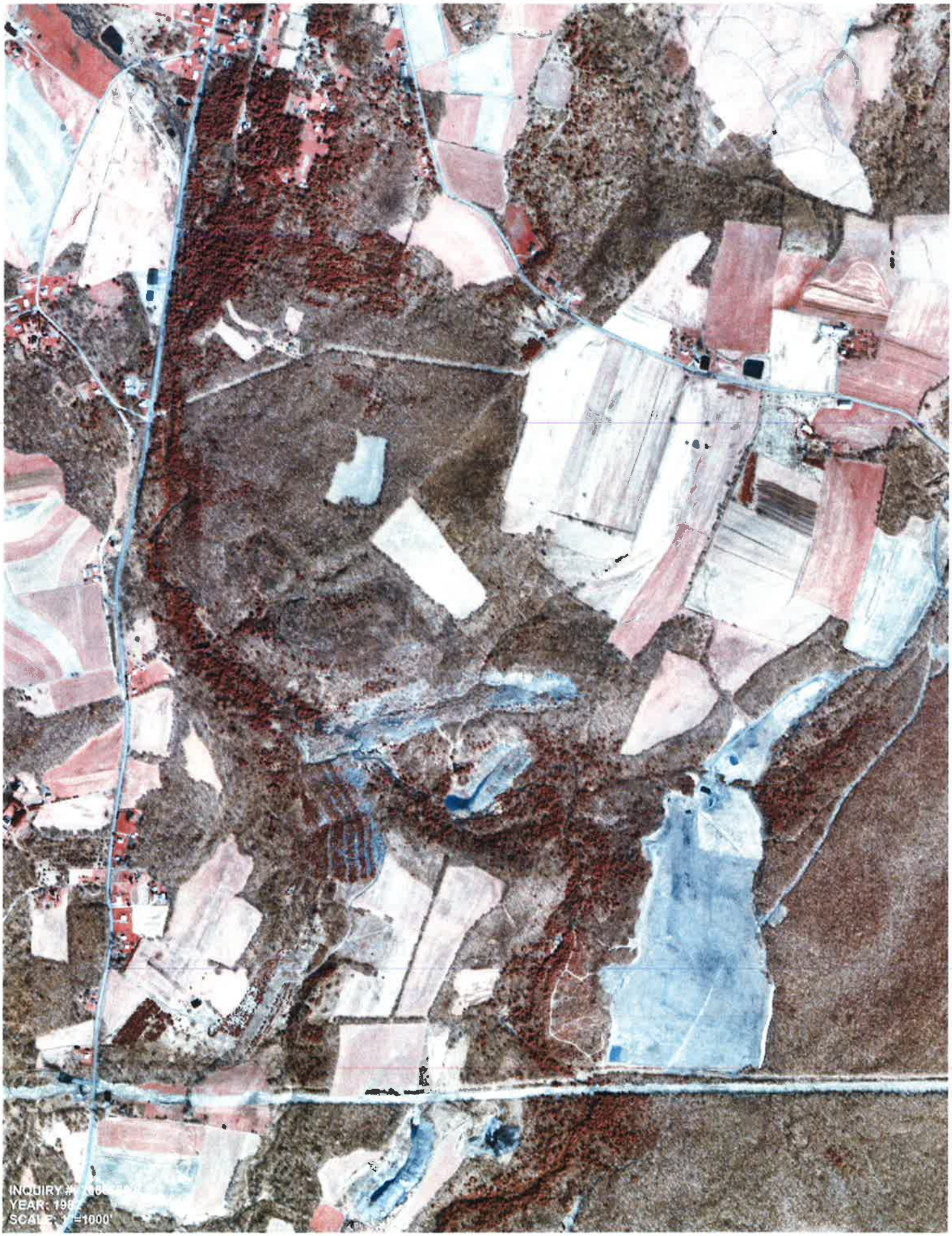

INQUIRY #: 7366660.8
YEAR: 1967
SCALE: 1"=1000'



INQUIRY #: 7066660.8
YEAR: 1967
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 1974
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 1974
SCALE: 1"=1000'


INQUIRY #
YEAR: 19
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 1982
SCALE: 1"=1000'


INQUIRY #: 7006660.8
YEAR: 1993
SCALE: 1"=


INQUIRY #: 7066660.8
YEAR: 1993
SCALE: 1" = 1000'


INQUIRY #: 7066660.8
YEAR: 2004
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 2008
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 2013
SCALE: 1"=1000'


INQUIRY #: 7066660.8
YEAR: 2017
SCALE: 1"=1000'

APPENDIX K

SPECIMEN TREE PHOTOS

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 1

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 1. Note: Tree #1 is located in Pennsylvania.

Photo 2

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 2. Note: Tree #1 is located in Pennsylvania.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 3

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 3.

Photo 4

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 4. Note: Tree 4 is <30” and is not included as a specimen tree.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 5

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 5.

Photo 6

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 6.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 7

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 7.

Photo 8

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 8.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 9

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 9.

Photo 10

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 10. Note: Tree #10 is <30” and is not considered a specimen tree

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 11

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 11.

Photo 12

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 12.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 13

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 13.

Photo 14

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 14. Note: Tree #14 is <30” and is not considered a specimen tree.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 15

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 15.

Photo 16

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 16.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 17

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 17.

Photo 18

Date Taken:
September 6, 2022

Comments:
Looking at Specimen Tree 18.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 19

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 19.

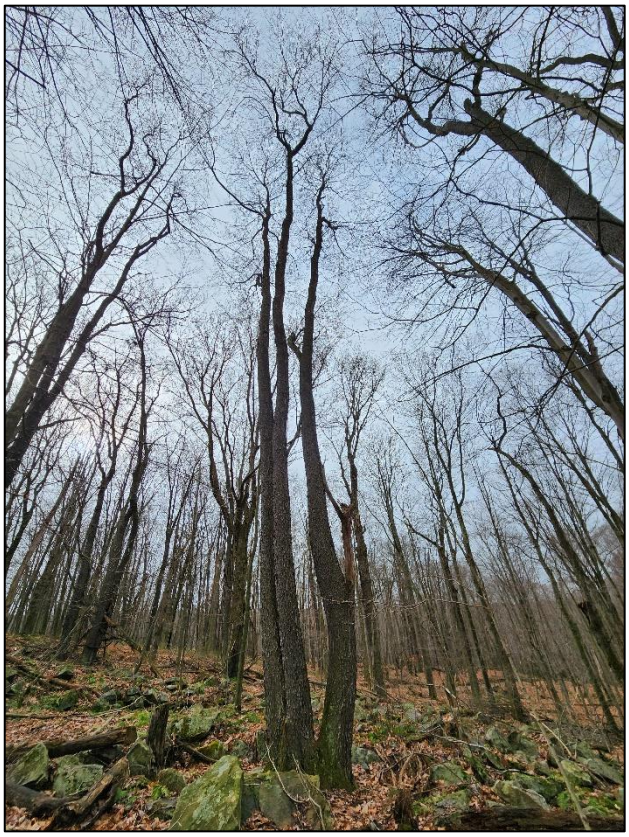


Photo 20

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 20.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 21

Date Taken:
September 8, 2022

Comments:
Looking at Specimen Tree 21.

Photo 22

Date Taken:
September 8, 2022

Comments:
Looking at Specimen Tree 22.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 23

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 23.

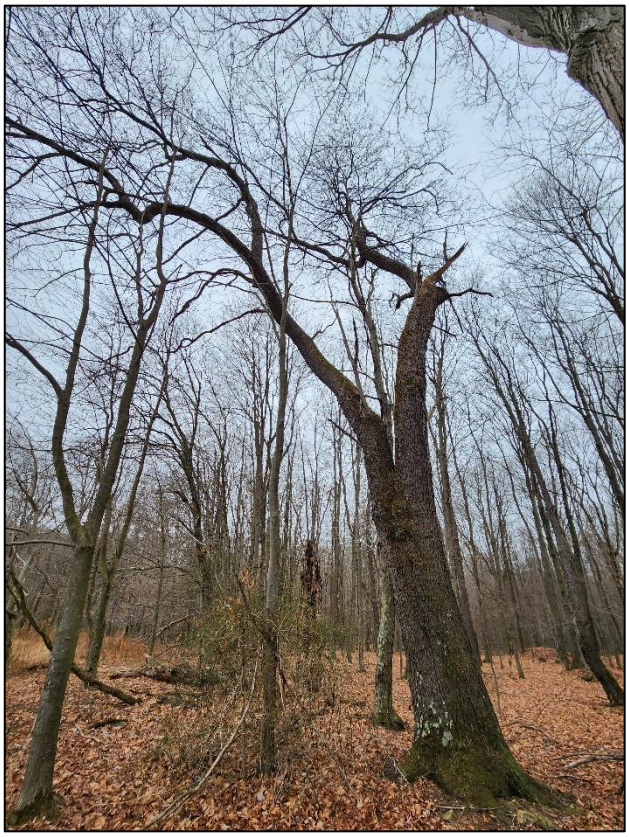


Photo 24

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 24.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 25

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 25.

Photo 26

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 26.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 27

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 27.

Photo 28

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 28.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 29

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 29.

Photo 30

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 30.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 31

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 31.

Photo 32

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 32.

RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 33

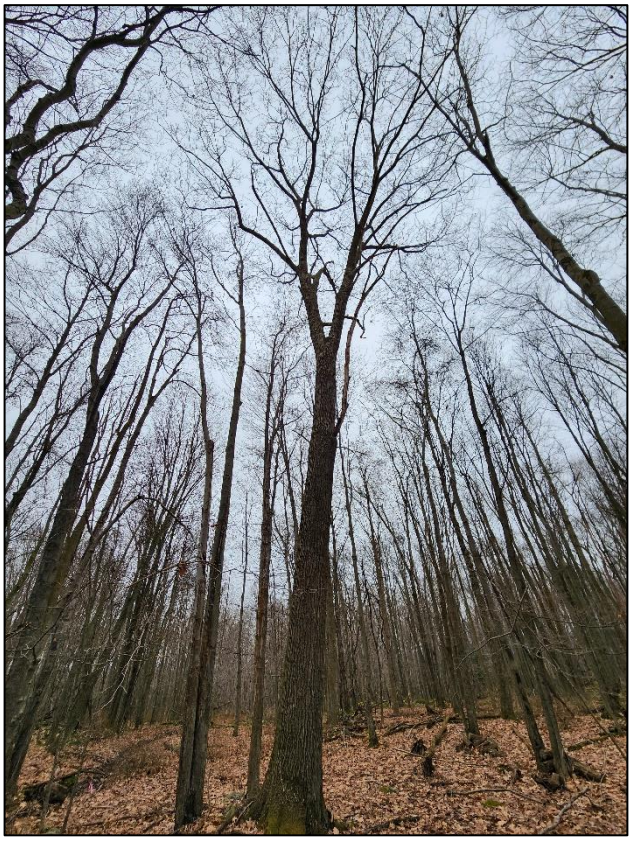
Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 33.

Photo 34

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 34.



RETTEW Associates, Inc.
Photo Documentation

Client:	**Site Name:**	**Site Location:**	**Project Number:**
Stantec Consulting Services Inc.	US 219 Meyersdale to Old Salisbury Rd	Garrett County, MD	019342063

Photo 35

Date Taken:
September 7, 2022

Comments:
Looking at Specimen Tree 35.

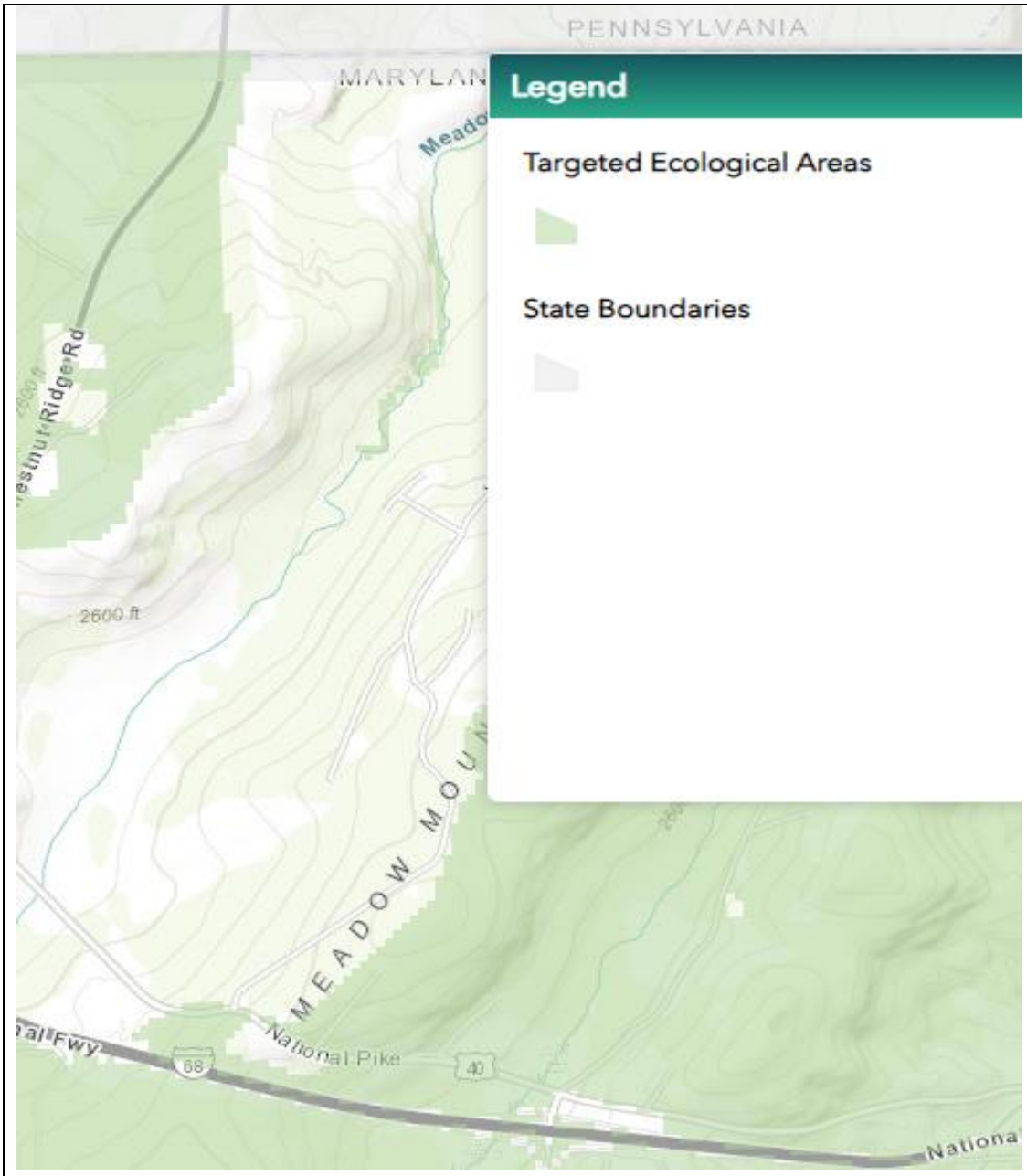
Photo 36

Date Taken:
September 7, 2022

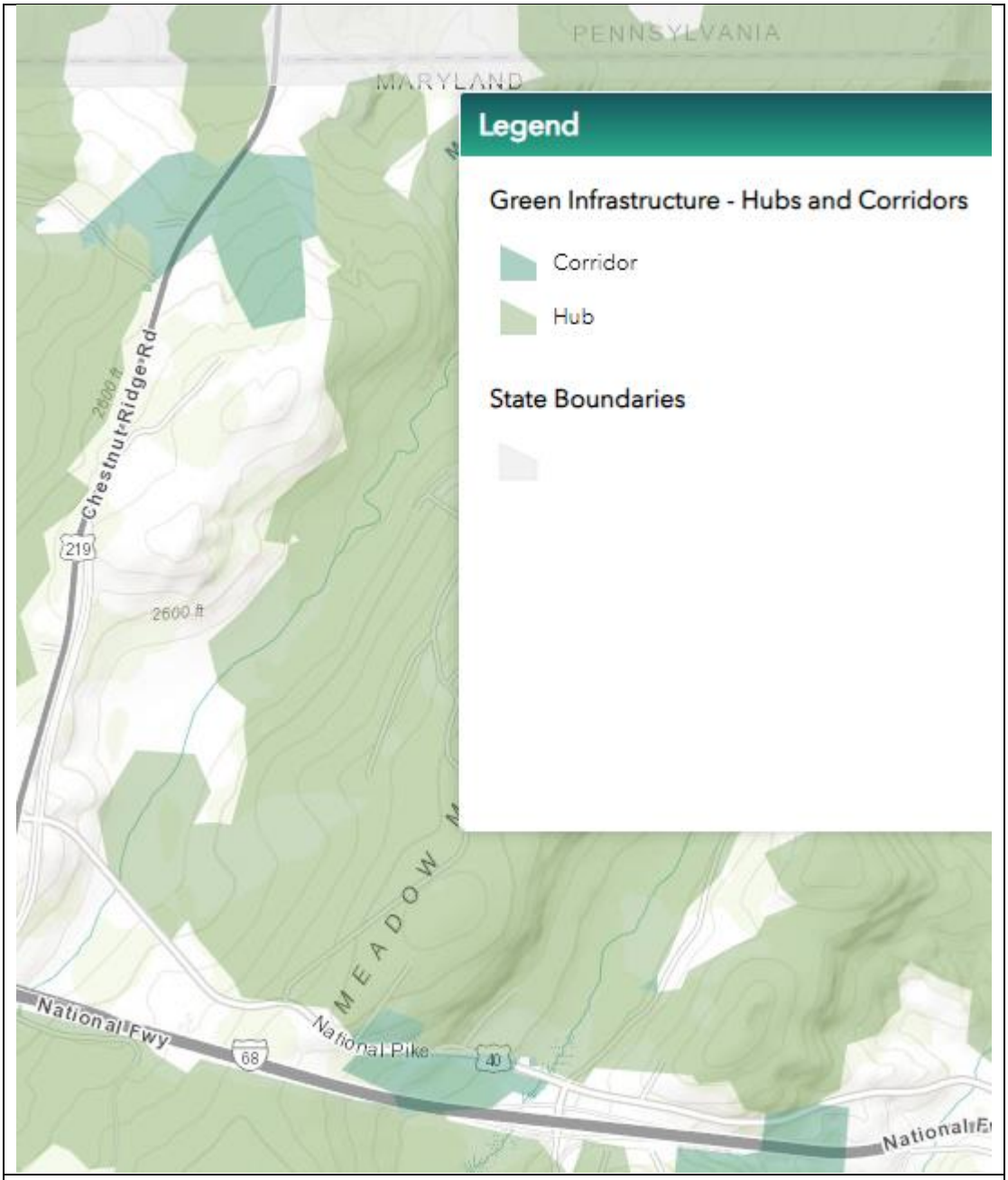
Comments:
Looking at Specimen Tree 36.

APPENDIX L

TARGETED ECOLOGICAL AREAS AND GREEN INFRASTRUCTURE



Targeted Ecological Areas
Source: Maryland's Watershed Resources Registry



Green Infrastructure – Hub and Corridor
Source: Maryland's Watershed Resources Registry