

Appendix E2 - Stormwater Restoration (Restoration Inspections)



MEMORANDUM

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Date: December 3, 2024
To: Danielle Hankins – Harford County Department of Public Works
From: Heaven Aziz – RK&K
CC: Andrew Bodt – Harford County Department of Public Works
Kate Gordon – RK&K
Re: Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspections

EXECUTIVE SUMMARY

RK&K environmental scientists conducted inspections of 12 tree planting sites located throughout Harford County during October 2024. The sites were planted by Gunpowder Valley Conservancy (GVC) and were evaluated for potential inclusion in Harford County's Watershed Protection and Restoration program for compliance with the requirements of their Municipal Separate Storm Sewer System (MS4) permit (MS4 Permit 22-DP-3310). The inspections included an assessment of the planting site boundaries, the number of live trees per acre, invasive species presence, maintenance needs and overall site conditions. Of the 12 sites inspected, four sites met MDE's forest planting Best Management Practice (BMP) criteria, which requires a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. The remaining eight sites were less than 0.5 acre in size and will be credited as Urban Tree Canopy (UTC) BMPs. The four forest planting sites are the equivalent of 4.62 impervious acre (IA) credit, and the eight UTC sites are the equivalent of 0.60 IA credit. Site mapping with the inspection results and photos for each site can be found in **Appendix A**.

INTRODUCTION

In April 2024, Harford County Department of Public Works (DPW) tasked RK&K to inspect tree planting sites in Harford County for potential credit to meet the requirements of the County's National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. The sites were planted on public and private property in Harford County and were implemented by GVC. GVC planted and maintained a total of 12 sites on approximately 5.06 acres between 2020 and 2023. Maintenance since plant installation has been variable from site to site. DPW provided RK&K with a Microsoft Word document developed by Gunpowder Valley Conservancy that contained the approximate site boundaries, estimated size of the planting sites, planting dates and quantities planted. For sites located on private property, RK&K received signed permission from the property owners before accessing the site.

METHODS

RK&K environmental scientists digitized the site boundaries in GIS based on the Word document provided by DPW. Using those site boundaries, RK&K environmental scientists conducted field inspections to determine whether each tree planting site meets MDE's forest planting BMP criteria, which requires survival of at least 100 trees per acre across a contiguous area of 0.5 acres or greater. UTC BMP credit will be taken for sites less than 0.5 acres based on the number of surviving trees at the time of inspection. Site assessment data was collected using the ArcGIS Field Maps application on an iPad equipped with an external GPS unit.

The site assessment began with walking the site boundary to determine if the existing site boundary accurately reflected the limits of the site. If the existing site boundary included an area without planted trees or planted trees extended beyond the site boundaries, the site boundaries were adjusted to reflect the current site conditions. After evaluating the site boundary, RK&K environmental scientists assessed the density of trees within the site. If the site was less than 1.0 acres, a total count of all trees ≥ 4.5 feet tall was conducted. If the site was greater than 1.0 acres, the tree density was estimated using plot points. Random plots points were developed prior to the field investigations using desktop GIS and the number of plot points were determined using **Table 1** below:

Table 1: Number of Plots per Site Acreage

Site Size (acres)	Plot Size (acre)	Radius (ft.)	# of Plots
1.0 to 1.7	0.05	26.3	3
1.8 to 2.2	0.05	26.3	4
2.3 to 2.7	0.05	26.3	5
2.8 to 3.0	0.05	26.3	6
3.1 to 3.4	0.1	37.24	3
3.5 to 4.4	0.1	37.24	4
4.5 to 5.4	0.1	37.24	5

At sites with plot points, RK&K environmental scientists navigated to the plot point and set up a circular plot using the radius designated in **Table 1** and counted the number of trees ≥ 4.5 feet tall. To determine tree density within each plot, the number of trees counted per plot was divided by the size of the plot. The location of each plot point can be found on the site mapping provided in **Appendix A**, and the data captured for each plot point is provided in **Appendix B**.

At all sites, RK&K environmental scientists evaluated the percent coverage of native seedling regeneration and the percent coverage of invasive herbaceous and woody vegetation. After conducting the total site count or plot point assessments, RK&K environmental scientists made general site assessments to determine the level of maintenance needed on the site, trends in the planted species and the invasive species present. Field staff also took photos to capture the overall condition of the site and determined an access route to each site for future maintenance needs.

On a site with a total tree count, the total number of trees per acre was determined by dividing the total trees counted by the updated site acreage following any necessary site boundary revisions. On a site with plot points, the number of trees counted per plot point was averaged, and the average trees per plot

was divided by the size of the plots. Forest planting sites (sites 0.5 acres or greater) with a density of at least 100 trees per acre were designated as passing. Impervious acre credits for forest planting and riparian forest planting sites were calculated by multiplying the current site acreage by 1.1 and 1.5 respectively, which are the BMP's equivalent impervious acre conversion factors (EIA_f) per MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated". For UTC sites, 1 tree is equal to 0.01 acres of treatment. Impervious acre credits for UTC were calculated by multiplying the total trees by 0.01, then by the BMP EIA_f of 0.28.

RESULTS

Of the 12 forest planting sites evaluated for inclusion in Harford County's Watershed Protection and Restoration program, four forest planting sites passed the inspection, for a total of 4.62 IA credits. The remaining eight sites were less than 0.5 acre in size and will be counted as UTC BMPs, for a total of 0.60 IA credits. The total IA credit for all GVC sites is 5.22 credit acres. The results of the site evaluations are summarized in **Table 2** below.

Table 2: Site Inspection Results

Site ID	Site Name	Trees per Acre	Acres	EIA Credit	Total IA Credit	Date of Inspection	Status
HA21APY000087	Jerusalem Mill A	111	0.70	1.5*	1.06	10/15/24	Pass
HA21APY000091	Jerusalem Mill Site 3	105	0.70	1.1	0.77	10/15/24	Pass
HA20APY000092	Jerusalem Mill Site 6	155	0.75	1.1	0.82	10/15/24	Pass
HA22APY000098	Phil Klein B	120	1.79	1.1	1.97	10/16/24	Pass
Forest Planting Subtotals:		3.94			4.62		
Site ID	Site Name	Total Trees	Acres	EIA Credit **	Total IA Credit	Date of Inspection	
HA20APY000088	Jerusalem Mill B	38	0.17	0.28	0.11	10/15/24	
HA21APY000089	Jerusalem Mill Site 1	9	0.03	0.28	0.03	10/15/24	
HA21APY000090	Jerusalem Mill Site 2	10	0.14	0.28	0.03	10/15/24	
HA21APY000093	Jerusalem Mill Site 7A	27	0.14	0.28	0.08	10/15/24	
HA21APY000094	Jerusalem Mill Site 7B	11	0.05	0.28	0.03	10/15/24	
HA21APY000095	Jerusalem Mill Site 7C	33	0.21	0.28	0.09	10/15/24	
HA23APY000096	Jerusalem Mill Site F23	75	0.33	0.28	0.21	10/15/24	
HA22APY000097	Phil Klein A	7	0.05	0.28	0.02	10/16/24	
Urban Tree Canopy Subtotals:		210	1.12		0.60		
Total IA Credit Passing				5.06		5.22	

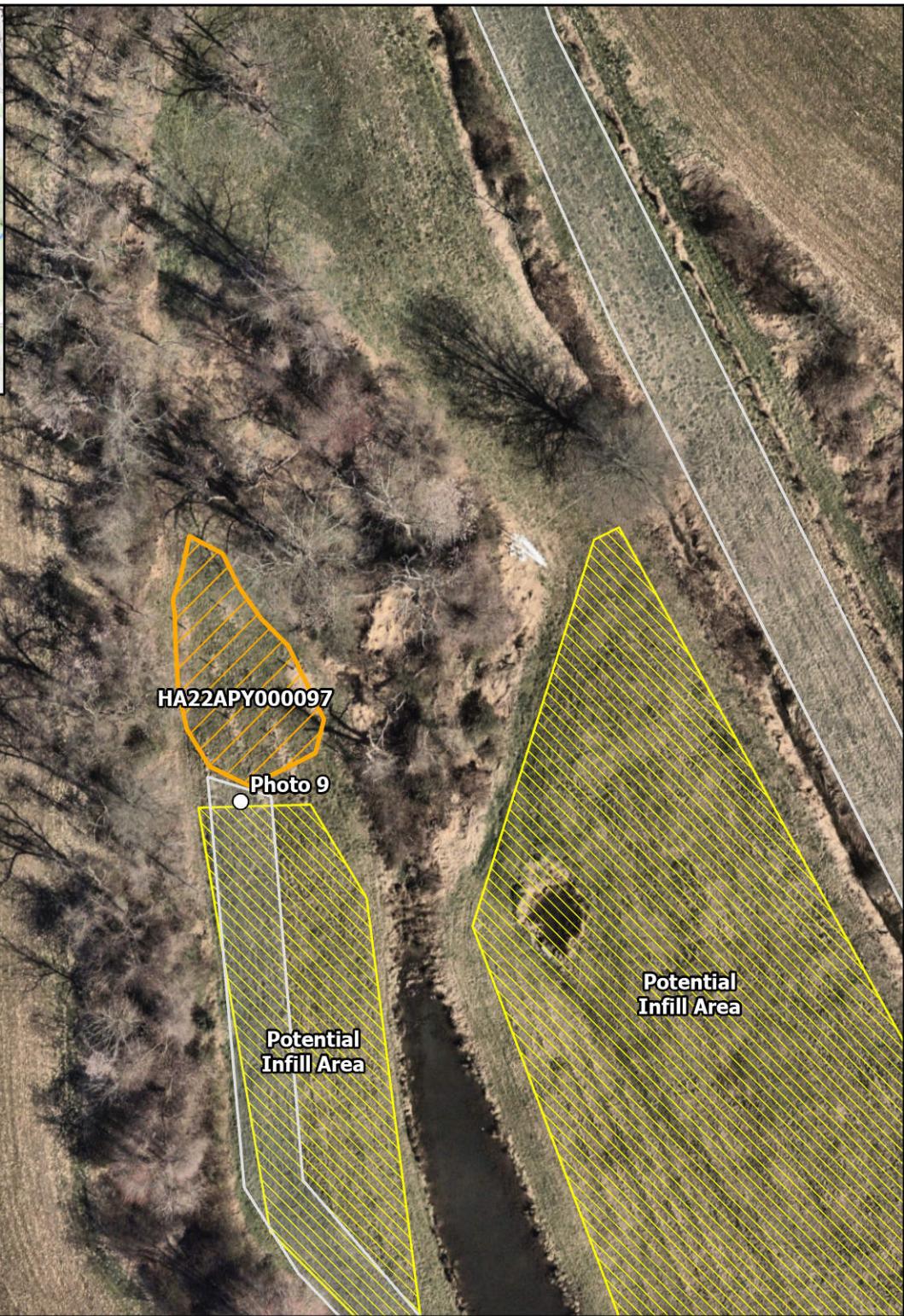
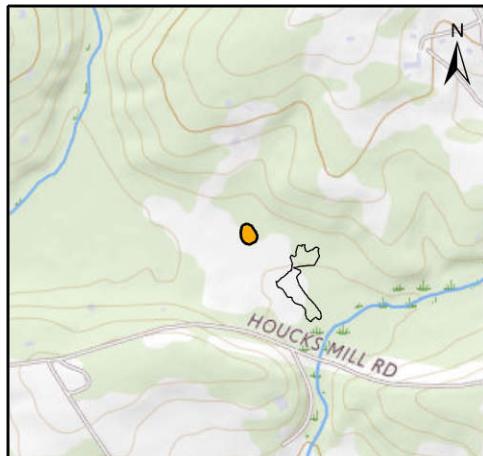
*Riparian Forest Planting

**EIA Credit for UTC was calculated by multiplying Total Trees by 0.01, then by the 0.28 BMP EIA_f credit multiplier. Each tree is the equivalent of 1/100th of an acre, according to MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated".

CONCLUSION

Of the 12 GVC sites inspected, four sites passed MDE's forest planting BMP criteria and will be counted as forest planting BMPs, which require a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. The remaining eight sites were less than 0.5 acre and will be counted as UTC BMPs. The IA credit at all GVC sites totals 5.22 IA credits, as the four passing forest planting sites are the equivalent of 4.62 IA credits, and the eight UTC sites are the equivalent of 0.60 IA credit. Typical site maintenance required includes knockdown mowing, vine removal, removal of Bradford pear, herbicide treatment of invasive species, hand clearing around tree pits, and removing or adding tree shelters. Some sites have infill planting opportunities, which could result in additional credit on UTC sites. Common causes of tree planting mortality include poor soils, inappropriate species selection, mower damage, deer browse, buck rub, and vegetative competition from invasive species.

Appendix A – Site Mapping and Photos



BMP Type: Urban Tree Canopy

Total Trees: 7

Planted Acres: 0.05

Total IA Credit: 0.02

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Small area with 7 trees. This area may have been connected to the larger planting area at one point, but the majority of the field is no longer planted. All dogwoods and sweet birch died. Infill opportunities include the majority of the field. The field appears to be mowed a few times a year.

Maintenance Comments: Could infill/replant

Owner Type: Homeowner

Forest Planting

Riparian Forest Planting

Urban Tree Canopy

Access Route

Observation Polygon

DNR Waters

Plot Point

Photo Point

Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

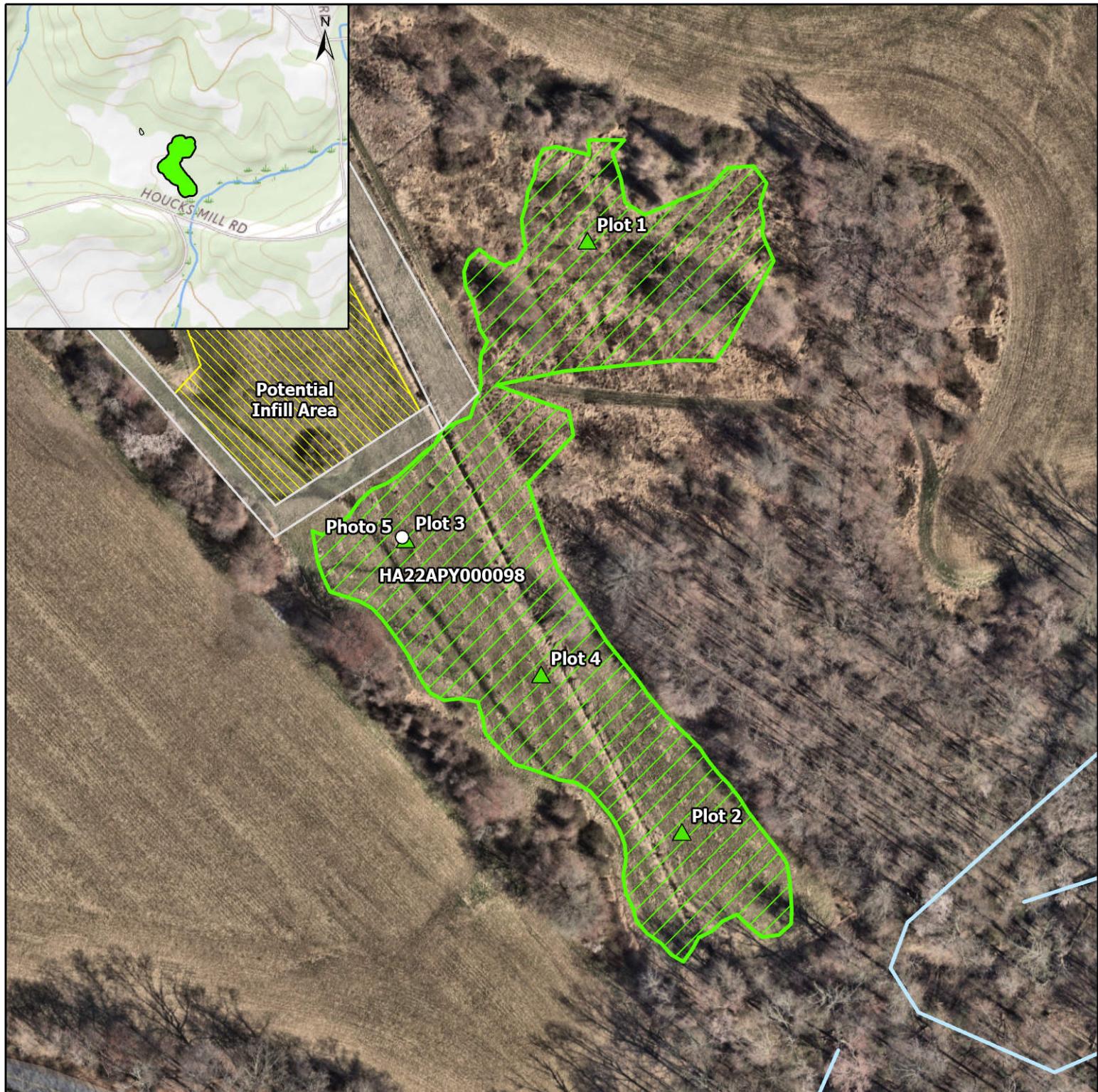
Phil Klein A
Site ID: HA22APY000097

0 25 50 100
1 inch = 50 feet

November 2024

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BMP Type: Forest Planting
Trees per Acre: 125
Planted Acres: 1.79
Total IA Credit: 1.97
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Maintained Turf

General Comments: Trees are planted in an old field that's periodically mowed. Trees planted in cages had low survival; all other trees generally healthy. Understory includes rye grass, deer tongue, stiltgrass, with patches of milkweed.

Maintenance Comments: Some shelters and cages could use replacement or repairs. NE part of site is an unmanaged understory and could use mile-a-minute control

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- ▲ Plot Point
- Photo Point
- ◆ Observation Point

Gunpowder Valley Conservancy
Fall 2024 Planting Inspections

Phil Klein B
Site ID: HA22APY000098

0 50 100 200
 1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

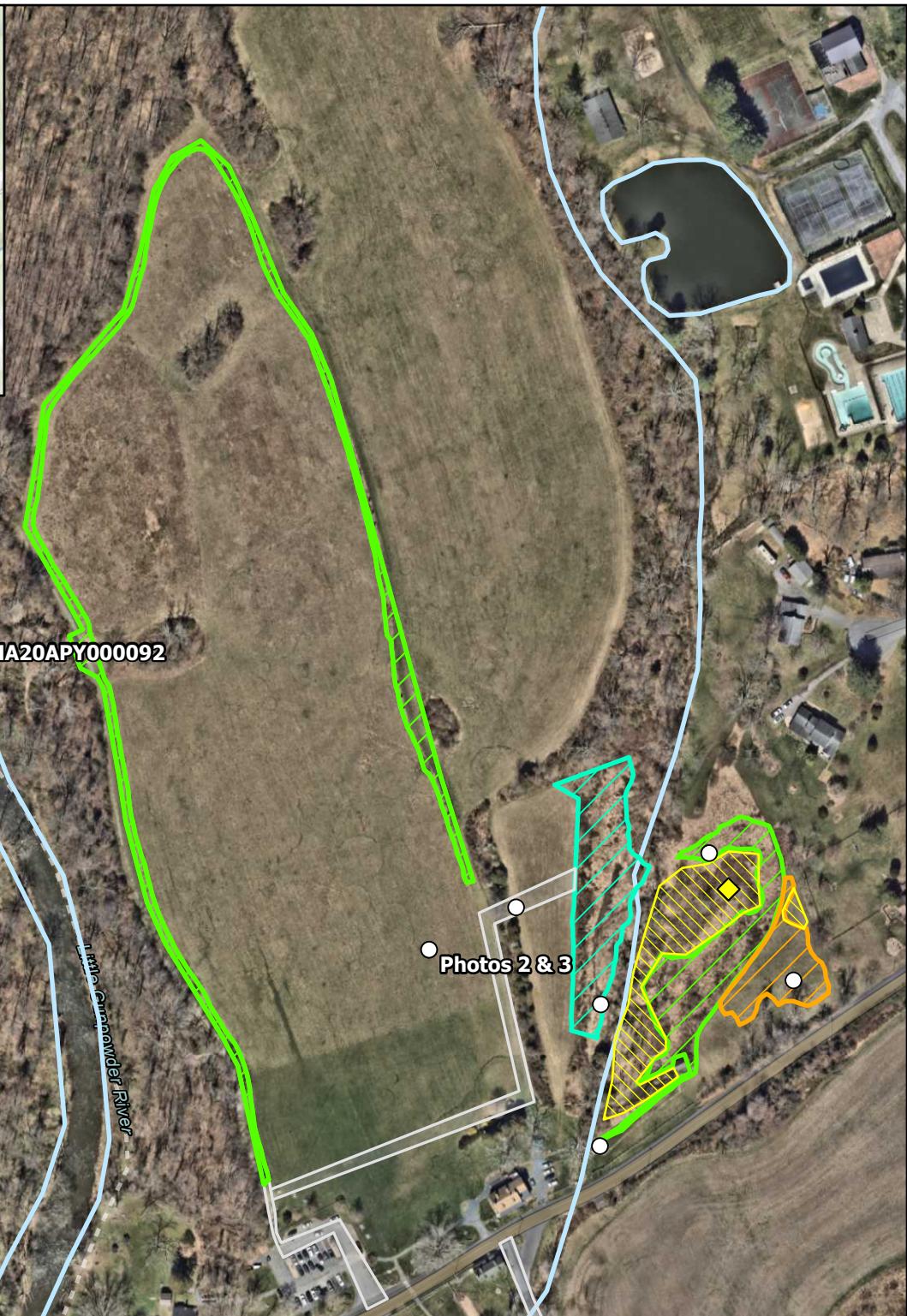
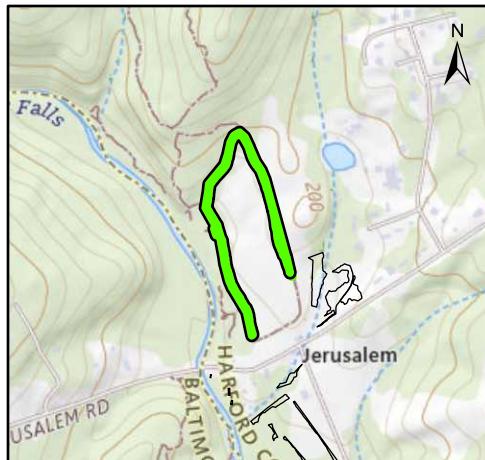
Phil Klein-Houcks Mill



Photo 5: Overview photo of Klein B (HA22APY000098) looking southeast.



Photo 9: Interior of Klein A (HA22APY000097) site looking west.



BMP Type: Forest Planting
Trees per Acre: 155
Planted Acres: 0.75
Total IA Credit: 0.82
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Green ash, red maple regen. One row of trees planted along a trail. Width is about 6 feet at its widest point. Most of 6' wide strip is unmanaged allowing invasives to take over. Site is adjacent to a large mowed field. Some portions have managed understory but mostly unmanaged.
Maintenance Comments: Clear planting pits of invasives.
Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- Plot Point
- Photo Point
- Observation Point

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Fall 2024 Planting Inspections

Jerusalem Mill Site 6
Site ID: HA20APY000092

0 125 250 500
ft
1 inch = 250 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

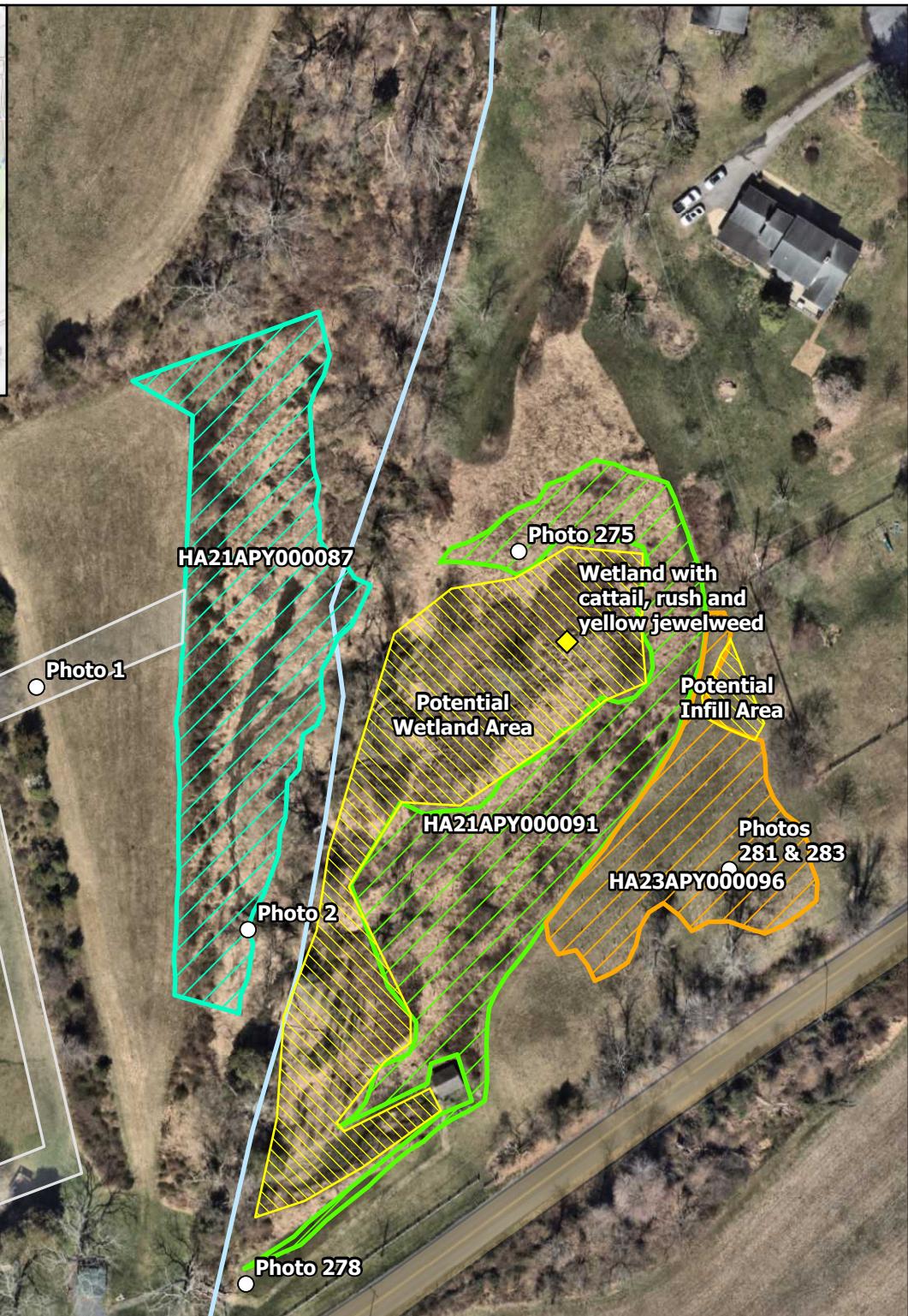
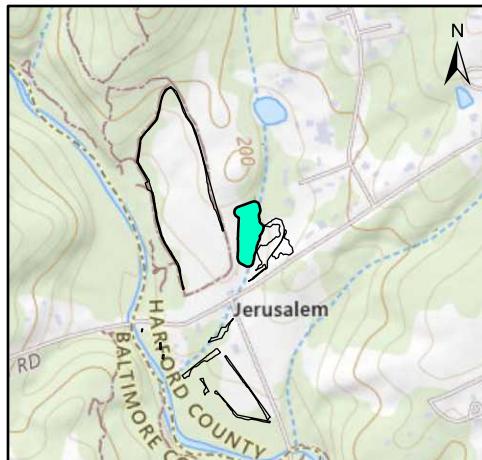
Jerusalem Mill, Site 6, HA20APY000092



Photo 2: Overview photo looking north.



Photo 3: Overview of planting strip looking northwest.



BMP Type: Riparian Forest Planting

Trees per Acre: 111

Planted Acres: 0.70

Total IA Credit: 1.06

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Unmanaged planted area adjacent to stream and mowed field. Sensitive fern, yellow jewelweed and Persicaria sp in herbaceous.

Maintenance Comments: Bradford pear and multiflora control needed.

Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- ▲ Plot Point
- Photo Point
- ◆ Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

Jerusalem Mill A Site ID: HA21APY000087

0 50 100 200
1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

Jerusalem Mill, Site A, HA21APY000087



Photo 1: Overview photo looking northeast.

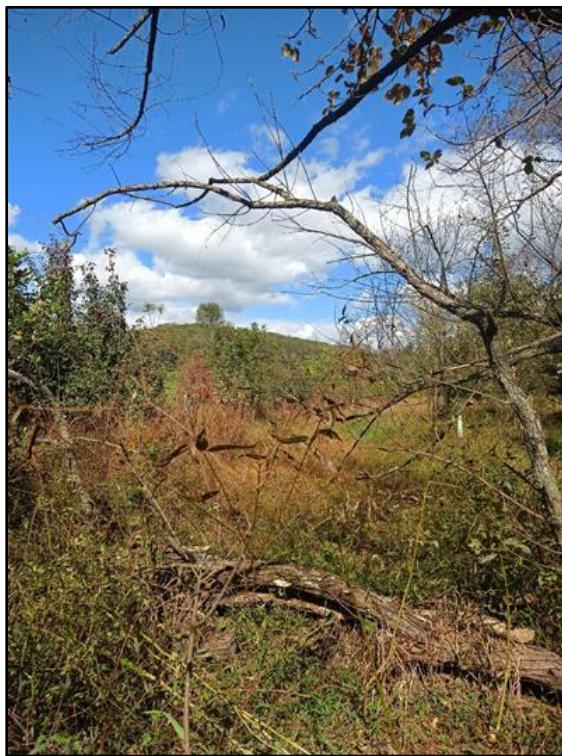
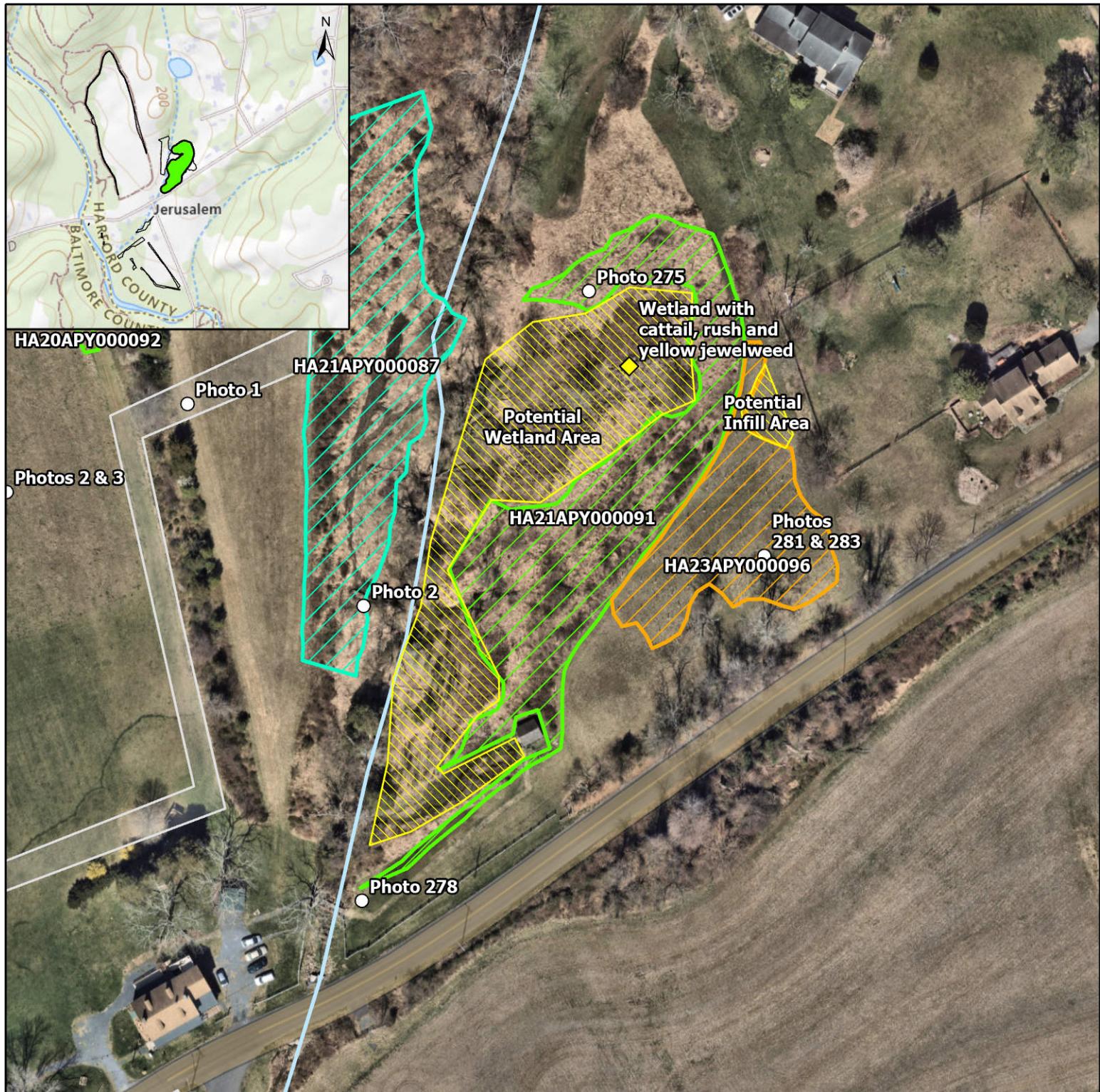


Photo 3: Interior of site, thick brush in understory.



BMP Type: Forest Planting
Trees per Acre: 105
Planted Acres: 0.70
Total IA Credit: 0.77
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Bee balm, ironweed and golden rod in herbaceous.
Maintenance Comments: Minor maintenance needs, maintain planting pits and tree shelters.
Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- ▲ Plot Point
- Photo Point
- ◆ Observation Point

Gunpowder Valley Conservancy
Fall 2024 Planting Inspections

Jerusalem Mill Site 3
Site ID: HA21APY000091

0 50 100 200
ft
1 inch = 100 feet

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Photo Log

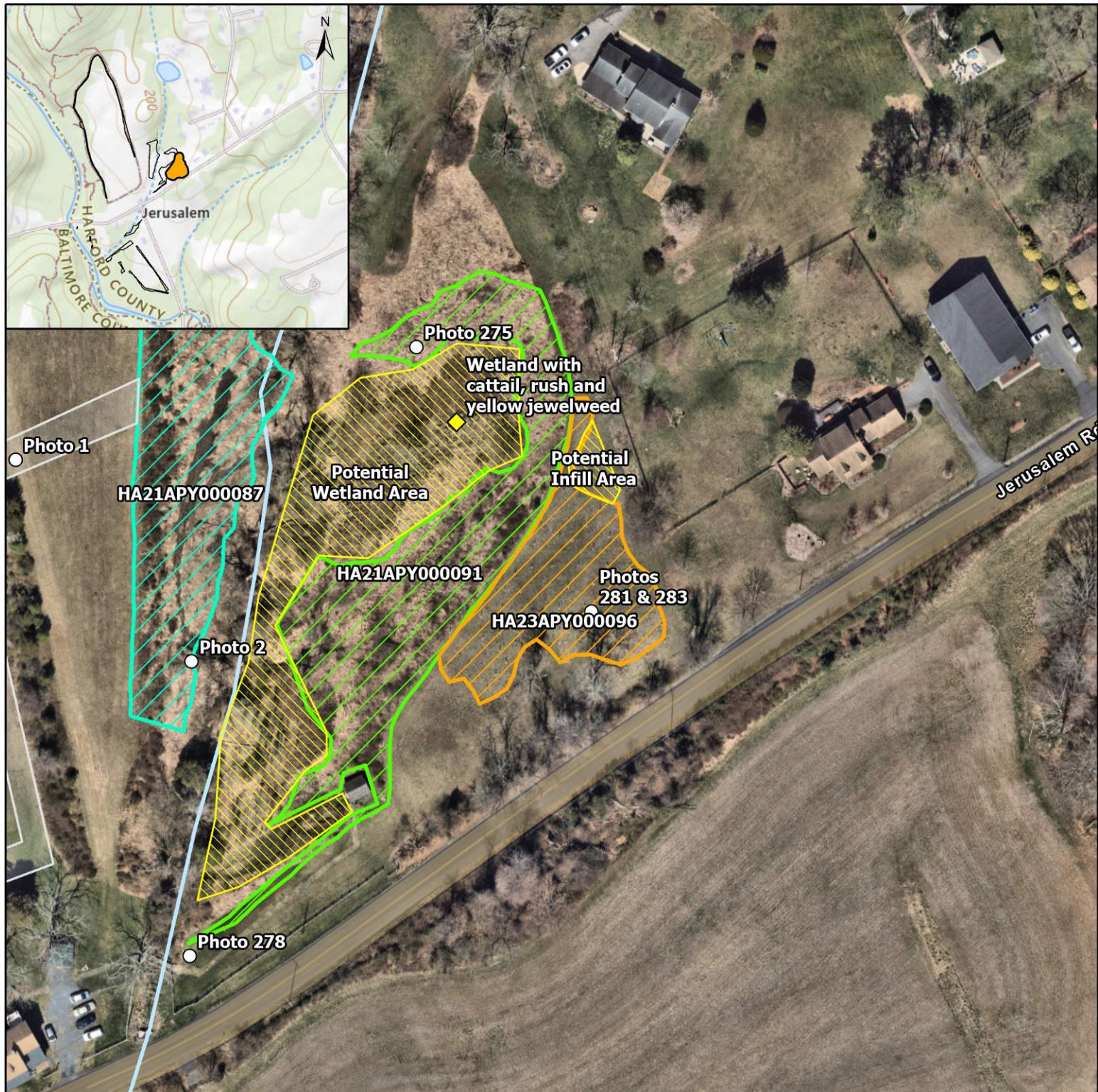
Jerusalem Mill, Site 3, HA21APY000091



Photo 278: Overview photo looking northeast.



Photo 275: Interior of site, healthy tree plantings.



BMP Type: Urban Tree Canopy

Total Trees: 75

Planted Acres: 0.33

Total IA Credit: 0.21

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Trees are very young.

Planted on a slope with wetland at bottom of slope. Many have not broken surface of shelter. Most are surviving.

Maintenance Comments: Maintain planting pits and tree shelters

Owner Type: DNR

Forest Planting

Riparian Forest Planting

Urban Tree Canopy

Access Route

Observation Polygon

DNR Waters

Plot Point

Photo Point

Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

**Jerusalem Mill Site F23
Site ID: HA23APY000096**

0 50 100 200
ft
1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

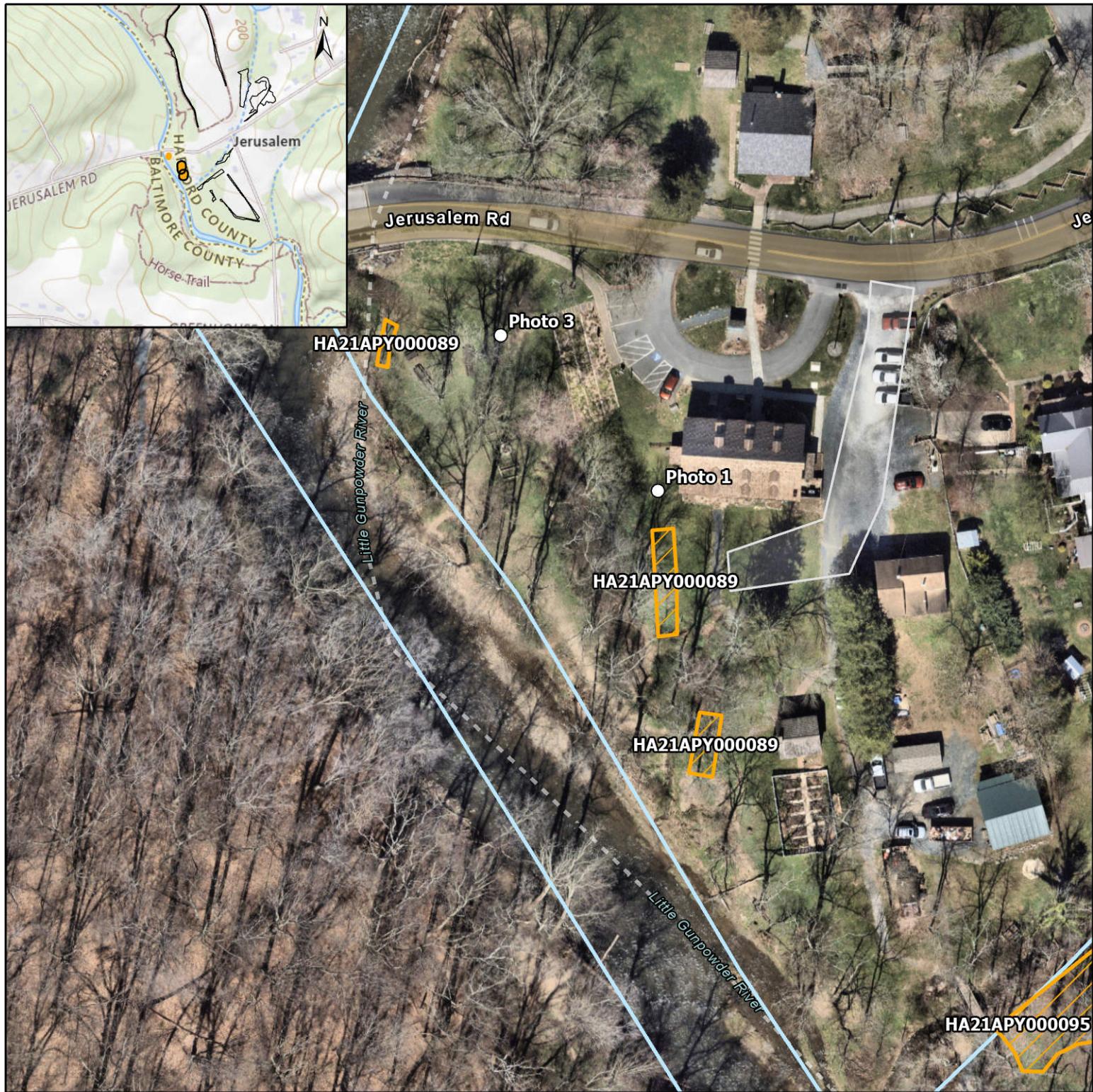
Jerusalem Mill, Site F23, HA23APY000096



Photo 281: Overview photo looking north.



Photo 283: Interior of site, healthy tree plantings uphill of wetland.



BMP Type: Urban Tree Canopy

Total Trees: 9

Planted Acres: 0.03

Total IA Credit: 0.03

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: 9 trees planted across 3 small areas. 3 along the river near picnic tables. 6 scattered behind headquarters building.

Maintenance Comments: N/A

Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- ▲ Plot Point
- Photo Point
- ◆ Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

**Jerusalem Mill Site 1
Site ID: HA21APY000089**

0 35 70 140
1 inch = 70 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

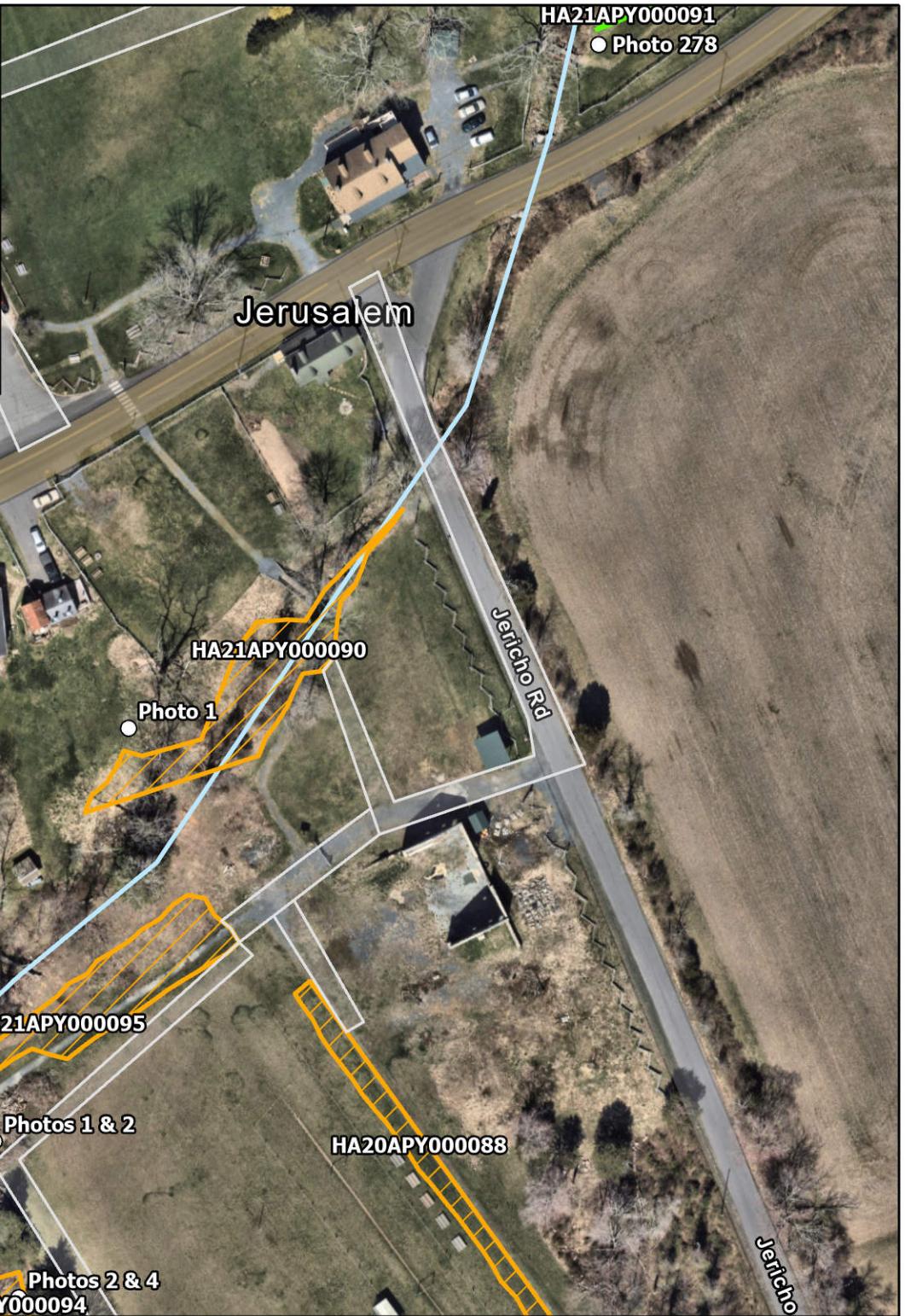
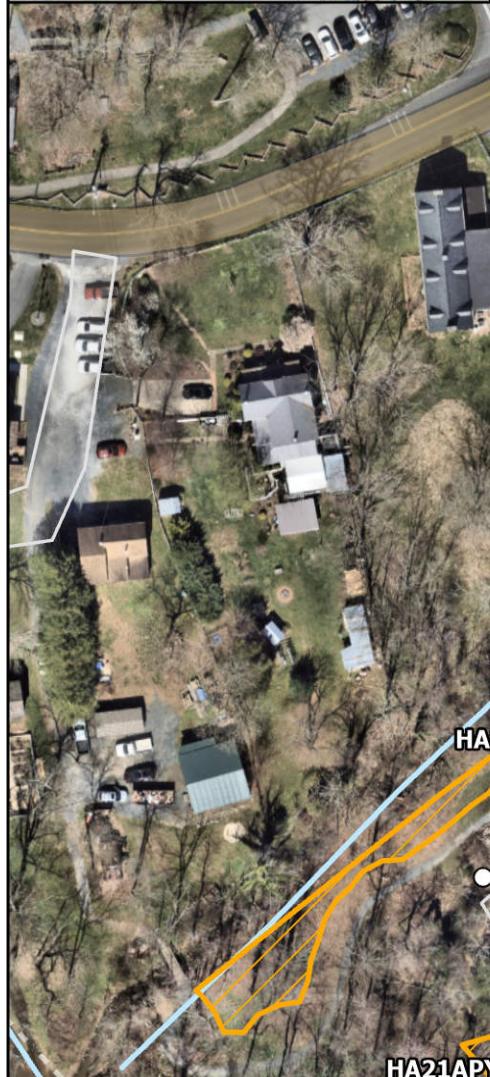
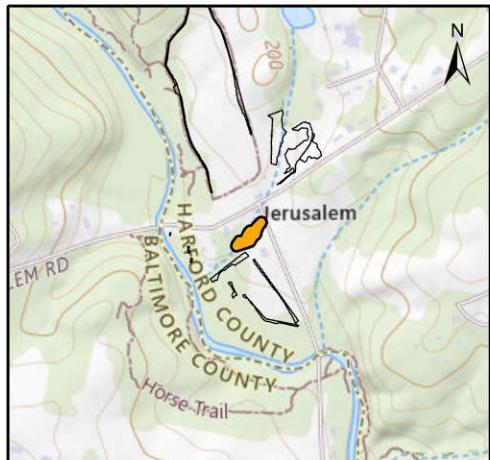
Jerusalem Mill, Site 1, HA21APY000089



Photo 1: Six individual trees looking southwest.



Photo 3: Three individual trees looking north.



BMP Type: Urban Tree Canopy

Total Trees: 10

Planted Acres: 0.14

Total IA Credit: 0.03

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: 10 trees planted along stream as infill in between mature trees.

Maintenance Comments: Shelter maintenance to clean out invasives and potentially infill. No specific infill area but can fill in along stream.

Owner Type: DNR

Forest Planting

Riparian Forest Planting

Urban Tree Canopy

Access Route

Observation Polygon

DNR Waters

Plot Point

Photo Point

Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

Jerusalem Mill Site 2 Site ID: HA21APY000090

0 50 100 200 N

1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

Jerusalem Mill, Site 2, HA21APY000090



Photo 1: Overview photo looking southwest.



BMP Type: Urban Tree Canopy

Total Trees: 33

Planted Acres: 0.21

Total IA Credit: 0.09

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Trees are generally in good condition. Part of understory is maintained along trail. Understory consists of ash and persimmon regen, coreopsis, goldenrod, stiltgrass, Japanese honeysuckle.

Maintenance Comments: Minor maintenance needs, maintain planting pits and tree shelters.

Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- Plot Point
- Photo Point
- Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

Jerusalem Mill Site 7C Site ID: HA21APY000095

0 50 100 200
1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

Jerusalem Mill, Site 7C, HA21APY000095



Photo 1: Overview photo looking east.

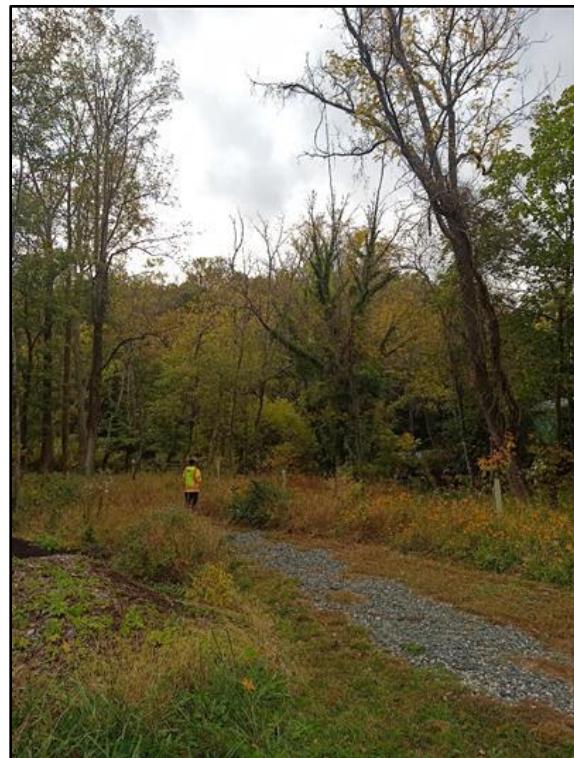


Photo 2: Tree plantings with unmanaged understory looking west.



BMP Type: Urban Tree Canopy

Total Trees: 11

Planted Acres: 0.05

Total IA Credit: 0.03

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Very small area with only 11 surviving trees. Plants are within existing forest. Middle section of poly is regen.

Maintenance Comments: Shelters and planting pit maintenance.

Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- Plot Point
- Photo Point
- Observation Point

Gunpowder Valley Conservancy
Fall 2024 Planting Inspections

Jerusalem Mill Site 7B
Site ID: HA21APY000094

0 35 70 140

1 inch = 70 feet



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Photo Log

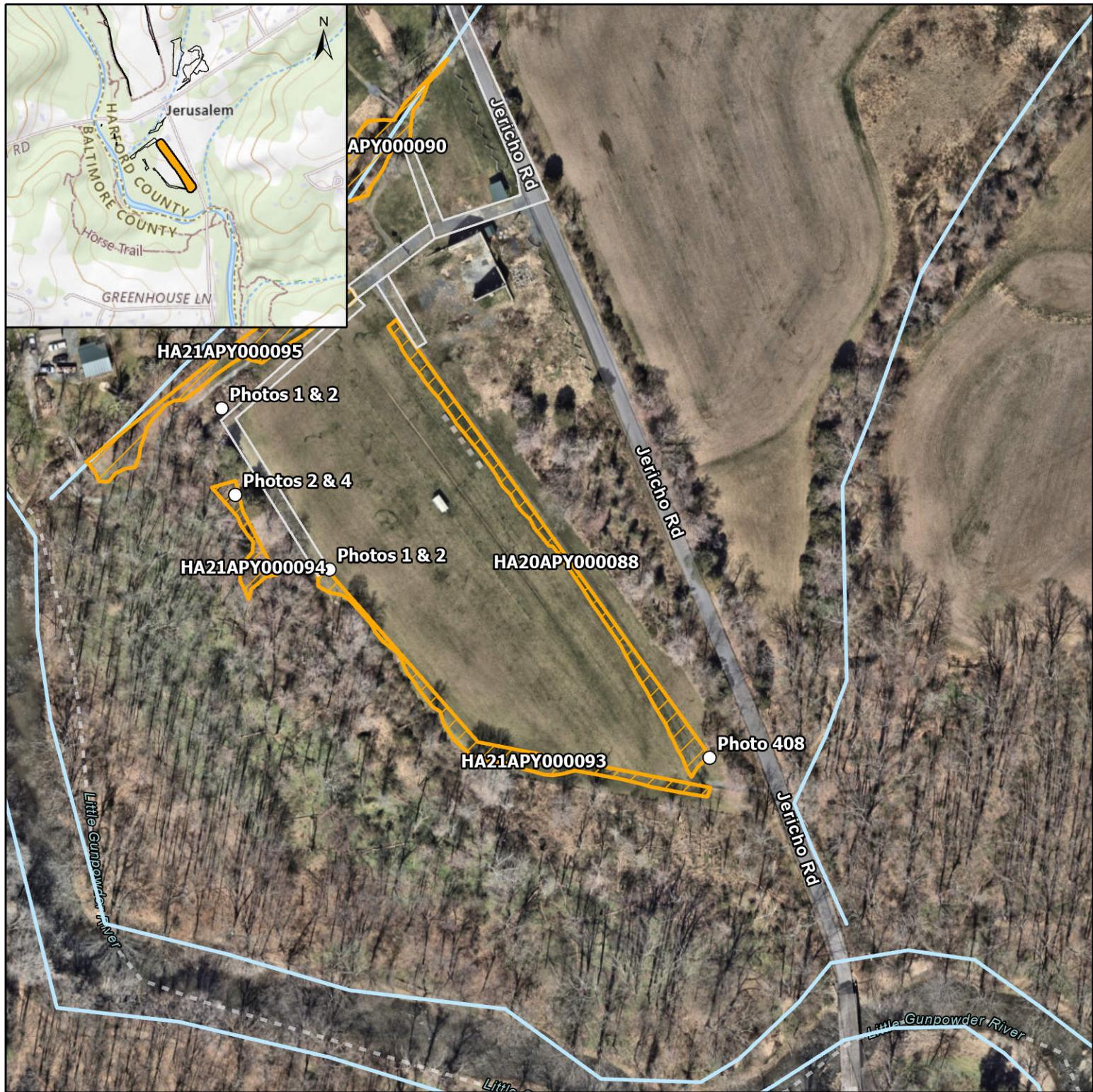
Jerusalem Mill, Site 7B, HA21APY000094



Photo 4: Overview photo looking south.



Photo 2: Interior of site, thick brush in understory.



BMP Type: Urban Tree Canopy

Total Trees: 38

Planted Acres: 0.17

Total IA Credit: 0.11

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Two rows of trees along a path. There are a few gaps 20-35 feet in between trees.

Maintenance Comments: Some invasive removal in planting pits, maintain tree shelters.

Owner Type: DNR

Forest Planting

Riparian Forest Planting

Urban Tree Canopy

Access Route

Observation Polygon

DNR Waters

Plot Point

Photo Point

Observation Point

Gunpowder Valley Conservancy Fall 2024 Planting Inspections

Jerusalem Mill B Site ID: HA20APY000088

0 75 150 300
1 inch = 150 feet

November 2024

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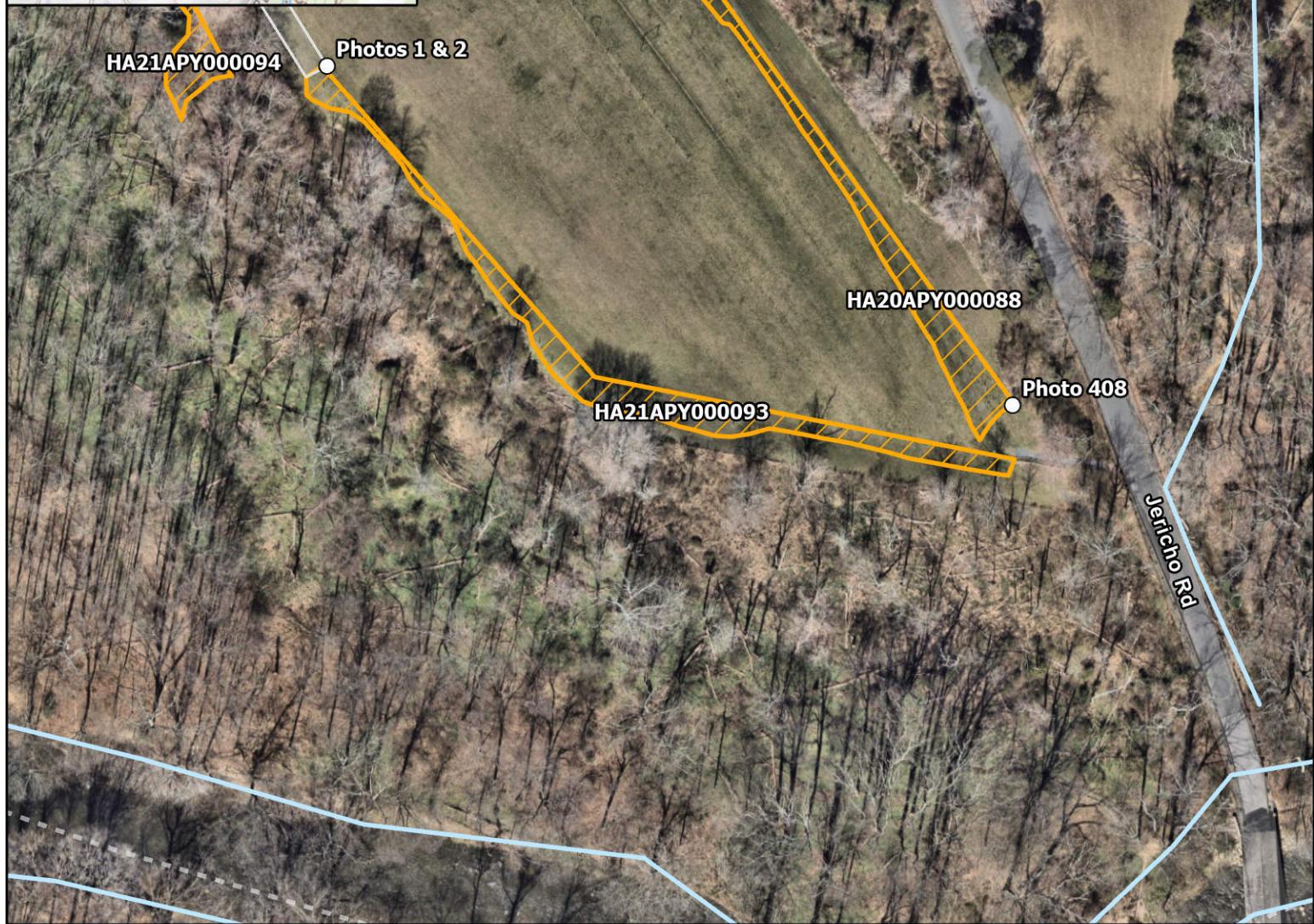
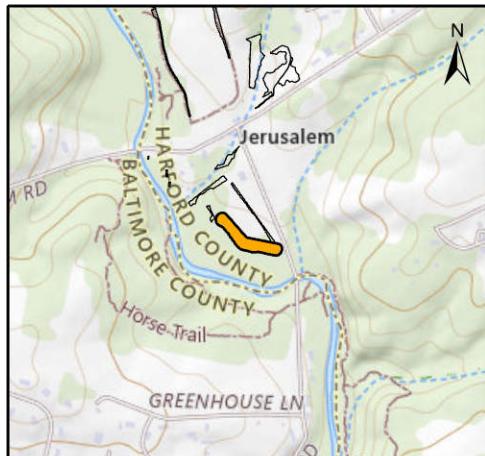


Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

Jerusalem Mill, Site B, HA20APY000088



Photo 408: Overview photo looking north.



BMP Type: Urban Tree Canopy

Total Trees: 27

Planted Acres: 0.14

Total IA Credit: 0.08

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: One row of trees planted along edge of field.

Maintenance Comments: Planting pit and tree shelter maintenance.

Owner Type: DNR

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- Observation Polygon
- DNR Waters
- Plot Point
- Photo Point
- Observation Point

Gunpowder Valley Conservancy
Fall 2024 Planting Inspections

Jerusalem Mill Site 7A
Site ID: HA21APY000093

0 50 100 200
ft
1 inch = 100 feet

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Harford County Fall 2024 Gunpowder Valley Conservancy Tree Planting Site Inspection Memo
Photo Log

Jerusalem Mill, Site 7A, HA21APY000093



Photo 2: Overview photo looking east.



Photo 1: Interior of site, healthy tree plantings.

Appendix B – Plot Point Table

Harford County Fall 2024 Gunpowder Valley Conservancy Site Inspections - Plot Point Table

Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native Regen	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
Phil Klein B	Plot 1	0.05 ac	7.00	140	0	15	2	Trees planted include sycamore, willow oak, Northern red oak, and Canadian serviceberry, all trees except Northern red oak are vigorous. Understory is primarily native with deer tongue grass, goldenrod, and blackberry. High deer activity observed.
Phil Klein B	Plot 2	0.05 ac	7.00	140	0	85	20	Plot includes black locust, swamp white oak and pignut hickory, all of which are vigorous. Invasives include reed canary grass, rye grass, and multiflora rose in tree shelters. Understory includes patches of milkweed and dog bane. Some shelters could be reattached to their stakes.
Phil Klein B	Plot 3	0.05 ac	5.00	100	0	70	0	Understory includes rye grass, deer tongue grass, and sensitive fern. Plot includes primarily Northern red oak that is not vigorous. Invasives include minor multiflora rose controlled by periodic mowing.
Phil Klein B	Plot 4	0.05 ac	6.00	120	0	25	25	Plot includes Northern red oak, swamp white oak, and red maple; all species look good. Understory includes deer tongue grass, Japanese stiltgrass, rye grass, and reed canary grass. Invasives include Japanese stiltgrass, reed canary grass, multiflora rose (in shelters), and rye grass. About 25% of the plot has no trees where an old, compacted four wheeler path cuts through.
		AVERAGE:	6.25	125	0	49	12	



MEMORANDUM

700 East Pratt Street, Suite 500
Baltimore, MD 21202
Phone 410.728.2900
Fax 410.728.2834
www.rkk.com

Date: December 3, 2024
To: Danielle Hankins – Harford County Department of Public Works
From: Heaven Aziz – RK&K
CC: Lindsey Snyder – Harford County Department of Public Works
Kate Gordon and Rich Lefebure – RK&K
Re: Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspections

EXECUTIVE SUMMARY

RK&K environmental scientists conducted inspections of 35 tree planting sites located throughout Harford County during September and October 2024. Harford County Department of Public Works (DPW) funded tree planting on private property in Harford County that was implemented by the Alliance for the Chesapeake Bay under a grant issued by the Chesapeake Bay Trust in 2019. The Alliance planted and maintained a total of 40 sites across 34.87 acres between 2019 and 2023. Access was denied to 5 of the sites. The remaining 35 sites were evaluated for potential inclusion in Harford County's Watershed Protection and Restoration program for compliance with the requirements of their Municipal Separate Storm Sewer System (MS4) permit (MS4 Permit 22-DP-3310). The inspections spanned 32.78 acres and included an assessment of the planting site boundaries, the number of live trees per acre, invasive species presence, maintenance needs and overall site conditions. Of the 35 sites inspected, 20 sites met MDE's forest planting Best Management Practice (BMP) criteria, which requires a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. Three forest planting sites failed to meet the forest planting BMP criteria due to a minimum tree density under the required 100 trees per acre, and one site was planted as a meadow instead of a forest and cannot be planted with trees. As a result, that site does not exist (HA19APY000114, St. Mark's C). Eleven sites were less than 0.5 acre and will be credited as Urban Tree Canopy (UTC) BMPs along with the three failed forest planting sites, for a total of 14 UTC sites. The 20 passing forest planting sites are the equivalent of 29.17 impervious acre (IA) credit, and the 14 UTC sites are the equivalent of 1.81 IA credit, for a total of 30.98 IA credits across all Alliance sites. If the three failed forest sites received infill planting to increase tree density to at least 100 trees per acre, they would meet the forest planting BMP criteria for a total of 3.53 IA credit. Site mapping with the inspection results and photos for each site can be found in **Appendix A**.

INTRODUCTION

In April 2024, Harford County Department of Public Works (DPW) tasked RK&K to inspect tree planting sites in Harford County for potential credit to meet the requirements of the County's National

Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. The sites were planted on private property in Harford County by the Alliance for the Chesapeake Bay under a Chesapeake Bay Trust grant that was funded by DPW in 2019. The Alliance planted and maintained a total of 40 sites on approximately 34.87 acres between 2020 and 2023. Sites received three years of maintenance, though frequency and extent of maintenance was variable from site to site. RK&K received signed permission from the property owners before accessing the sites on private property. On the permission letter, property owners were also asked about their interest in long-term maintenance. See **Table 2** in the **Results** section for maintenance information.

METHODS

Using site boundaries provided by the Alliance, RK&K environmental scientists conducted field inspections to determine whether each tree planting site meets MDE's forest planting BMP criteria, which requires survival of at least 100 trees per acre across a contiguous area of 0.5 acres or greater. UTC BMP credit may be taken for sites less than 0.5 acres based on the number of surviving trees at the time of inspection. For sites that failed to meet the forest planting BMP requirements, UTC credit was taken for the surviving trees observed on site. Site assessment data was collected using the ArcGIS Field Maps application on an iPad equipped with an external GPS unit.

The site assessment began with walking the site boundary to determine if the existing site boundary accurately reflected the limits of the site. If the existing site boundary included an area without planted trees or planted trees extended beyond the site boundaries, the site boundaries were adjusted to reflect the current site conditions. After evaluating the site boundary, RK&K environmental scientists assessed the density of trees within the site. If the site was less than 1.0 acres, a total count of all trees \geq 4.5 feet tall was conducted. If the site was greater than 1.0 acres, the tree density was estimated using plot points. Random plots points were developed prior to the field investigations using desktop GIS and the number of plot points were determined using **Table 1** below:

Table 1: Number of Plots per Site Acreage

Site Size (acres)	Plot Size (acre)	Radius (ft.)	# of Plots
1.0 to 1.7	0.05	26.3	3
1.8 to 2.2	0.05	26.3	4
2.3 to 2.7	0.05	26.3	5
2.8 to 3.0	0.05	26.3	6
3.1 to 3.4	0.1	37.24	3
3.5 to 4.4	0.1	37.24	4
4.5 to 5.4	0.1	37.24	5

At sites with plot points, RK&K environmental scientists navigated to the plot point and set up a circular plot using the radius designated in **Table 1** and counted the number of trees \geq 4.5 feet tall. To determine tree density within each plot, the number of trees counted per plot was divided by the size of the plot. The location of each plot point can be found on the site mapping provided in **Appendix A**, and the data captured for each plot point is provided in **Appendix B**.

At all sites, RK&K environmental scientists evaluated the percent coverage of native seedling regeneration and the percent coverage of invasive herbaceous and woody vegetation. After conducting the total site count or plot point assessments, RK&K environmental scientists made general site assessments to determine the level of maintenance needed on the site, trends in the planted species and the invasive species present. Field staff also took photos to capture the overall condition of the site and determined an access route to each site for future maintenance needs.

On a site with a total tree count, the total number of trees per acre was determined by dividing the total trees counted by the updated site acreage following any necessary site boundary revisions. On a site with plot points, the number of trees counted per plot point was averaged, and the average trees per plot was divided by the size of the plots. Forest planting sites (sites 0.5 acres or greater) with a density of at least 100 trees per acre were designated as passing. Impervious acre credits for forest planting and riparian forest planting sites were calculated by multiplying the current site acreage by 1.1 and 1.5 respectively, which are the BMP's equivalent impervious acre conversion factors (EIA_f) per MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated". For UTC sites, 1 tree is equal to 0.01 acres of treatment. Impervious acre credits for UTC (and failed Forest Planting sites) were calculated by multiplying the total trees by 0.01, then by the BMP EIA_f of 0.28.

RESULTS

Prior to any site inspections, five landowners denied property access, see **Table 3** below. Of the 35 forest planting sites evaluated for inclusion in Harford County's Watershed Protection and Restoration program, 20 forest planting sites passed the inspection, for a total of 29.17 IA credits. Three forest planting sites failed the inspection and were counted as UTC BMPs; these sites represent a potential of 3.53 IA credits if they are replanted to at least 100 tree per acre. One site was never planted and does not exist. Eleven sites were less than 0.5 acre in size and will be counted as UTC BMPs, along with the three failed forest plantings, for a total of 14 UTC sites and 1.81 IA credits. See **Table 2** below for maintenance needs on properties that indicated they were interested in maintenance support, and **Tables 3-5** below for the results of the site evaluations.

Table 2: Maintenance Needs for Interested Property Owners

Site ID	Landowner Name	Long-term maintenance interest	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
HA19APY000048	Barry Stansbury	Yes	Stansbury	1.51	1	Low	Property owner requested invasive species control along existing forest stands and planting along his driveway.
HA21APY000049	Forest Crocker (Berthenia)	Yes	Crocker A	0.23	1	Low	Replace and/or repair shelters.
HA21APY000100	Forest Crocker (Berthenia)	Yes	Crocker B	1.12	2	Low	Conduct shelter and planting pit maintenance; bittersweet control; re-sheltering as needed; remove bird netting and conduct corrective pruning as needed.

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November 2024

Site ID	Landowner Name	Long-term maintenance interest	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
HA21APY000033	Chris Murk	Maybe	Chris Murk A	0.56	1	Low	Re-stake and re-shelter.
HA21APY000099	Chris Murk	Maybe	Chris Murk B	1.95	3	Medium	Infill throughout planting area; re-shelter and re-stake trees; and conduct invasive species control using hand tools and targeted herbicide application.
HA20APY000053	Kaleena Cyrulik (Sharp & William Heilman)	Maybe	Cyrulik	1.71	2	Low	Repair/replace shelters as needed. Control invasives and apply native seed mix to suppress invasives in the understory.
HA19APY000054	Thomas Fair & Kerry Lynch	Yes	Fair & Lynch A	0.89	3	Medium	Recommend mowing or brushhog, shelter repair and removal, cut stump herbicide application for large multiflora. Flag or re-shelter leaning trees prior to mowing.
HA19APY000102	Thomas Fair & Kerry Lynch	Yes	Fair & Lynch B	0.08	1	Medium	Recommend mowing or brushhog, shelter repair and removal, cut stump herbicide application for large multiflora. Flag or re-shelter leaning trees prior to mowing.
HA19APY000116	Thomas Fair & Kerry Lynch	Yes	Fair & Lynch C	0.11	1	Low	Conduct Oriental bittersweet control and some shelter removal as needed.
HA20APY000044	John Sutton, Jr.	Maybe	John Sutton, Jr.	2.49	3	Medium	Conduct re-staking and guying and planting pit/shelter maintenance. Many tree shelters need multiflora or bittersweet removed. Remove shelters on larger trees.
HA21APY000037	Bruce Kinzinger	Yes	Kinzinger A	0.40	2	High	Control Johnsongrass and Oriental bittersweet with hand tools and chemical treatment. Replace damaged shelters and remove shelters on larger trees.
HA21APY000104	Bruce Kinzinger	Yes	Kinzinger B	0.70	2	High	Control Johnsongrass and Oriental bittersweet with hand tools and chemical treatment. Replace damaged shelters and remove shelters on larger trees.
HA21APY000105	Bruce Kinzinger	Yes	Kinzinger C	1.92	5	High	Use brush hogging, hand tools, and targeted herbicide application to control Johnsongrass, multiflora rose, and Oriental bittersweet.
HA19APY000051	Michael Tepper	Yes	Tepper A	1.24	3	Medium	Conduct infill planting throughout. Clear plant debris as needed for access.
HA19APY000115	Michael Tepper	Yes	Tepper B	0.06	1	Medium	Use brush hogging, hand tools, and targeted herbicide application for invasive species control. Some trees require staking and guying.

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Site ID	Landowner Name	Long-term maintenance interest	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
HA19APY000045	Mike Skowron	Yes	Skowron	0.87	1	Low	Shelter replacement and removal recommended. Corrective pruning and NNI control with handtools is recommended.
HA21APY000039	Anthony Pecoriello	Yes	Pecoriello A	0.86	2	Medium	Some oriental bittersweet climbing plantings. Invasive species control with hand tools and chemical treatment is recommended for the portion along the stream.
HA21APY000106	Anthony Pecoriello	Yes	Pecoriello B	0.08	1	Low	Conduct minor Oriental bittersweet control.
HA19APY000034	Greg Edwards	Yes	Edwards A	0.09	1	Low	Remove Oriental bittersweet from shelters. Stakes and guys for leaning trees.
HA19APY000101	Greg Edwards	Yes	Edwards B	0.04	1	Low	Remove Oriental bittersweet from shelters. Stakes and guys for leaning trees.
HA19APY000035	Henry Harrison	Yes	Harrison	0.33		None	
Totals				16.91	37		

Table 3: Access Denied Site Summary

Site Name	Assumed BMP Type	Acres	EIA Credit	Potential IA Credit
Barbara Lukasik	Forest Planting	0.56	1.1	0.62
Michael Houser	Forest Planting	2.17	1.1	2.39
Missy Varnarnsdale	Forest Planting	0.96	1.1	1.06
Rebecca Murk	Forest Planting	0.63	1.1	0.69
Joelle Pouliot	Urban Tree Canopy	0.22	0.28	0.06
Totals		4.54		4.82

Table 4: Forest Planting Site Inspection Results

Site ID	Site Name	Trees per Acre	Acres	EIA Credit	Total IA Credit	Date of Inspection	Status
HA21APY000033	Chris Murk A	227	0.56	1.1	0.61	10/10/24	Pass
HA21APY000099	Chris Murk B	120	1.95	1.1	2.15	10/10/24	Pass
HA21APY000100	Crocker B	217	1.12	1.1	1.24	9/26/24	Pass
HA20APY000053	Cyrulik	306	1.71	1.1	1.88	10/9/24	Pass
HA19APY000054	Fair & Lynch A	206	0.89	1.1	0.98	9/23/24	Pass
HA20APY000044	John Sutton, Jr.	340	2.49	1.1	2.74	10/15/24	Pass
HA19APY000052	Kahl A	175	0.60	1.1	0.66	10/7/24	Pass
HA21APY000104	Kinzinger B	125	0.70	1.1	0.77	10/3/24	Pass

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Site ID	Site Name	Trees per Acre	Acres	EIA Credit	Total IA Credit	Date of Inspection	Status
HA21APY000105	Kinzinger C	240	1.92	1.1	2.11	10/3/24	Pass
HA21APY000039	Pecoriello A	319	0.86	1.1	0.95	10/1/24	Pass
HA20APY000041	Preston A	234	0.57	1.1	0.63	10/8/24	Pass
HA20APY000107	Preston B	203	4.53	1.1	4.98	10/8/24	Pass
HA20APY000108	Preston C	167	0.99	1.1	1.09	10/9/24	Pass
HA20APY000109	Preston D	94	0.65	1.1	0.71	10/8/24	Fail
HA20APY000110	Preston E	53	1.32	1.1	1.45	10/8/24	Fail
HA19APY000043	Runyon	200	0.76	1.1	0.84	10/1/24	Pass
HA19APY000045	Skowron	143	0.87	1.1	0.96	9/26/24	Pass
HA21APY000046	Smith A	245	2.00	1.1	2.20	10/7/24	Pass
HA21APY000112	Smith B	256	0.99	1.1	1.09	10/7/24	Pass
HA19APY000047	St. Mark's A	178	0.74	1.1	0.81	9/23/24	Pass
HA19APY000113	St. Mark's B	248	0.76	1.1	0.84	9/23/24	Pass
HA19APY000114	St. Mark's C	-	-	-	-	9/23/24	DNE
HA19APY000048	Stansbury	200	1.51	1.1	1.66	10/3/24	Pass
HA19APY000051	Tepper A	60	1.24	1.1	1.37	9/26/24	Fail
Total IA Credits Passing			26.52		29.17		
Total IA Credits Failing*			3.21		3.53		

* See **Table 5** for failed forest planting sites IA credits.

Table 5: Urban Tree Canopy Site Inspection Results

Site ID	Site Name	Total Trees	Acres	EIA Credit	Total IA Credit**	Date of Inspection
HA21APY000049	Crocker A	73	0.30	0.28	0.20	9/26/24
HA19APY000034	Edwards A	28	0.09	0.28	0.08	9/26/24
HA19APY000101	Edwards B	14	0.04	0.28	0.04	9/26/24
HA19APY000102	Fair & Lynch B	22	0.08	0.28	0.06	9/23/24
HA19APY000116	Fair & Lynch C	35	0.11	0.28	0.10	9/23/24
HA19APY000035	Harrison	116	0.33	0.28	0.32	9/17/24
HA19APY000103	Kahl B	17	0.23	0.28	0.05	10/7/24
HA21APY000037	Kinzinger A	82	0.40	0.28	0.23	10/3/24
HA21APY000106	Pecoriello B	46	0.08	0.28	0.13	10/1/24
HA20APY000111	Preston F	62	0.25	0.28	0.17	10/8/24
HA19APY000115	Tepper B	19	0.06	0.28	0.05	9/26/24
HA20APY000109	Preston D*	61	0.65	0.28	0.17	10/8/24
HA20APY000110	Preston E*	70	1.32	0.28	0.20	10/8/24
HA19APY000051	Tepper A*	3	1.24	0.28	0.008	9/26/24
Total IA Credits		648	5.18		1.81	

*Originally forest planting sites that did not meet the forest BMP criteria due to tree density under 100 TPA.

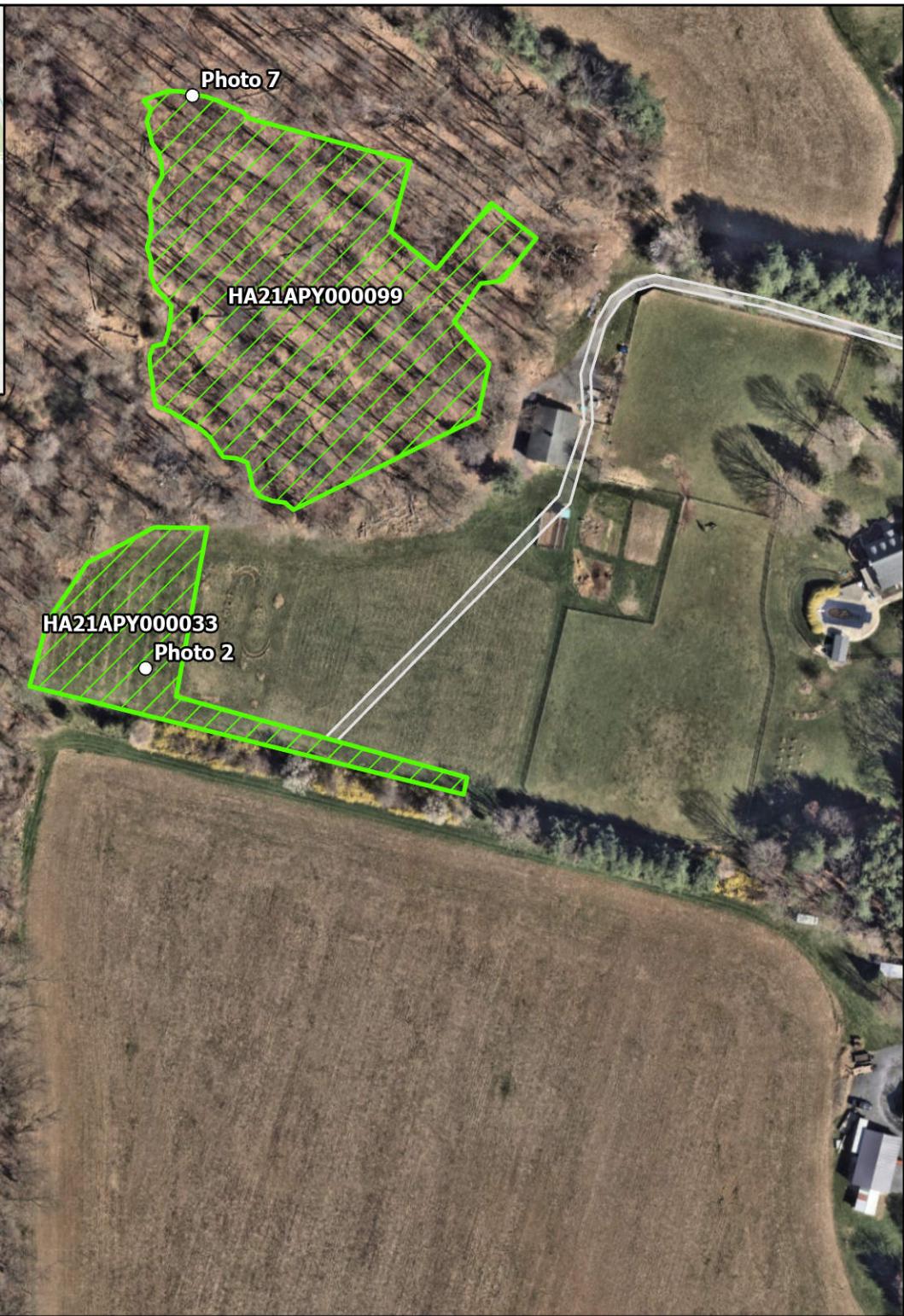
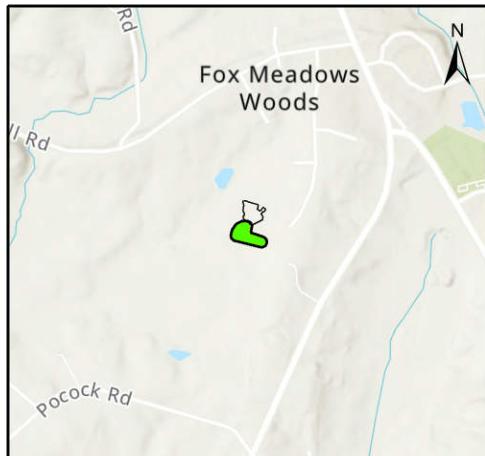
**IA Credit for UTC was calculated by multiplying Total Trees by 0.01, then by the 0.28 EIA_{IA} credit multiplier.

Each tree is the equivalent of 1/100th of an acre, according to MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated".

CONCLUSION

Of the 35 Alliance sites inspected, 20 sites passed the inspection and will be counted as forest planting BMPs since they met MDE's forest planting BMP criteria, which require a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. Three forest planting sites failed to meet the forest planting BMP criteria due to a minimum tree density under the required 100 trees per acre. The surviving trees at the three failed forest planting sites will be credited as UTC BMPs. One site was planted as a meadow instead of a forest and cannot be planted with trees. As a result, that site does not exist. Eleven sites were less than 0.5 acre and will be counted as UTC BMPs along with the three failed forest planting sites, for a total of 14 UTC sites. The IA credit at all Alliance sites totals 30.98 IA credits, as the 20 passing forest planting sites are the equivalent of 29.17 IA credits, and the 14 UTC sites are the equivalent of 1.81 IA credits. If the three failed forest sites received infill planting to increase tree density to at least 100 trees per acre, they would meet the forest planting BMP criteria for a total of 3.53 IA credit. Typical site maintenance required includes knockdown mowing, vine removal, removal of Bradford pear, herbicide treatment of invasive species, hand clearing around tree pits, and removing, repairing or adding tree shelters. Some sites have infill planting opportunities, though infill is only required for crediting purposes for the three sites that did not meet the forest planting BMP criteria. Common causes of tree planting mortality include poor soils, inappropriate species selection, mower damage, deer browse, buck rub, and vegetative competition from invasive species.

Appendix A – Site Mapping and Photos



BMP Type: Forest Planting
Total Trees: 126
Trees per Acre: 227
Planted Acres: 0.56
Total IA Credit: 0.61
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Maintained Turf
General Comments: Site doing well overall. Some small gaps in survival but trees are generally 6-15' tall. Site is actively maintained and mowed. Landowner interested in additional planting.
Maintenance Comments: Re-stake and re-shelter.
Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Chris Murk A
Site ID: HA21APY000033

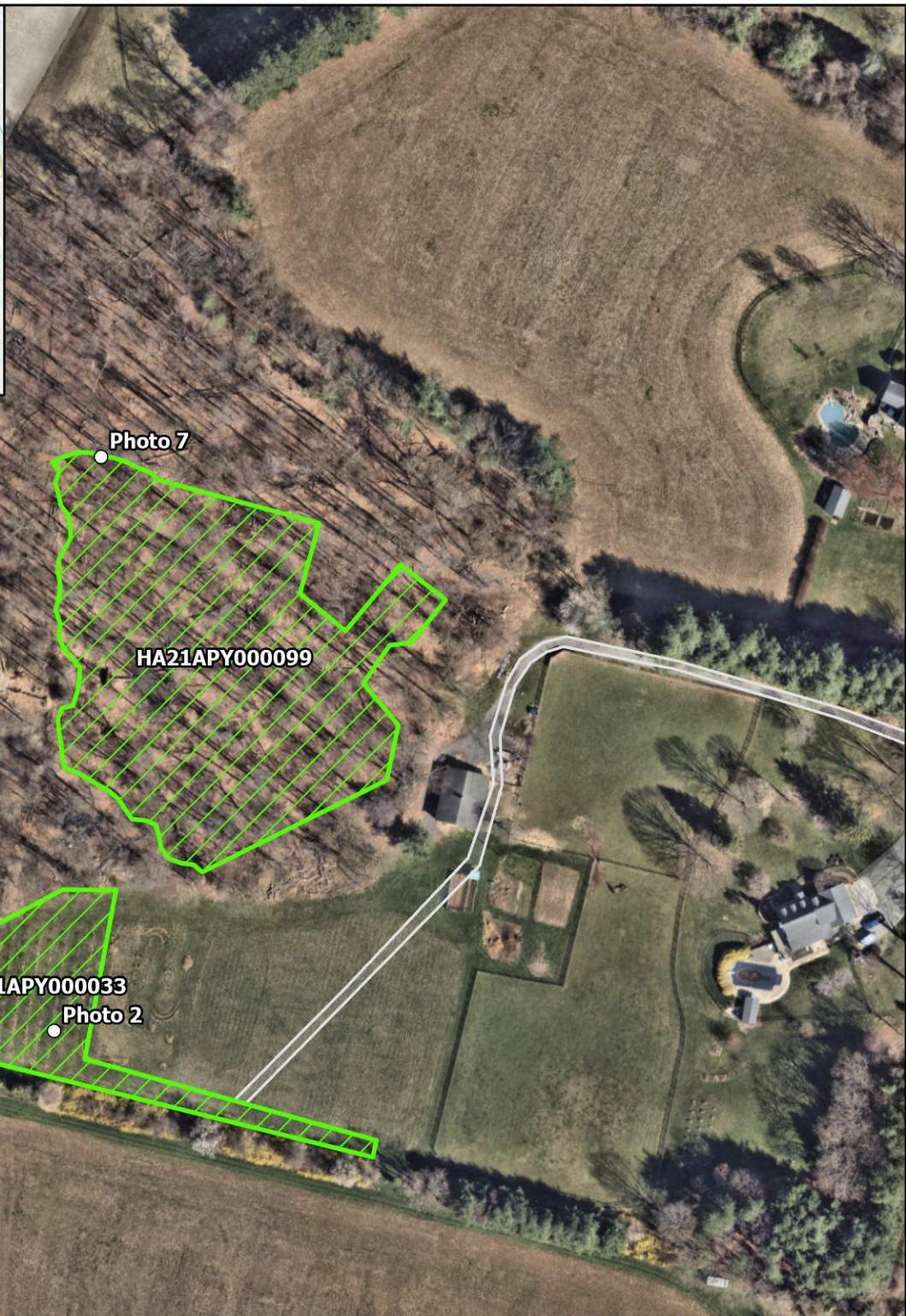
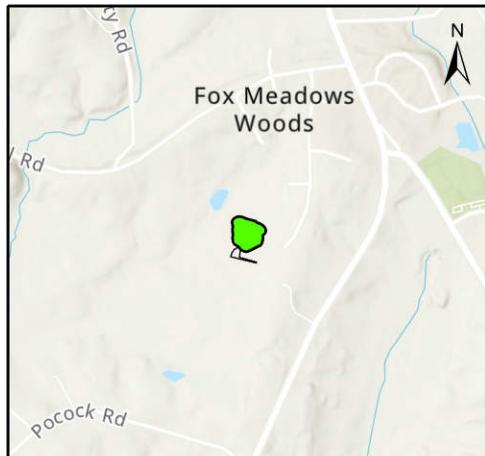
0 75 150 300 ft

1 inch = 150 feet

November 2024

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BMP Type: Forest Planting
Total Trees: 235
Trees per Acre: 120
Planted Acres: 1.95
Total IA Credit: 2.15
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Existing forest stand was thinned prior to planting by property owner. Infill planting occurred at same time as adjacent site. Slower growth and establishment due to moderate shade. Area is subject to windstorms. Some dirt bike trails throughout.
Maintenance Comments: Infill throughout planting area; re-shelter and re-stake trees; and conduct invasive species control using hand tools and targeted herbicide application.
Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Chris Murk B
Site ID: HA21APY000099

0 75 150 300 ft

1 inch = 150 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Chris Murk Property



Photo 7: Overview photo of Chris Murk A (HA21APY000033) facing southeast.

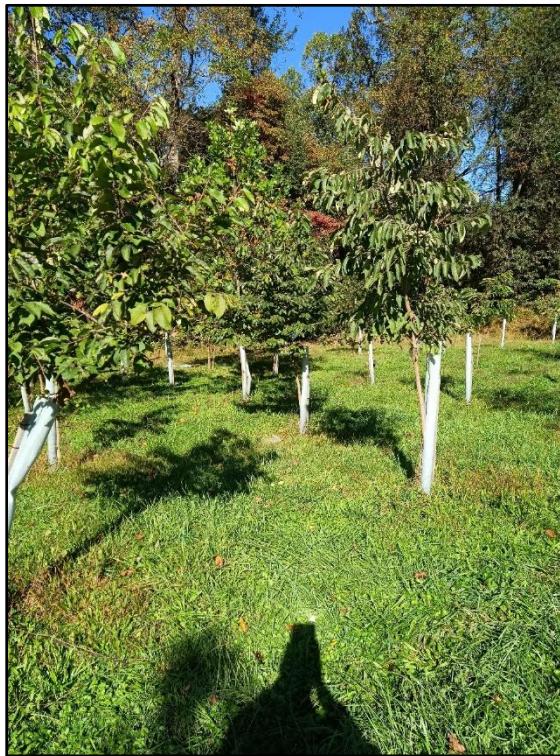
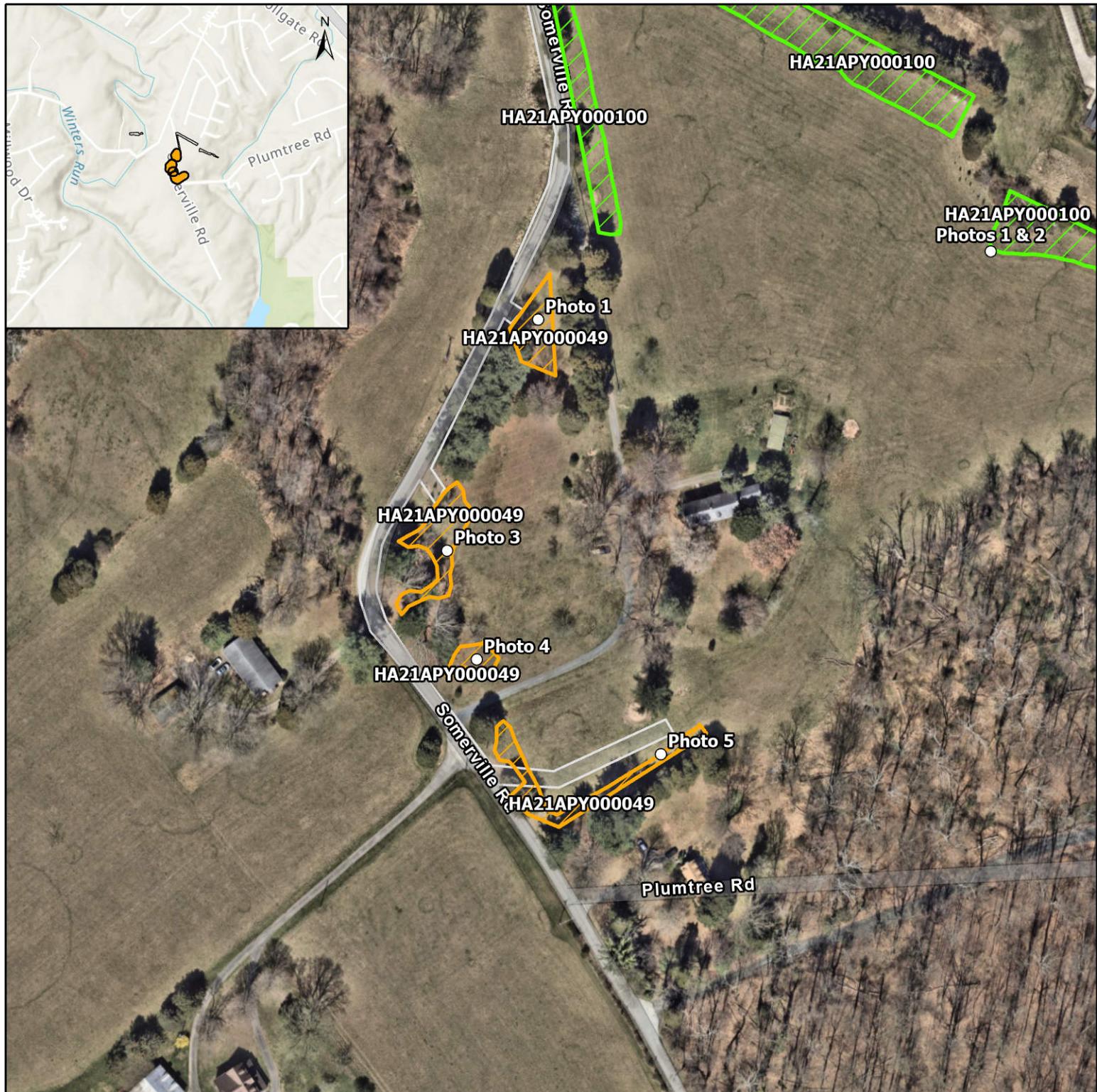


Photo 2: Interior of site Chris Murk B (HA21APY000099), healthy tree plantings.



BMP Type: Urban Tree Canopy

Total Trees: 73

Planted Acres: 0.30

Total IA Credit: 0.20

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Site is split into several smaller plantings. Survival and growth is moderate and limited by deer browse. Many plantings are not very robust. Some shelters have been removed.

Maintenance Comments: Replace and/or repair shelters.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Crocker A
Site ID: HA21APY000049**

0 75 150 300
ft

1 inch = 150 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Crocker Property, Site A, HA21APY000049



Photo 1: Overview photo facing south.



Photo 3: Overview photo facing west.

Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

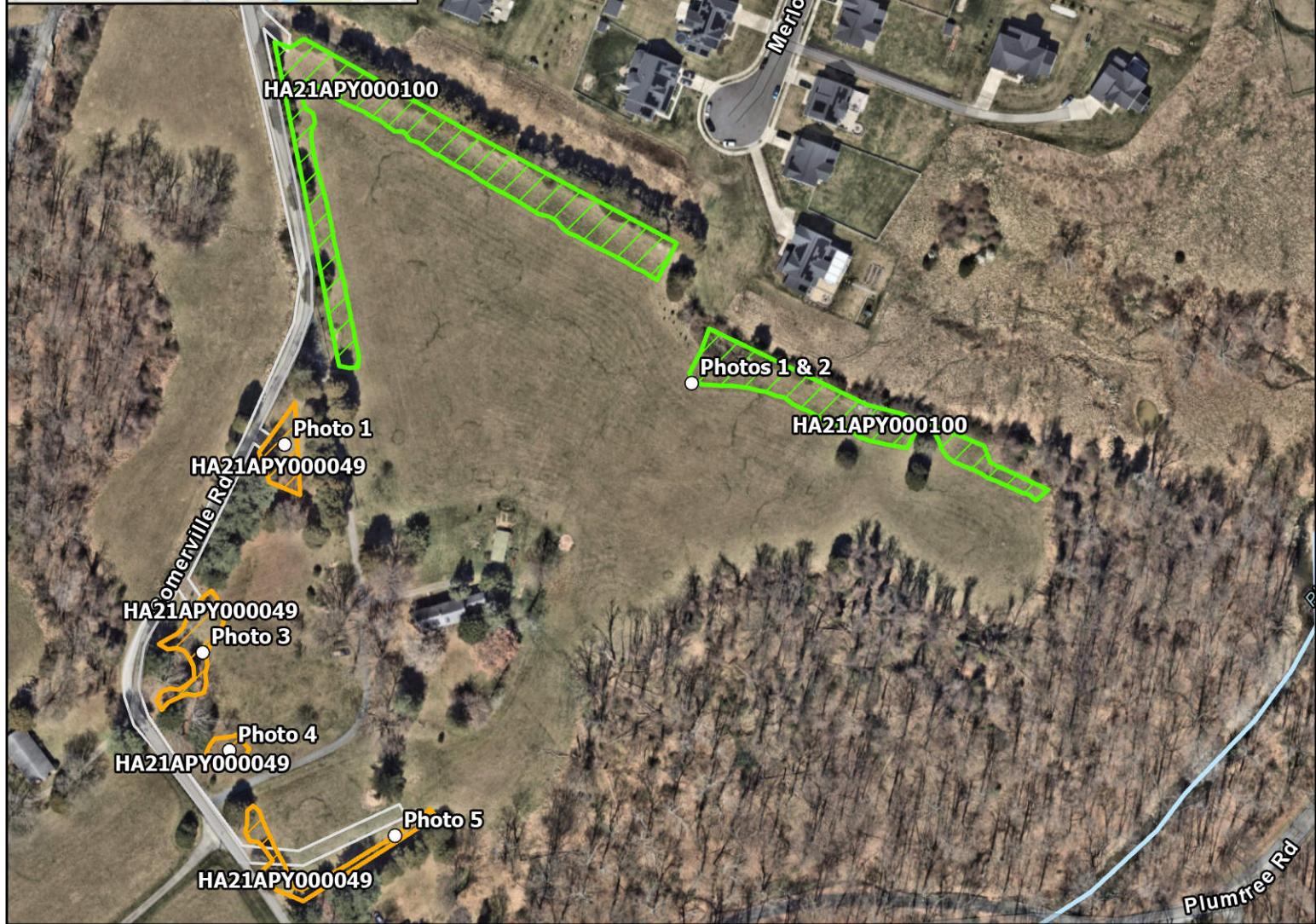
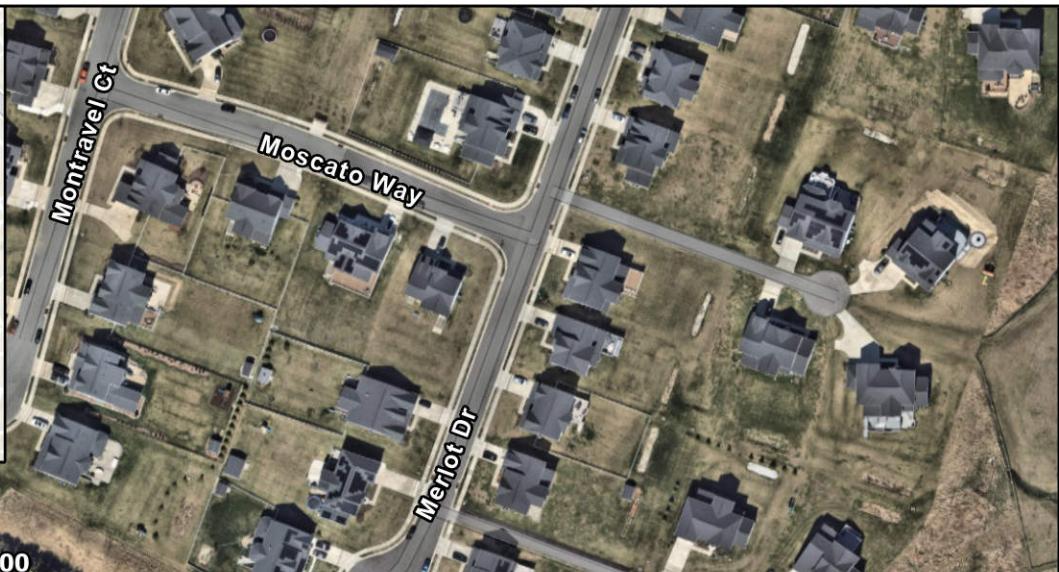
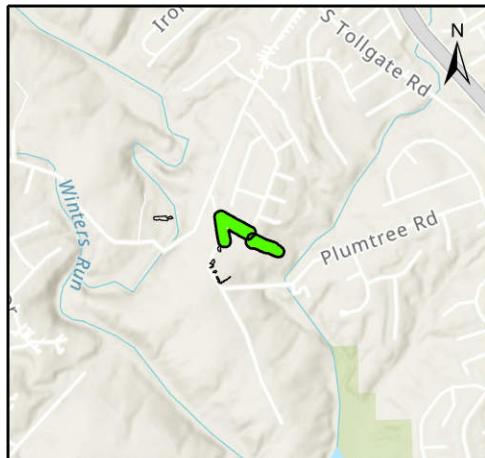
Crocker Property, Site A, HA21APY000049



Photo 4: Overview photo facing south.



Photo 5: Overview photo facing southwest.



BMP Type: Forest Planting
Total Trees: 244
Trees per Acre: 217
Planted Acres: 1.12
Total IA Credit: 1.24
Site Condition: Functioning
Inspection Method: Total Site Count

Understory: Unmanaged
General Comments: Trees are 4-8 feet tall. Overall good survival and establishment. Maintained as low mow. Deer browse and buck rub was observed.

Maintenance Comments: Conduct shelter and planting pit maintenance; bittersweet control; re-sheltering as needed; remove bird netting and conduct corrective pruning as needed.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Crocker B
Site ID: HA21APY000100**

0 100 200 400
ft
1 inch = 200 feet

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Photo Log

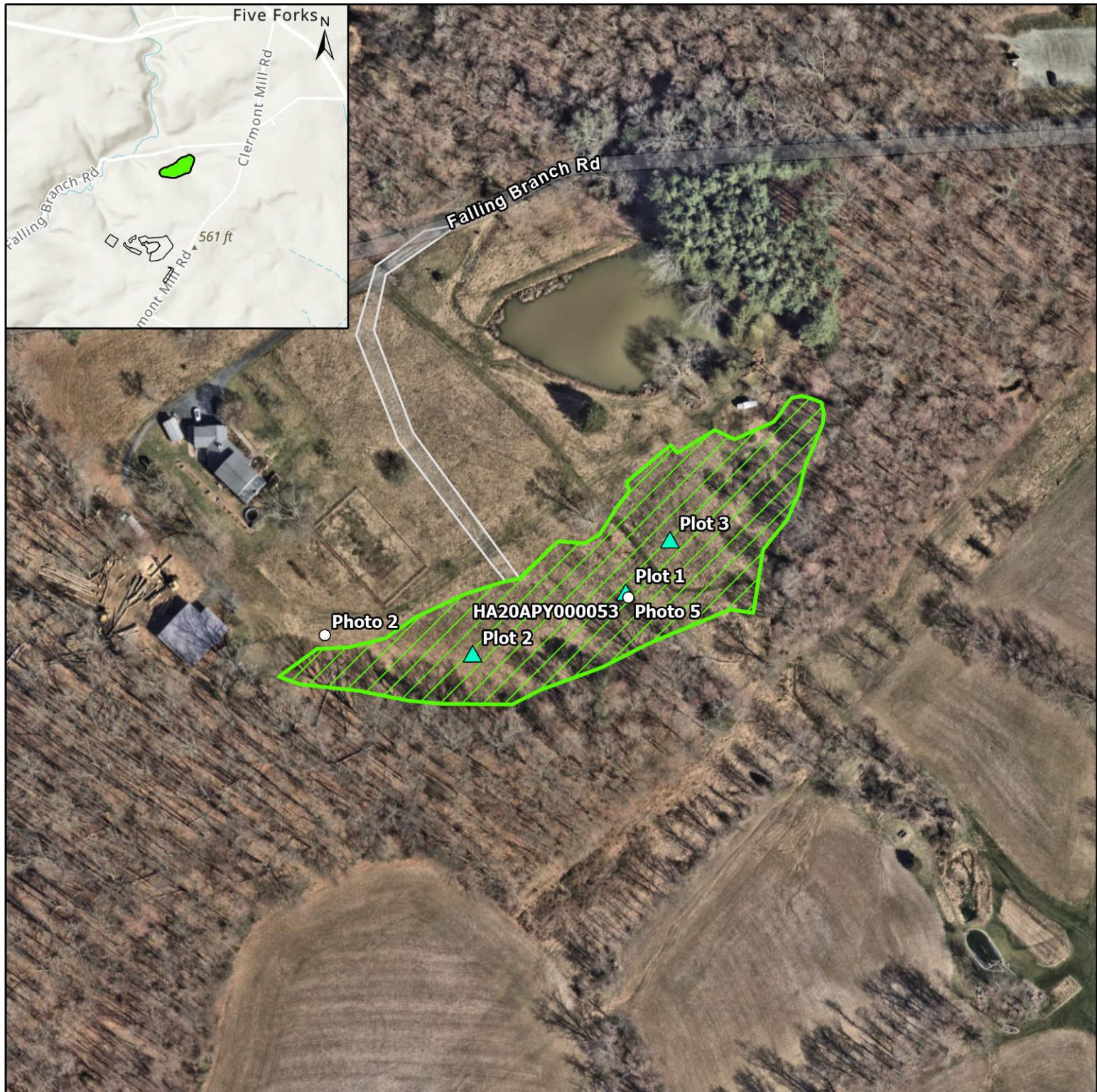
Crocker Property, Site B, HA21APY000100



Photo 1: Overview photo facing east.



Photo 2: Overview photo facing north.



BMP Type: Forest Planting
Total Trees: 15
Trees per Acre: 306
Planted Acres: 1.71
Total IA Credit: 1.88
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Maintained Turf
General Comments: Site generally looks very good and is well maintained by landowner. Owner stated the site was regularly mowed until a few months ago, the growing herbaceous layer is almost entirely invasive.
Maintenance Comments: Repair/replace shelters as needed. Control invasives and apply native seed mix to suppress invasives in the understory.
Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Cyrulik
Site ID: HA20APY000053

0 75 150 300
ft
1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Cyrulik Property, HA20APY000053



Photo 2: Overview photo facing south.

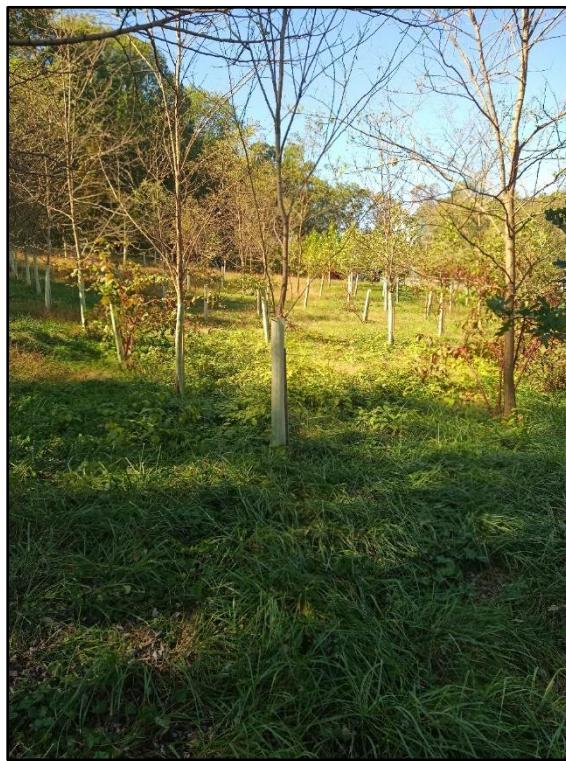
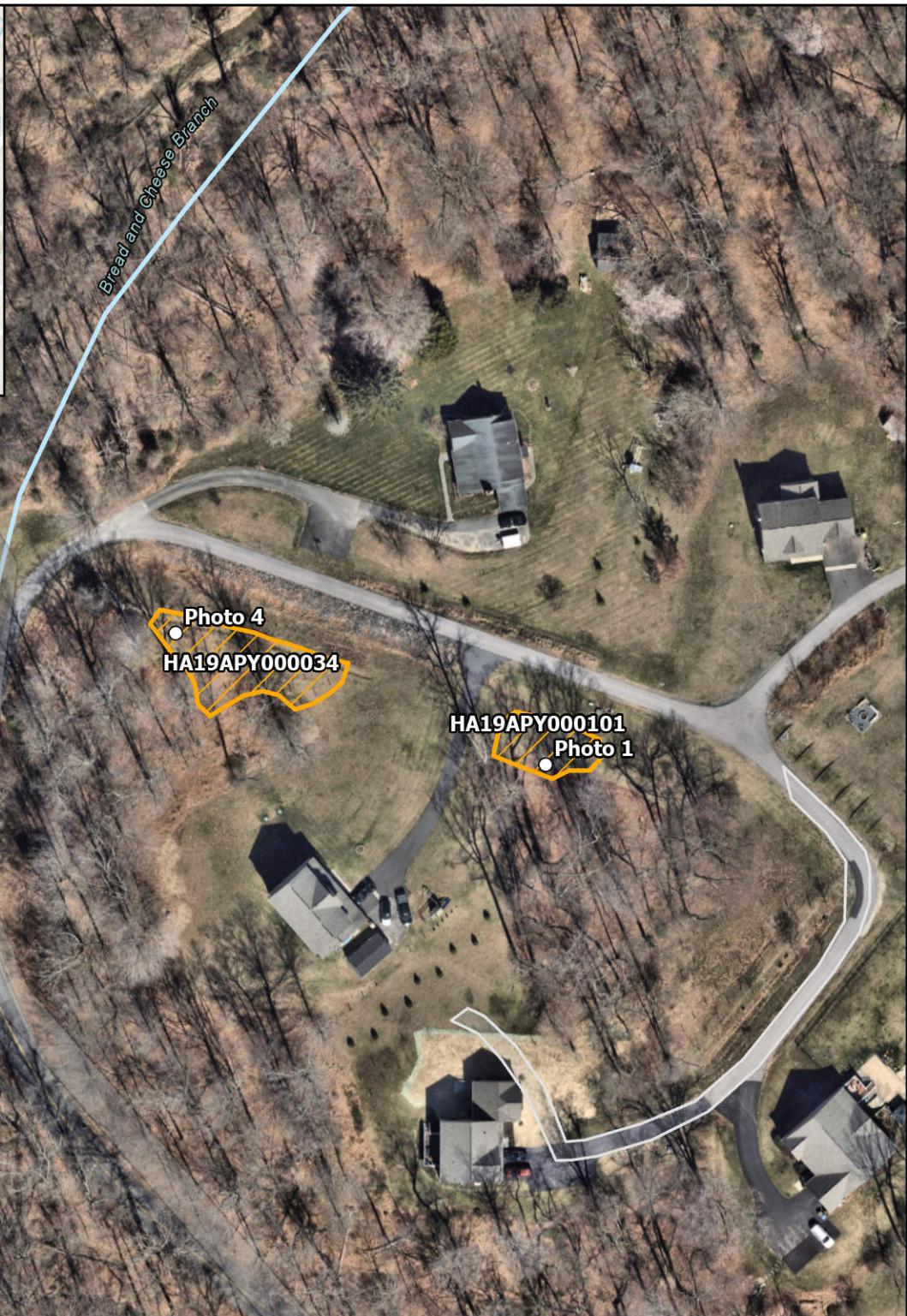
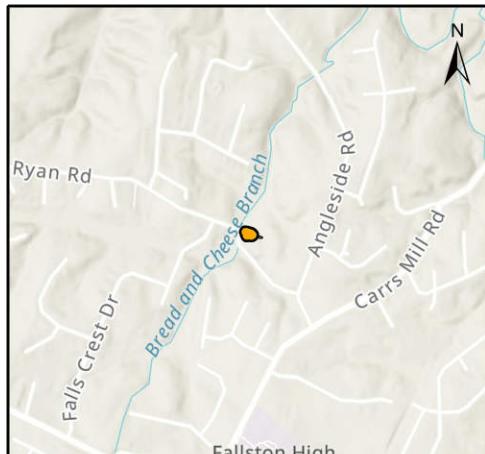


Photo 5: Interior of site, healthy tree plantings.



BMP Type: Urban Tree Canopy

Total Trees: 28

Planted Acres: 0.09

Total IA Credit: 0.08

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Mostly maintained turf with naturalized area in NW part of site. Mowed area has strong establishment and growth. More modest success in naturalized area.

Maintenance Comments: Remove Oriental bittersweet from shelters. Stakes and guys for leaning trees.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Edwards A
Site ID: HA19APY000034

0 50 100 200 ft

1 inch = 100 feet



November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

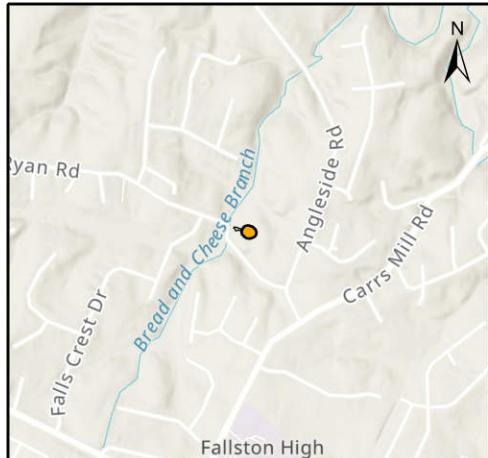
Edwards Property, Site A, HA19APY000034



Photo 1: Overview photo facing southeast.



Photo 2: Overview photo facing west.



BMP Type: Urban Tree Canopy

Total Trees: 14

Planted Acres: 0.04

Total IA Credit: 0.04

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Generally good condition, trees are 4-8 feet tall. Actively mowed and maintained.

Maintenance Comments: Remove Oriental bittersweet from shelters. Stakes and guys for leaning trees.

Owner Type: Homeowner

- / Forest Planting
- / Urban Tree Canopy
- / Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- △ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Edwards B
Site ID: HA19APY000101**

0 50 100 200 ft

1 inch = 100 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

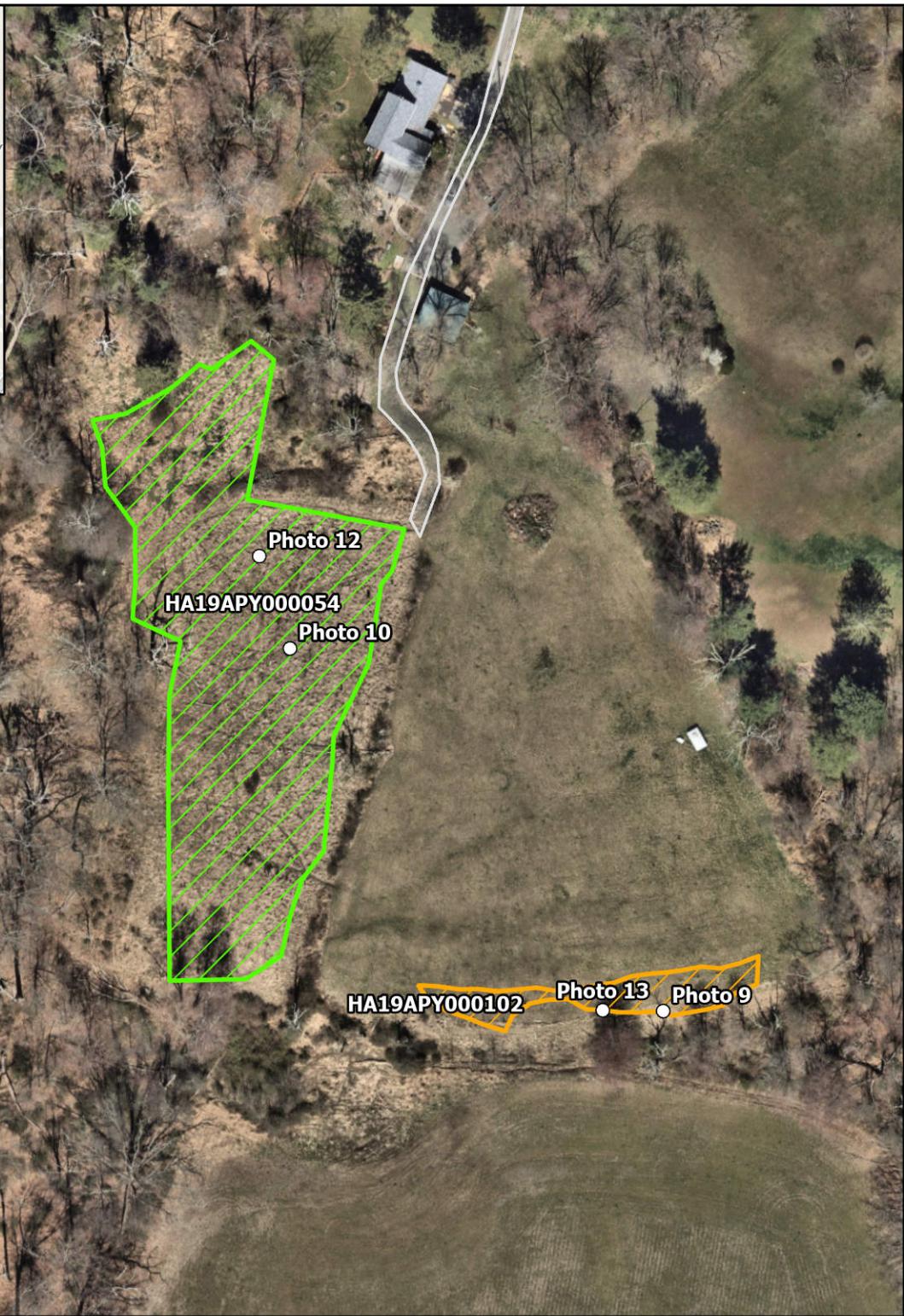
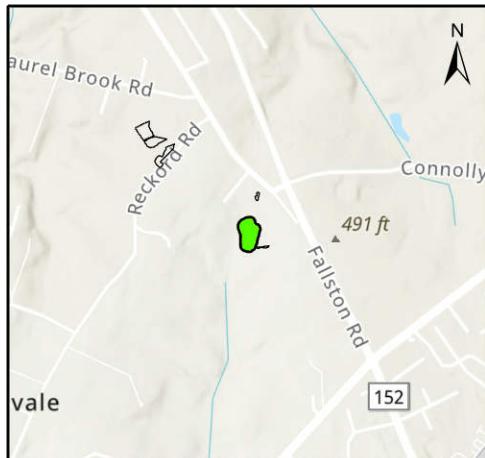
Edwards Property, Site B, HA19APY000101



Photo 4: Overview photo facing northwest.



Photo 3: Overview photo facing southeast.



BMP Type: Forest Planting

Total Trees: 183

Trees per Acre: 206

Planted Acres: 0.89

Total IA Credit: 0.98

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Site was originally mowed by Alliance but is no longer receiving maintenance. Establishment is generally strong but maintenance is recommended. Some small gaps for infill, but replanting is not required based on density.

Maintenance Comments: Recommend mowing or brushhog, shelter repair and removal, cut stump herbicide application for large multiflora. Flag or re-shelter leaning trees prior to mowing.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Fair & Lynch A
Site ID: HA19APY000054

0 50 100 200
ft

1 inch = 100 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Fair and Lynch Property, Site A, HA19APY000054



Photo 10: Overview photo facing south.



Photo 12: Interior of site and understory.



BMP Type: Urban Tree Canopy

Total Trees: 22

Planted Acres: 0.08

Total IA Credit: 0.06

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Additional planting area not captured by Alliance data. Trees are generally doing well.

Maintenance Comments: Recommend mowing or brushhog, shelter repair and removal, cut stump herbicide application for large multiflora. Flag or re-shelter leaning trees prior to mowing.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Fair & Lynch B
Site ID: HA19APY000102

0 50 100 200
ft

1 inch = 100 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Fair and Lynch Property, Site B, HA19APY000102



Photo 9: Overview photo facing west.



Photo 13: Interior of site facing east.



BMP Type: Urban Tree Canopy

Total Trees: 35

Planted Acres: 0.11

Total IA Credit: 0.10

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Areas being actively mowed and maintained. Strong growth and survival.

Maintenance Comments: Conduct Oriental bittersweet control and some shelter removal as needed.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Fair & Lynch C
Site ID: HA19APY000116**

0 50 100 200 ft

1 inch = 100 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

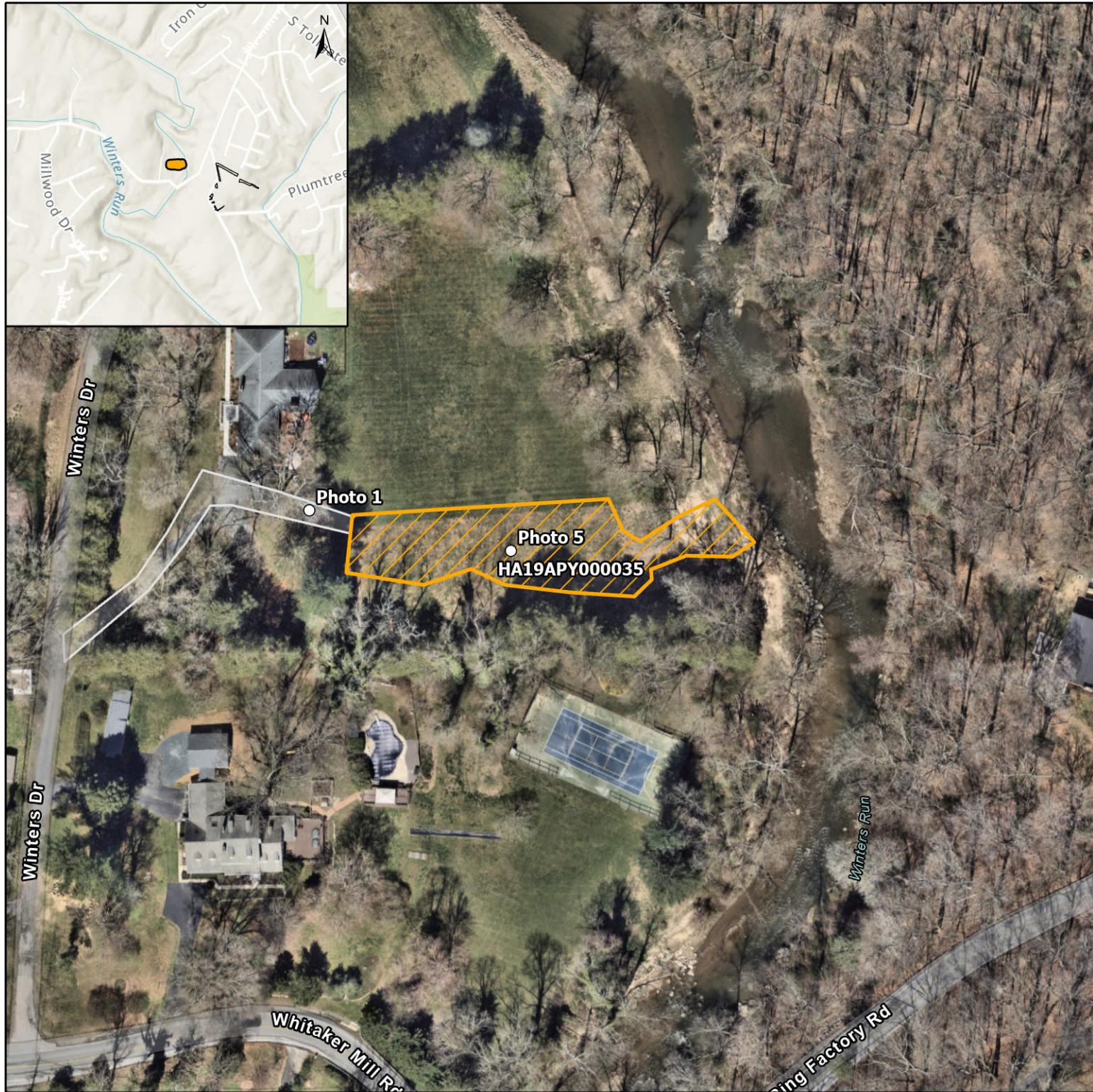
Fair and Lynch Property, Site C, HA19APY000116



Photo 7: Overview photo facing southwest.



Photo 8: Overview photo facing west.



BMP Type: Urban Tree Canopy

Total Trees: 116

Planted Acres: 0.33

Total IA Credit: 0.32

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Well maintained and very successful site. Back portion by river is more naturalized with some natural regeneration of native woody species.

Maintenance Comments: Site is actively maintained and mowed by landowner. No maintenance needed.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Harrison
Site ID: HA19APY000035

0 50 100 200 ft

1 inch = 100 feet

N

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

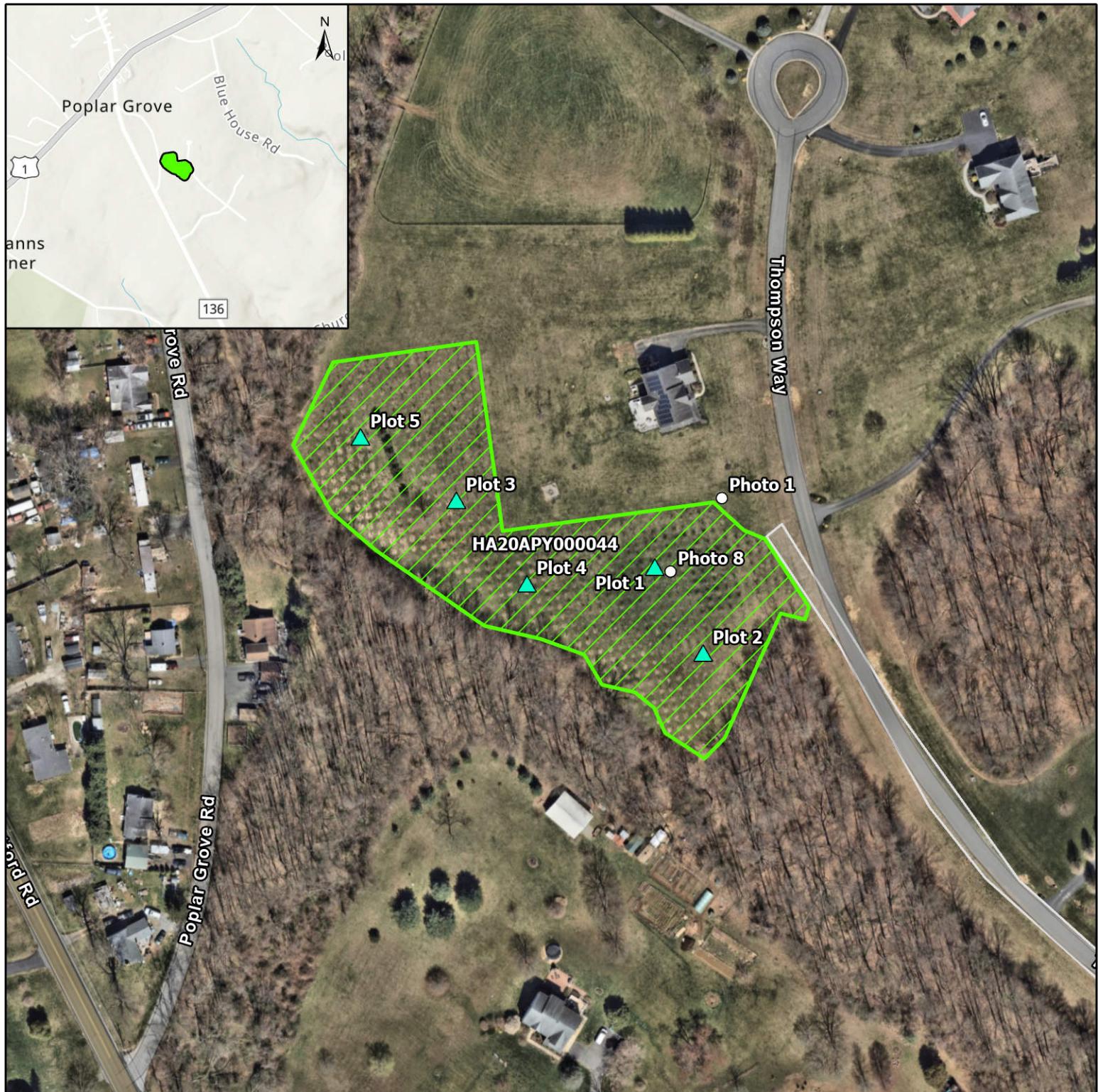
Harrison Property, HA19APY000035



Photo 1: Overview photo facing east.



Photo 5: Interior of site, healthy tree plantings.



BMP Type: Forest Planting

Total Trees: 17

Trees per Acre: 340

Planted Acres: 2.49

Total IA Credit: 2.74

Site Condition: Functioning

Inspection Method: 0.05 Acre Plots

Understory: Maintained Turf

General Comments: Landowner intends to keep mowing. Trees are overall healthy, and landowner has removed a lot of invasives. East corner of site gets heavy deer activity and plantings are struggling. Landowner seems actively involved in maintenance of trees.

Maintenance Comments: Conduct re-staking and guying and planting pit/shelter maintenance. Many tree shelters need multiflora or bittersweet removed. Remove shelters on larger trees.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

John Sutton, Jr.
Site ID: HA20APY000044

0 75 150 300
ft

1 inch = 150 feet



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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

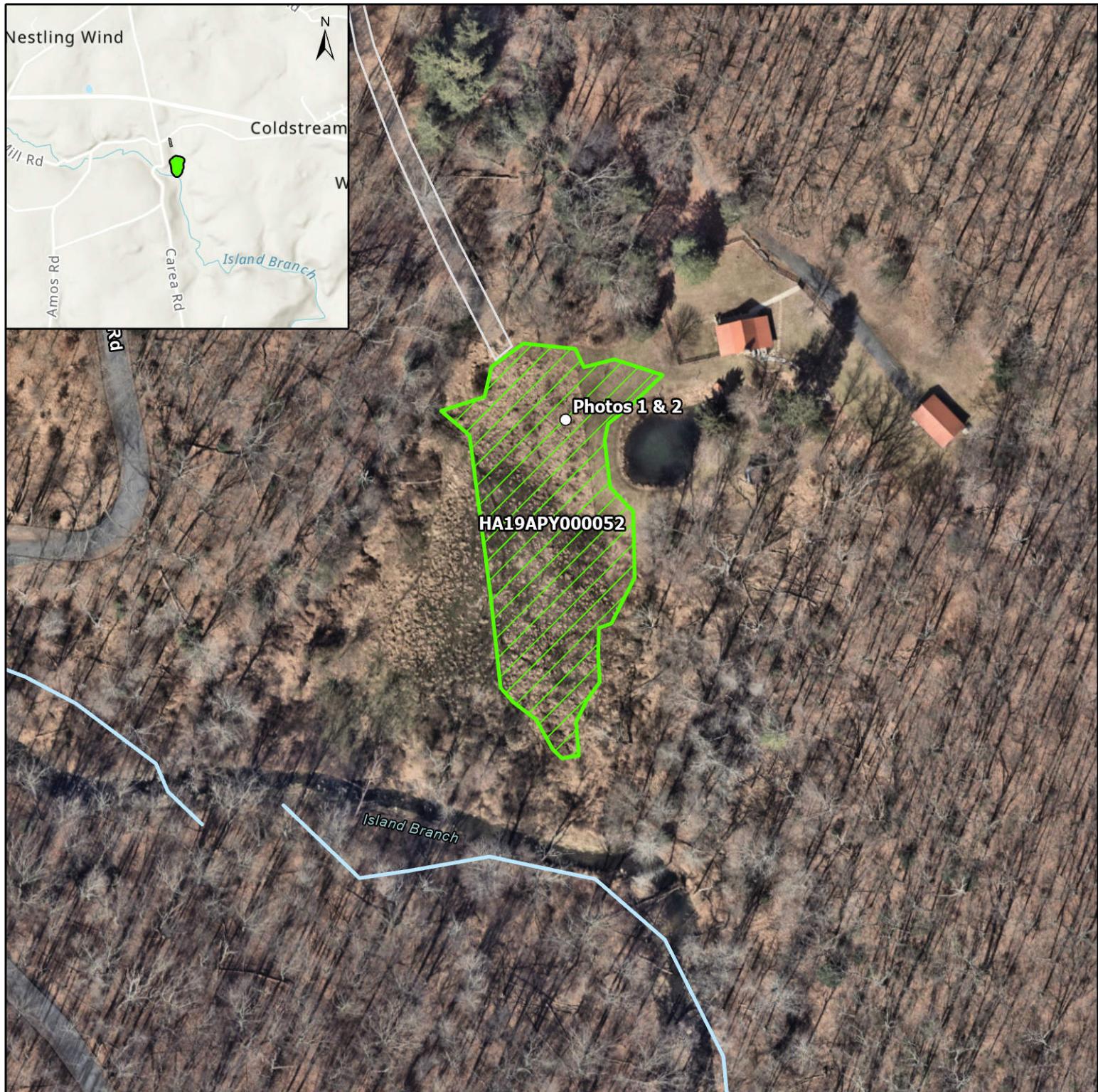
John Sutton Jr. Property, HA20APY000044



Photo 1: Overview photo facing west.



Photo 8: Interior of site, healthy tree plantings.



BMP Type: Forest Planting
Total Trees: 106
Trees per Acre: 175
Planted Acres: 0.60
Total IA Credit: 0.66
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged

General Comments: Southern portion of site sits very wet with inundated soils at time of visit and better survival in upland areas. Trees still establishing, generally 4-8' tall. Expect site to develop in coming years. Wet area may need infill. Water level appeared higher in planting tube than surrounding wetland.

Maintenance Comments: Site is well maintained and no maintenance required, could potentially infill wet area.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- △ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Kahl A

Site ID: HA19APY000052

0 50 100 200
ft

1 inch = 100 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

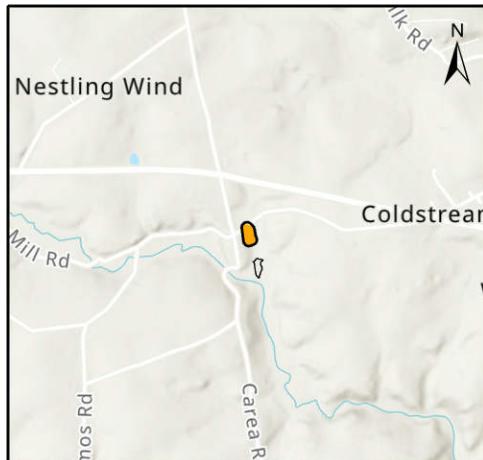
Kahl Property



Photo 1: Interior of site Kahl A (HA19APY000052) looking southwest, healthy tree plantings.



Photo 2: Interior of site Kahl A (HA19APY000052) looking south, healthy tree plantings.



BMP Type: Urban Tree Canopy

Total Trees: 17

Planted Acres: 0.23

Total IA Credit: 0.05

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Large areas of failure, mowers have knocked down most trees and tubes. Almost entirely stilt grass in northern area

Maintenance Comments: Replanting, shelter repair/replacement

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Kahl B

Site ID: HA19APY000103

0 50 100 200

N

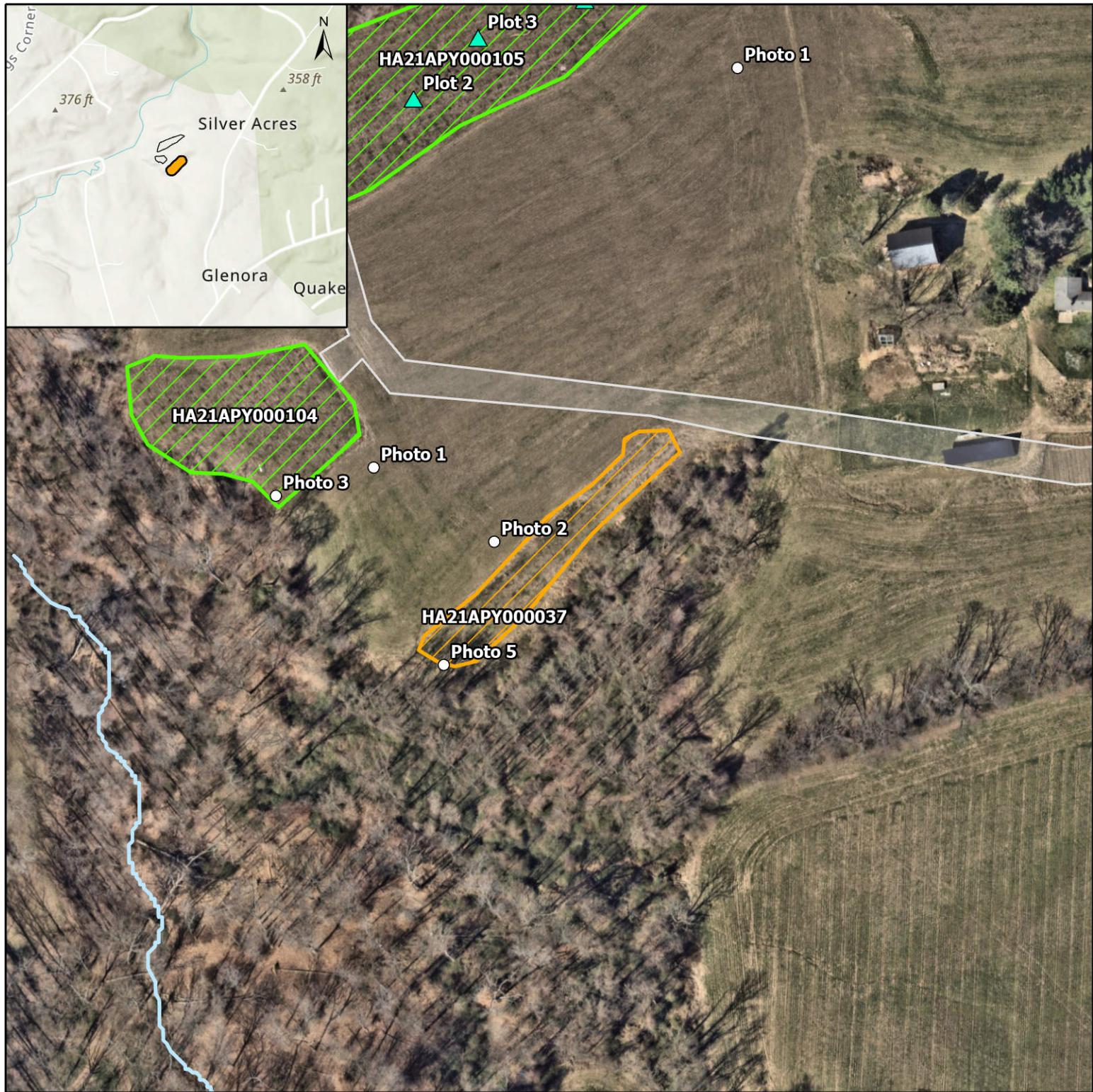
1 inch = 100 feet

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BMP Type: Urban Tree Canopy

Total Trees: 82

Planted Acres: 0.40

Total IA Credit: 0.23

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Fair condition. Plantings down slope towards forest are less vigorous. Many shelters bent/damaged. Potential for infill planting if landowner wants it.

Maintenance Comments: Control Johnsongrass and Oriental bittersweet with hand tools and chemical treatment. Replace damaged shelters and remove shelters on larger trees.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Kinzinger A
Site ID: HA21APY000037**

0 75 150 300

N

1 inch = 150 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

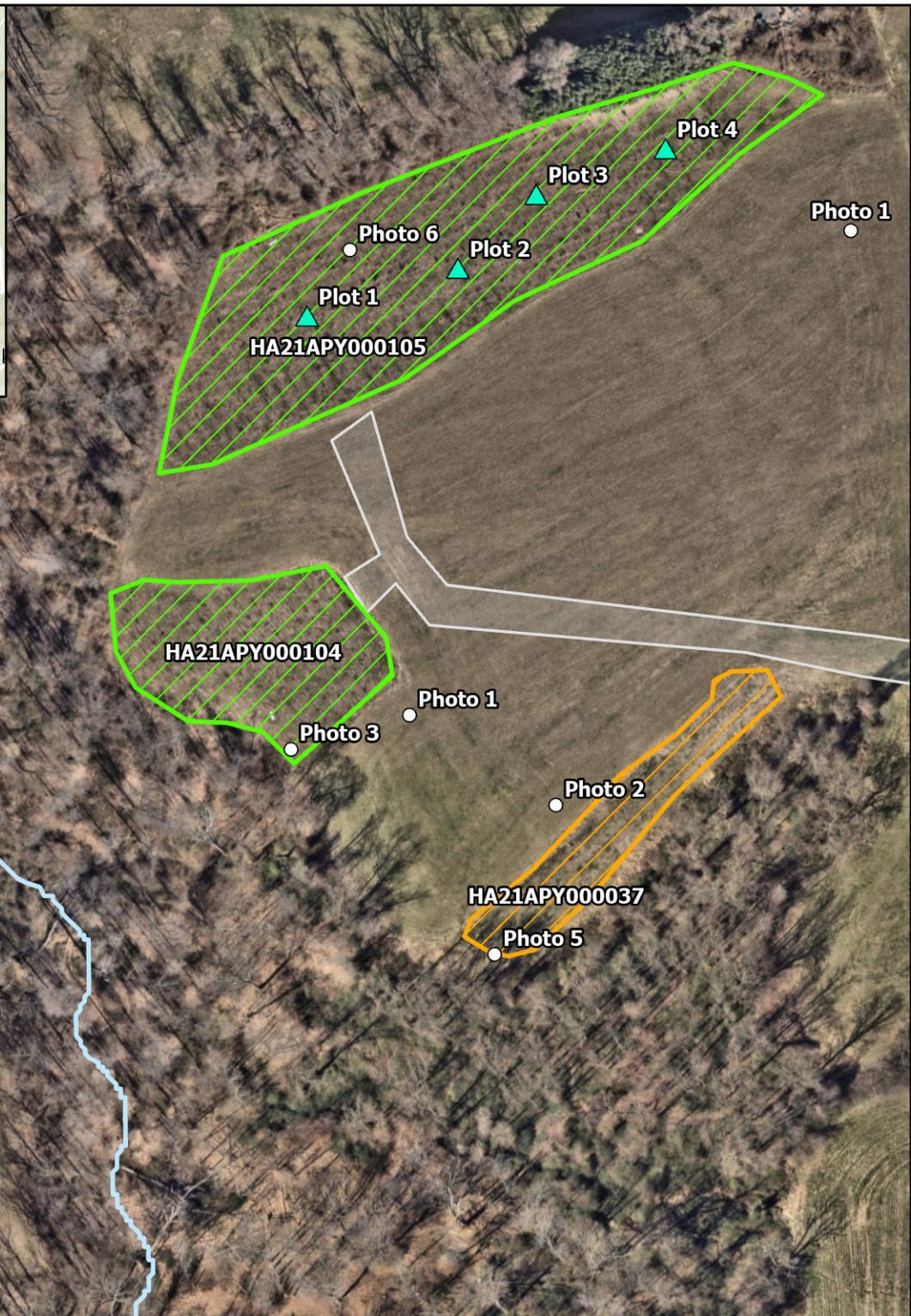
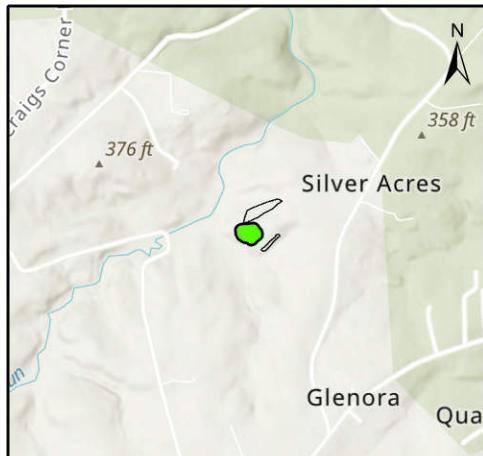
Kinzinger Property, Site A, HA21APY000037



Photo 5: Overview photo facing northeast.



Photo 2: Overview of site, photo facing southeast.



BMP Type: Forest Planting

Total Trees: 125

Trees per Acre: 179

Planted Acres: 0.70

Total IA Credit: 0.77

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Plantings in good condition overall, low mortality

Maintenance Comments: Control Johnson grass and Oriental bittersweet with hand tools and chemical treatment. Replace damaged shelters and remove shelters on larger trees.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Kinzinger B
Site ID: HA21APY000104

0 75 150 300

N

1 inch = 150 feet

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Photo Log

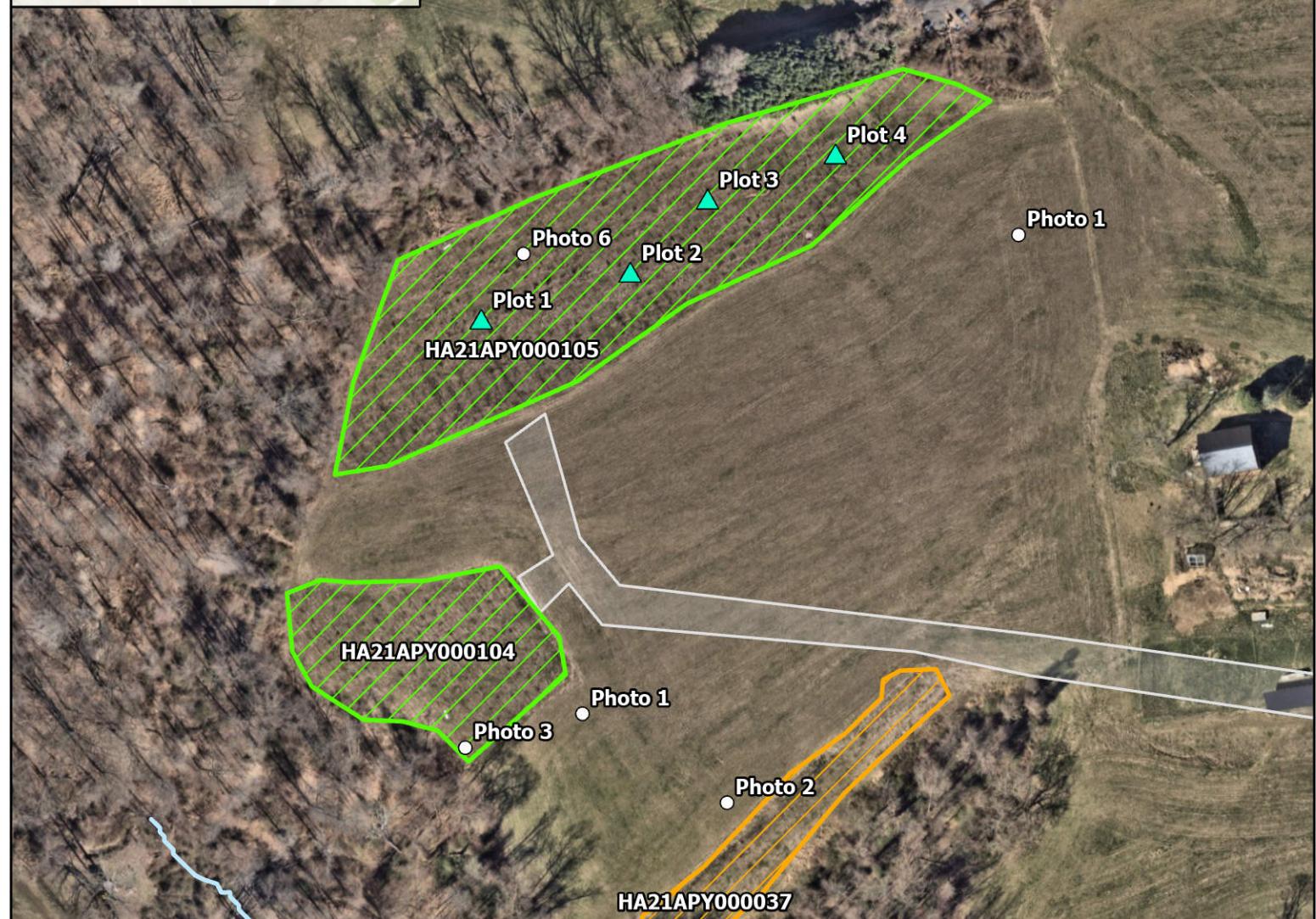
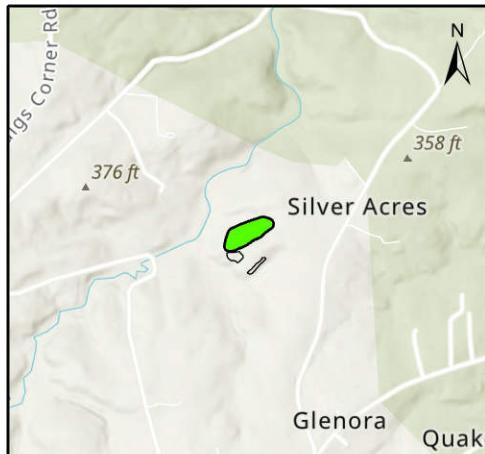
Kinzinger Property, Site B, HA21APY000104



Photo 1: Overview photo facing west.



Photo 3: Overview photo facing northwest.



BMP Type: Forest Planting

Total Trees: 12

Trees per Acre: 240

Planted Acres: 1.92

Total IA Credit: 2.11

Site Condition: Functioning

Inspection Method: 0.05 Acre Plots

Understory: Unmanaged

General Comments: Goldenrod prevalent in herbaceous layer, competing with Johnsongrass. Plantings in good condition overall, mostly taller than Johnsongrass.

Maintenance Comments: Use brush hogging, hand tools, and targeted herbicide application to control Johnsongrass, multiflora rose, and Oriental bittersweet.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Kinzinger C
Site ID: HA21APY000105

0 75 150 300
ft
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Photo Log

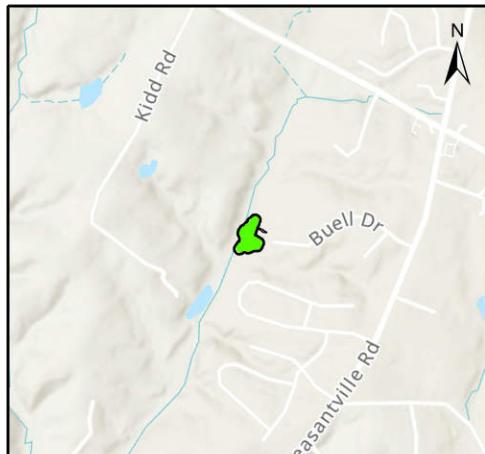
Kinzinger Property, Site C, HA21APY000105



Photo 1: Overview of planted area, facing northwest.



Photo 6: Interior of site, healthy tree plantings.



BMP Type: Forest Planting

Total Trees: 275

Trees per Acre: 319

Planted Acres: 0.86

Total IA Credit: 0.95

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Site looks good overall and is well maintained by landowner. A few shelters missing but trees are large enough that they don't need them. Portion along the stream has an unmanaged understory with ATV trails throughout. All species are doing well for the most part with low mortality.

Maintenance Comments: Some oriental bittersweet climbing plantings. Invasive species control with hand tools and chemical treatment is recommended for the portion along the stream.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Pecoriello A
Site ID: HA21APY000039

0 50 100 200 ft

1 inch = 100 feet

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Photo Log

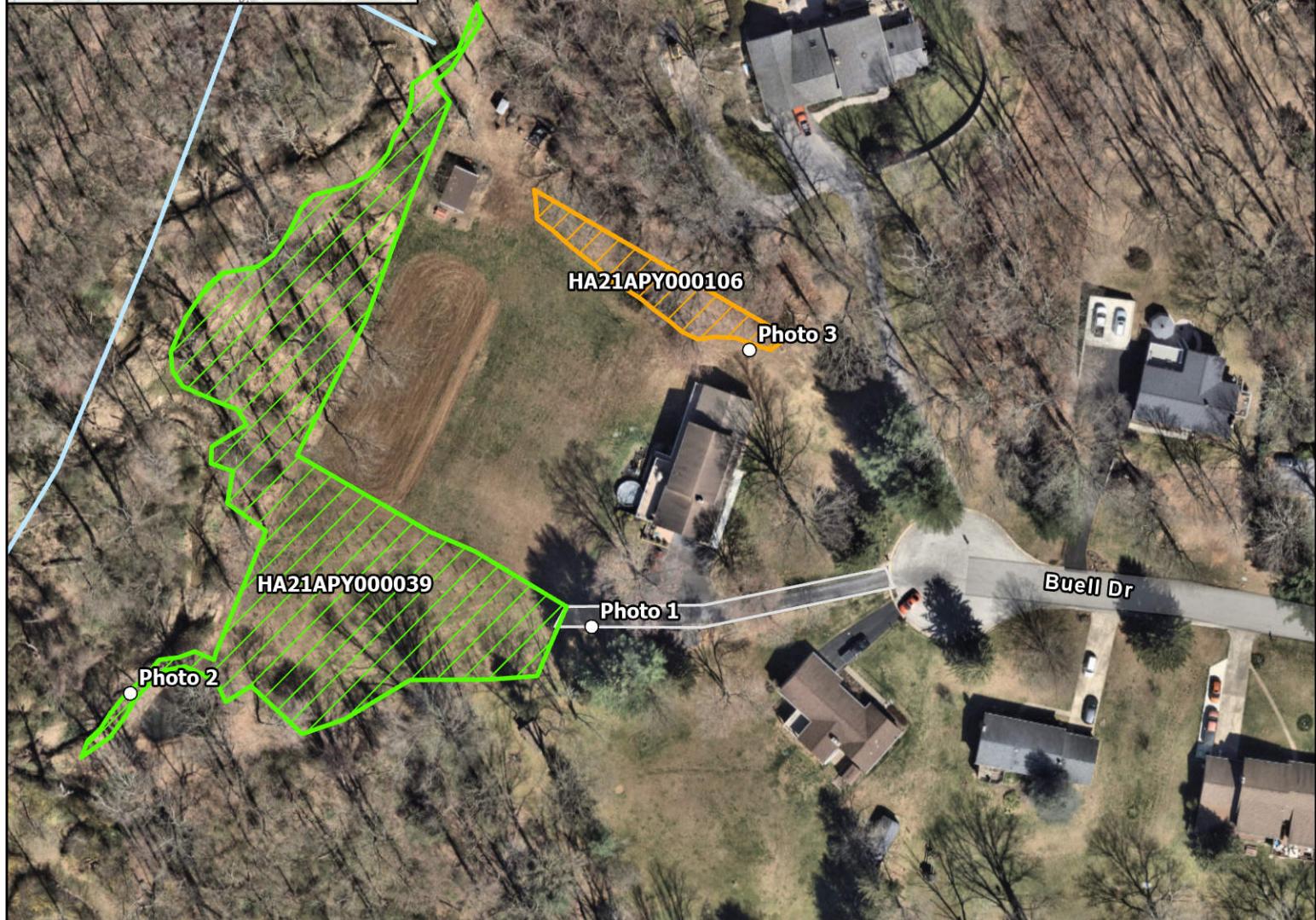
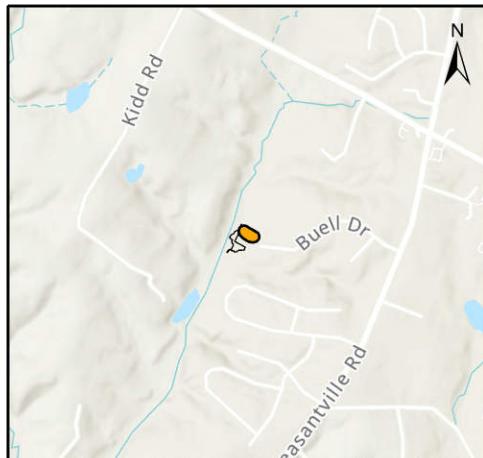
Pecoriello Property, Site A, HA21APY000039



Photo 1: Overview photo facing west.



Photo 2: Overview photo facing southwest.



BMP Type: Urban Tree Canopy

Total Trees: 46

Planted Acres: 0.08

Total IA Credit: 0.13

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Plantings look good overall. Well maintained by land owner.

Maintenance Comments: Conduct minor Oriental bittersweet control.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Pecoriello B
Site ID: HA21APY000106

0 50 100 200

N

1 inch = 100 feet

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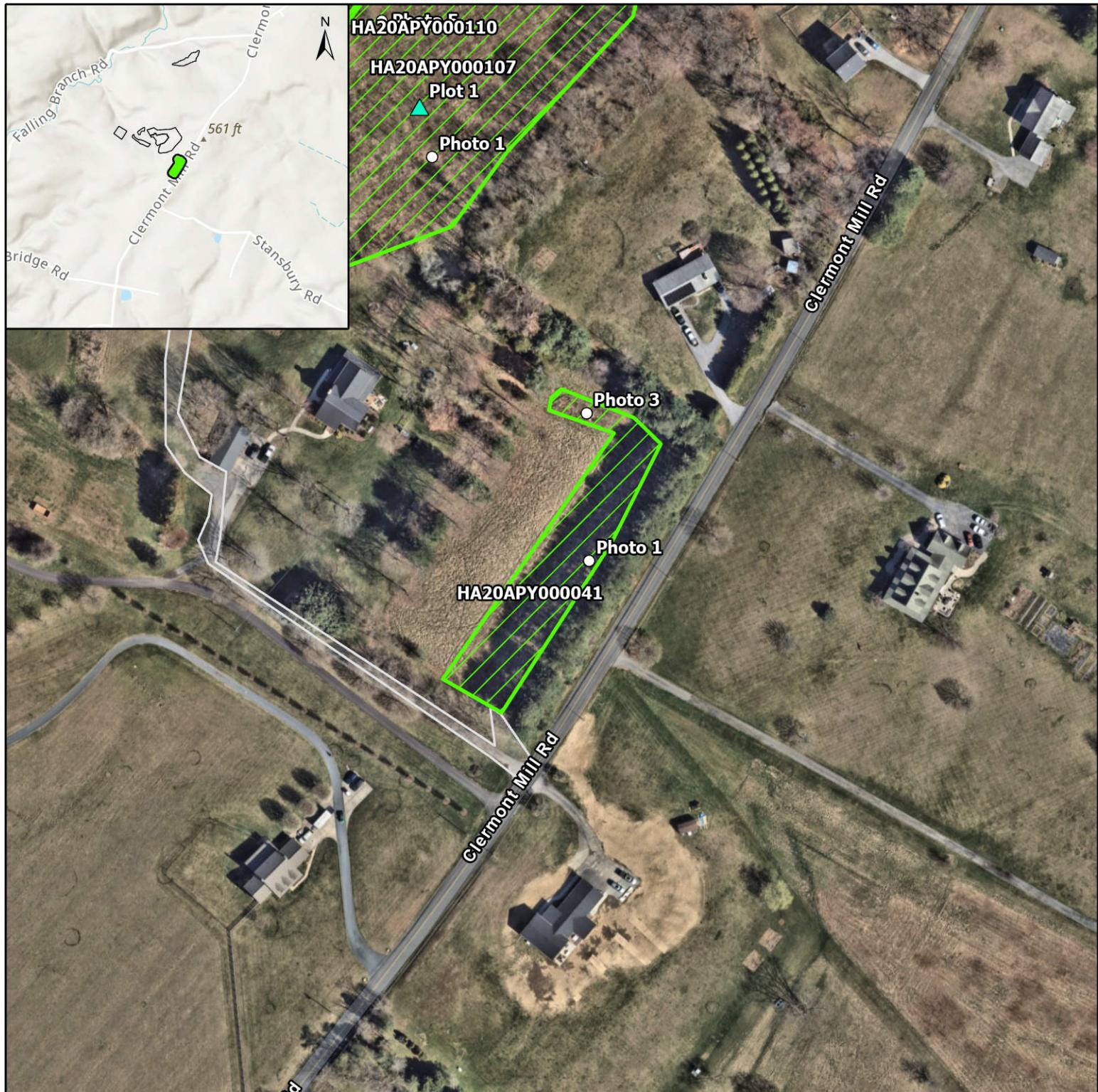


Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Pecoriello Property, Site B, HA21APY000106



Photo 3: Overview photo facing northwest.



BMP Type: Forest Planting
Total Trees: 134
Trees per Acre: 234
Planted Acres: 0.57
Total IA Credit: 0.63

Site Condition: Functioning
Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Planting is on border of small field of fescue. Some shelters look damaged by mower. Overall plantings look healthy.

Maintenance Comments: Some shelters need to be removed or repaired. Continue mowing a couple times a year to control encroaching honeysuckle.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Preston A
Site ID: HA20APY00041

0 75 150 300

1 inch = 150 feet

N

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Photo Log

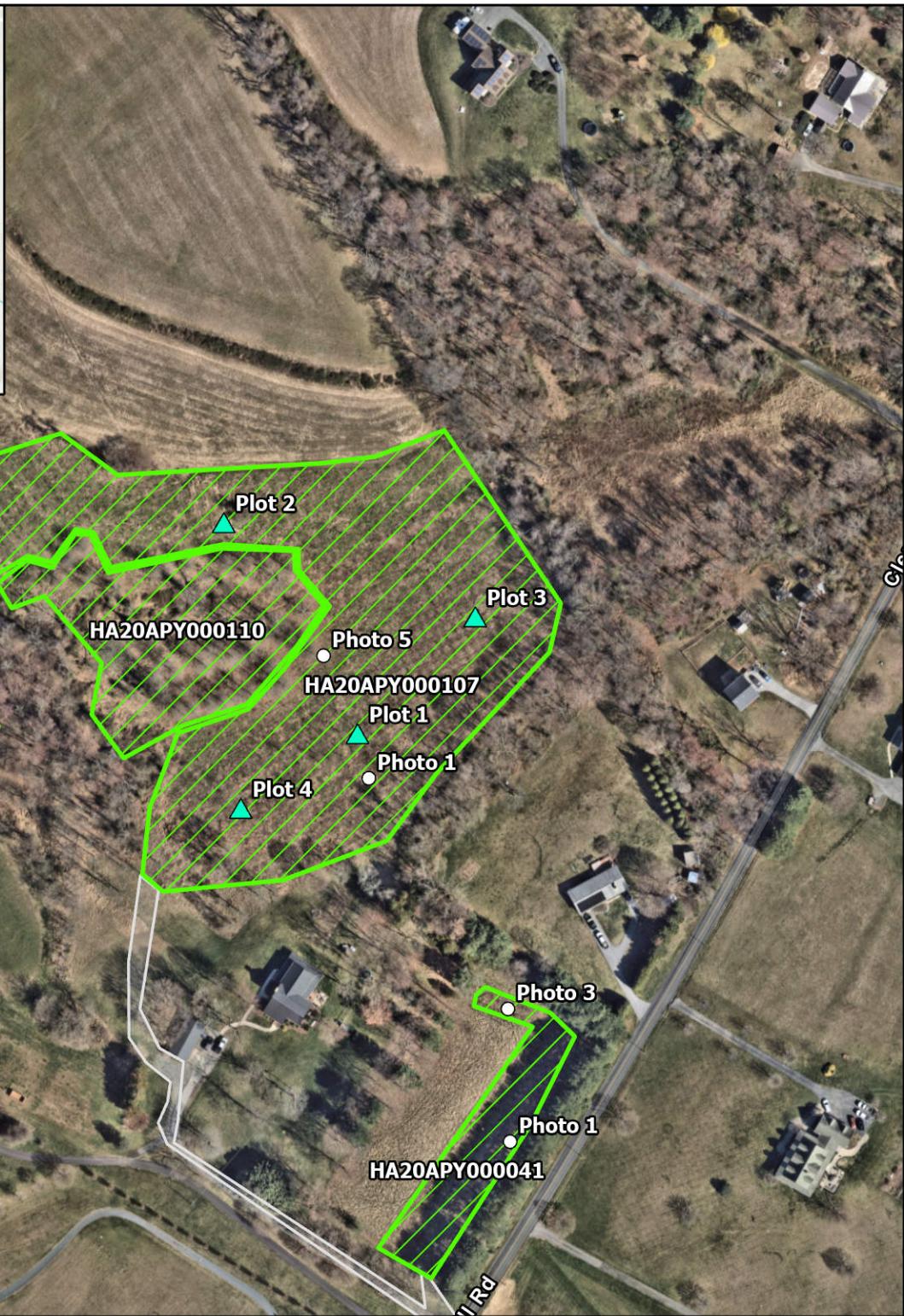
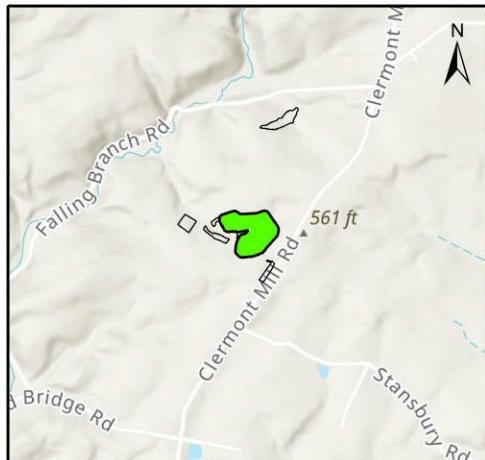
Preston Property, Site A, HA20APY000041



Photo 1: Overview photo facing west.



Photo 3: Overview photo facing southeast.



BMP Type: Forest Planting

Total Trees: 20

Trees per Acre: 203

Planted Acres: 4.53

Total IA Credit: 4.98

Site Condition: Functioning

Inspection Method: 0.01 Acre Plots

Understory: Unmanaged

General Comments: Goldenrod makes up majority of understory. Landowner said site has been mowed 2-4 times a year. Plantings generally doing well.

Maintenance Comments: Continue mowing a couple times a year. Monitor Japanese honeysuckle and microstegium. Shelters should be removed from larger trees.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Preston B
Site ID: HA20APY000107

0 100 200 400
ft
1 inch = 200 feet

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Photo Log

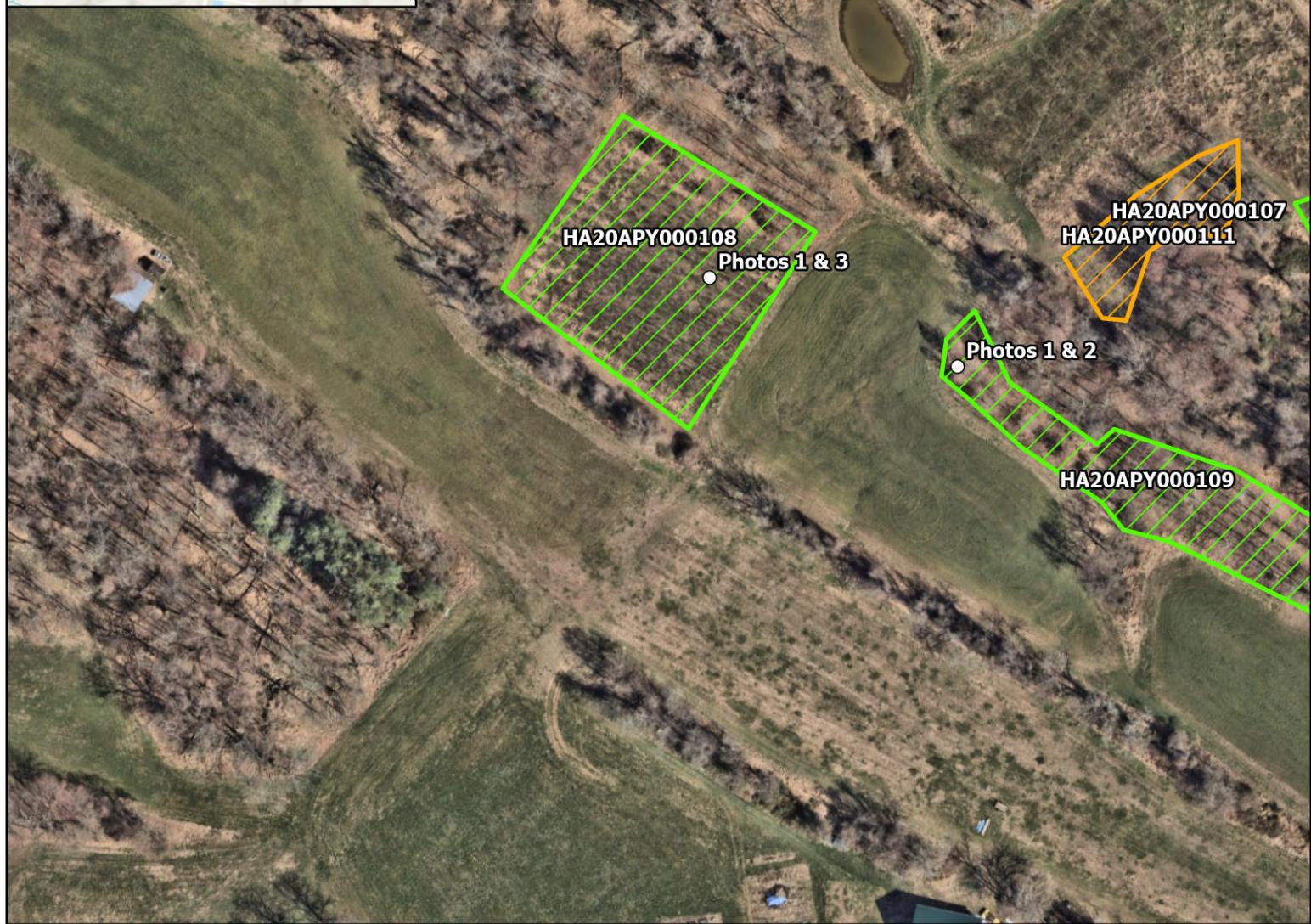
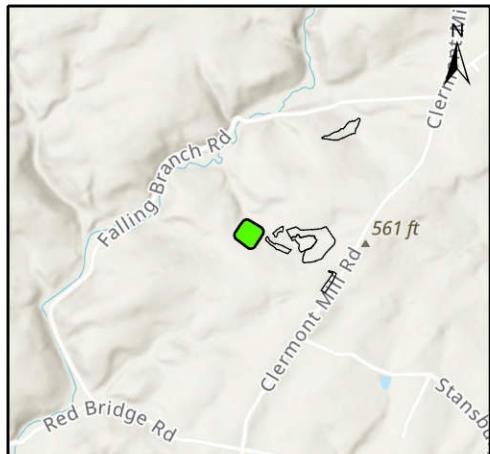
Preston Property, Site B, HA20APY000107



Photo 1: Overview of site, looking west.



Photo 5: Interior of site and established understory, facing northeast.



BMP Type: Forest Planting
Total Trees: 165
Trees per Acre: 167
Planted Acres: 0.99
Total IA Credit: 1.09
Site Condition: Functioning
Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Species typically more vigorous higher up slope. Plantings almost entirely understory trees. Understory includes foxtail, stiltgrass, little bluestem, and patches of goldenrod. Site appears to be mowed a 2-4x a year. High deer activity, generally site is in good/fair condition.

Maintenance Comments: Continue mowing 2-4x a year to control microstegium. Some shelters could be removed/replaced. Could infill some empty shelters - but replanting is currently not necessary due to density.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Preston C
Site ID: HA20APY000108

0 75 150 300
ft
1 inch = 150 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Preston Property, Site C, HA20APY000108

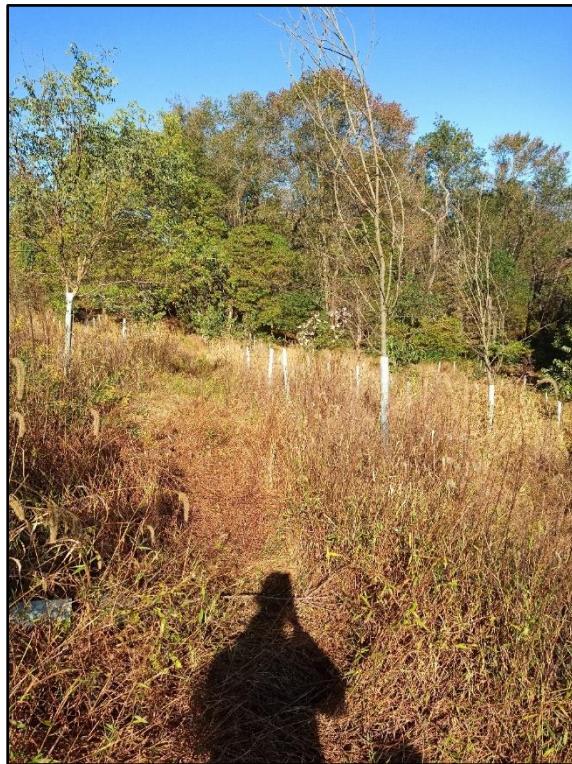


Photo 1: Interior of site with established understory and healthy tree plantings.



Photo 3: Interior of site with established understory and healthy tree plantings.



BMP Type: Forest Planting

Total Trees: 61

Trees per Acre: 94

Planted Acres: 0.65

Total IA Credit: 0.71

Site Condition: Not Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Many plantings are dead. Not a lot of understory, forest is open. Redbuds are doing well. Infill opportunities throughout the site but property owner is currently uninterested in maintenance assistance.

Maintenance Comments: Spot treatment of multiflora rose and Japanese honeysuckle. Opportunities to replant empty shelters.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Preston D
Site ID: HA20APY000109**

0 75 150 300
ft

1 inch = 150 feet

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

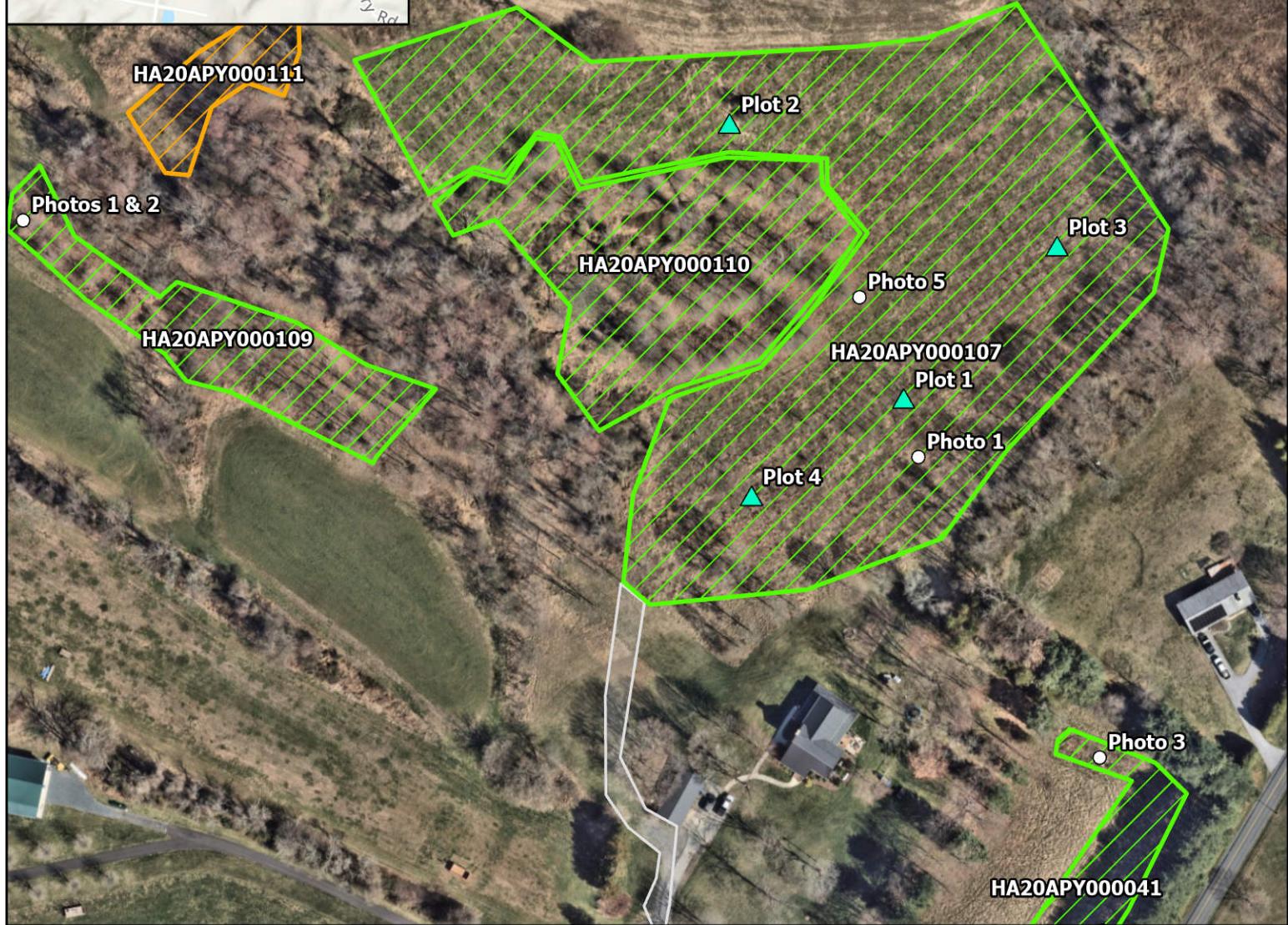
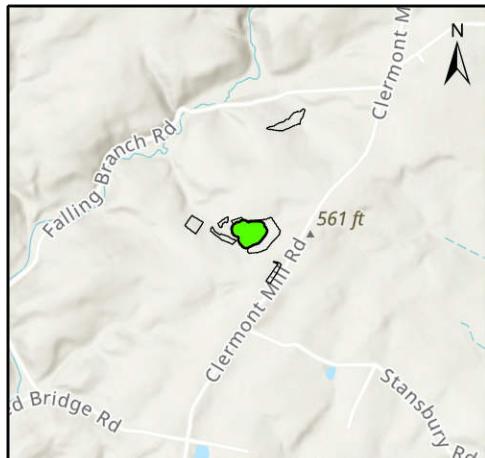
Preston Property, Site D, HA20APY000109



Photo 1: Overview of site, facing southeast.



Photo 2: Overview of site, facing northeast.



BMP Type: Forest Planting

Total Trees: 70

Trees per Acre: 53

Planted Acres: 1.32

Total IA Credit: 1.45

Site Condition: Not Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: This site appears to be infill planting within the larger forest area. Many plantings did not survive, so replanting opportunities are available throughout the site. However, property owner is currently uninterested in maintenance assistance.

Maintenance Comments: Replace infill plantings that died. Control multiflora patches.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Preston E
Site ID: HA20APY000110

0 75 150 300
ft
1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

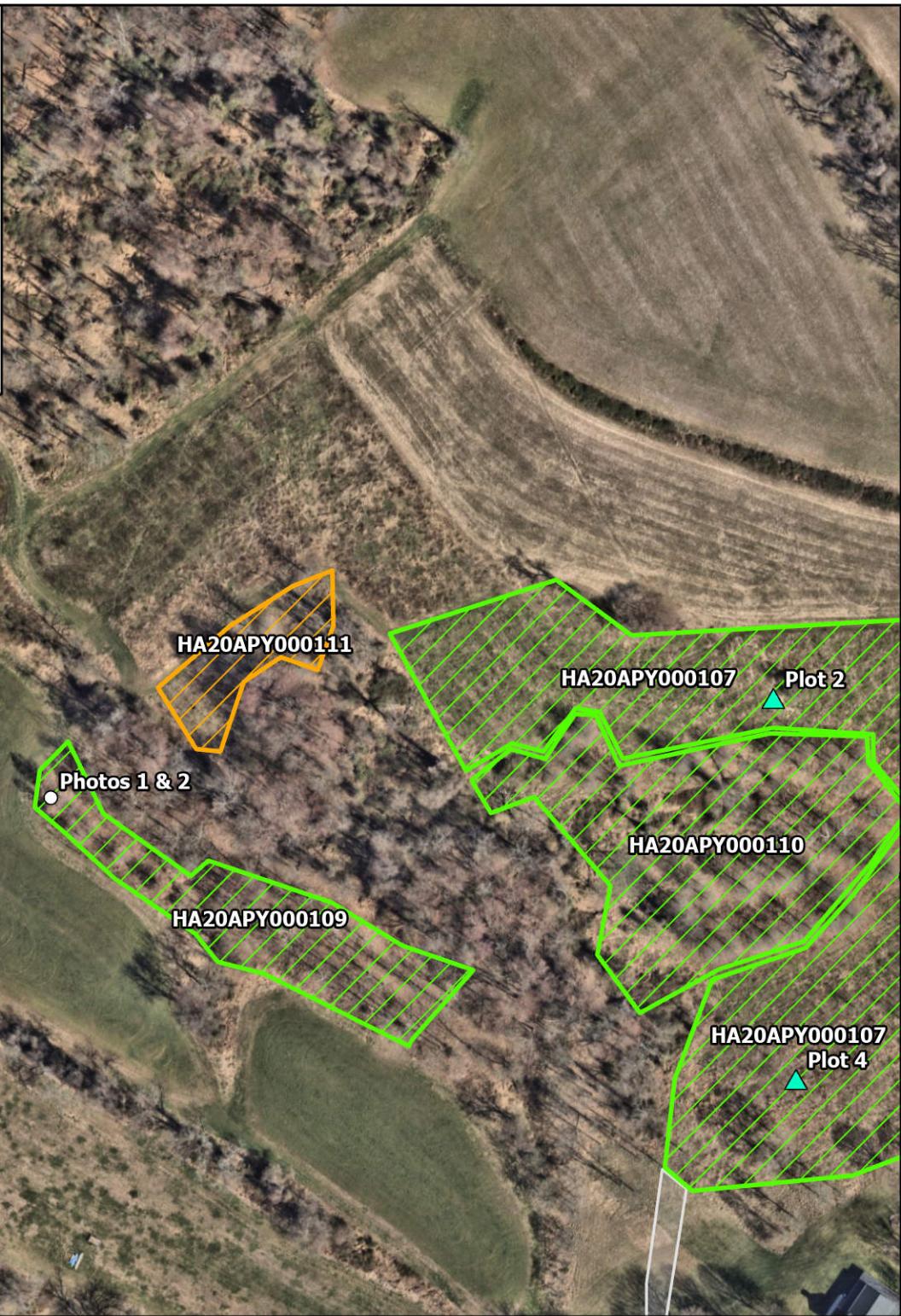
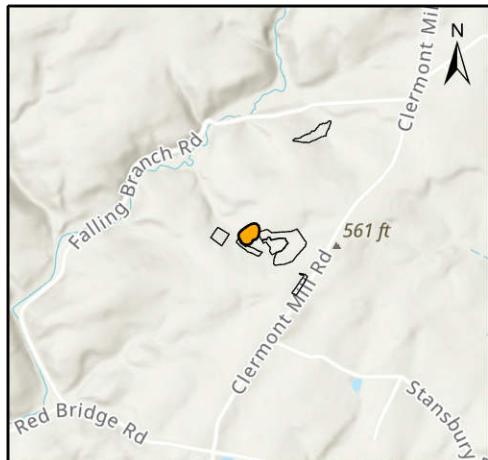
Preston Property, Site E, HA20APY000110



Photo 1: Overview photo facing east.



Photo 2: Overview photo facing north.



BMP Type: Urban Tree Canopy

Total Trees: 62

Planted Acres: 0.25

Total IA Credit: 0.17

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Winterberry, silky dogwood, redbud, American plum, and crab apple are planted. Appears to be an understory species planting, or possibly a food forest. NE part of site includes older oak plantings that are not included in the total count.

Maintenance Comments: Control lespedeza and multiflora.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

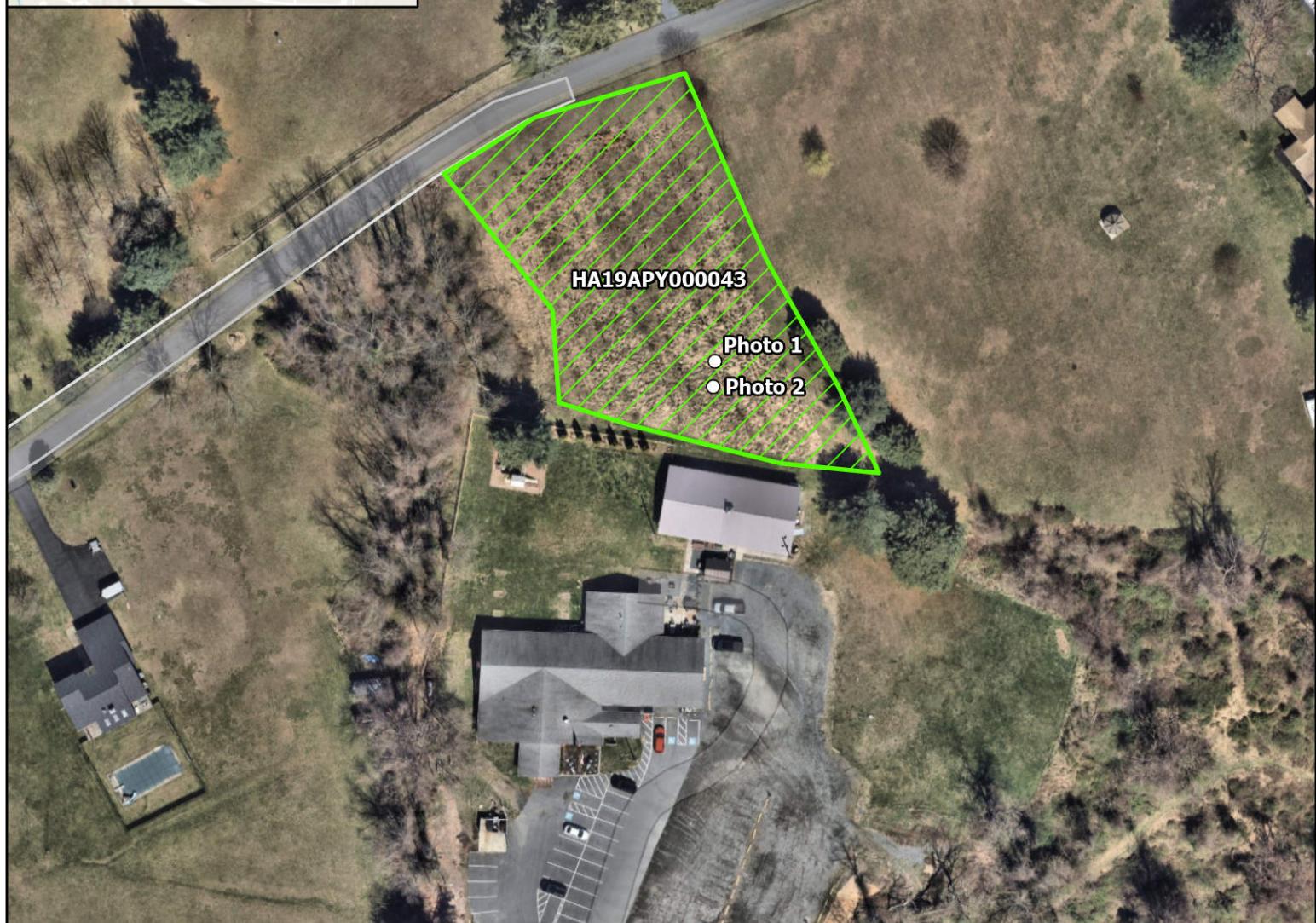
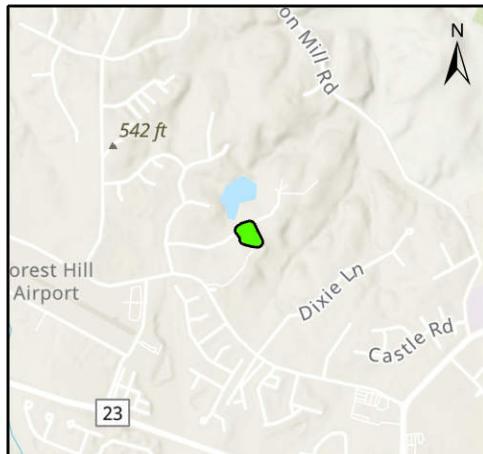
Preston F
Site ID: HA20APY000111

0 75 150 300
ft
1 inch = 150 feet

November 2024

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BMP Type: Forest Planting
Total Trees: 153
Trees per Acre: 200
Planted Acres: 0.76
Total IA Credit: 0.84
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is in good to fair condition with some gaps where plantings have died. Multiple shelters are damaged. Some shelters need to be removed from the larger trees.
Maintenance Comments: General planting pit maintenance to control invasives. Shelter removal and addition of stakes recommended
Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Runyon
Site ID: HA19APY000043

0 50 100 200 ft

1 inch = 100 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

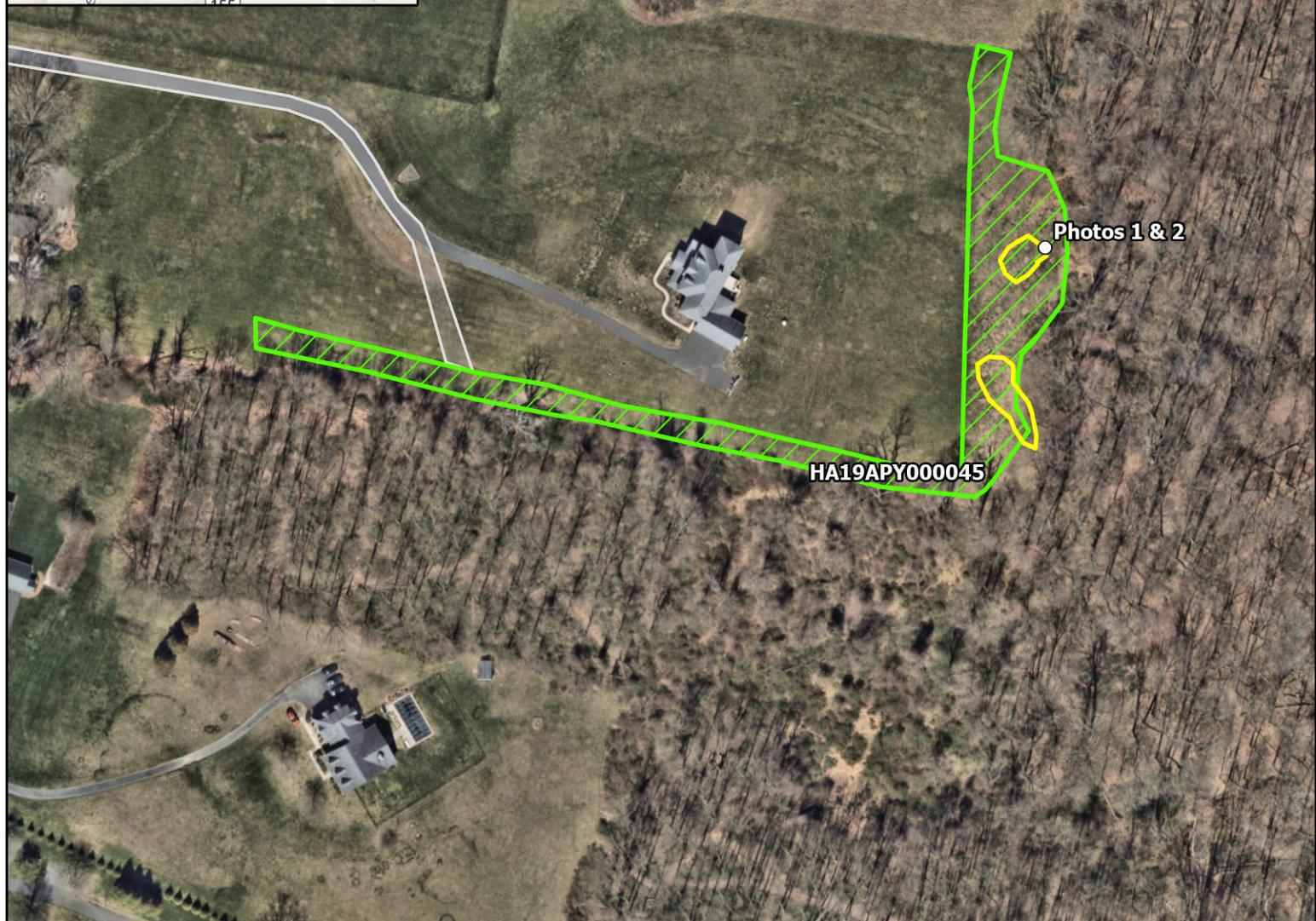
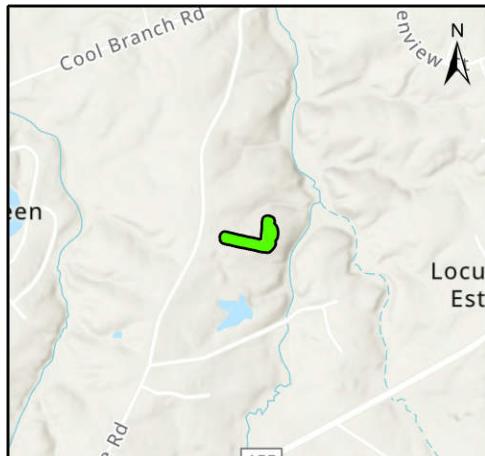
Runyon Property, HA19APY000043



Photo 1: Overview photo facing northwest.



Photo 2: Overview photo facing west.



BMP Type: Forest Planting

Total Trees: 125

Trees per Acre: 143

Planted Acres: 0.87

Total IA Credit: 0.96

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Site is doing well overall. Trees are 6-12 feet tall. Site is very well maintained.

Maintenance Comments: Shelter replacement and removal recommended. Corrective pruning and NNI control with handtools is recommended.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**Skowron
Site ID: HA19APY000045**

0 75 150 300
ft

1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

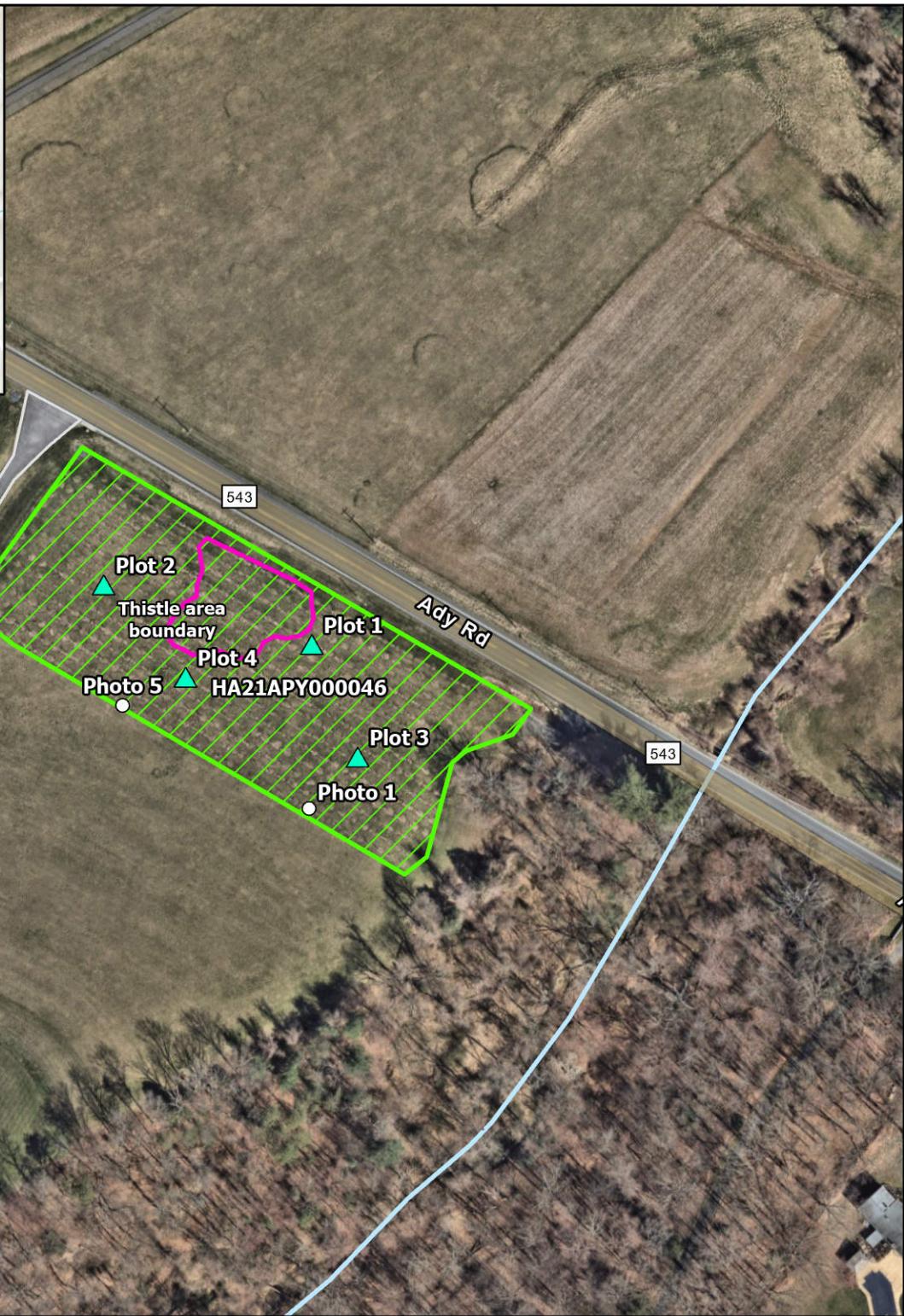
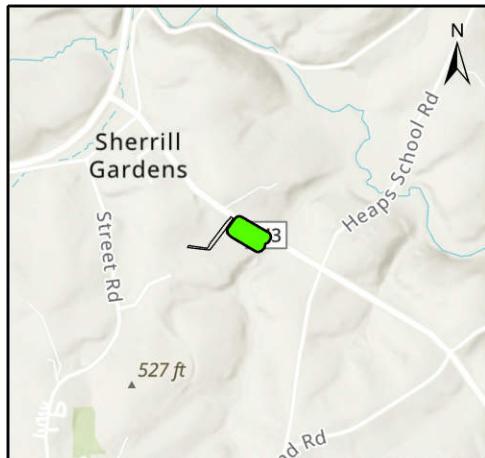
Skowron Property, HA19APY000045



Photo 1: Overview photo facing south.



Photo 2: Overview photo facing north.



BMP Type: Forest Planting
Total Trees: 12
Planted Acres: 2.00
Total IA Credit: 2.20
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged

General Comments: Site is establishing very well overall, strong survival and growth. Site is being well maintained via low mow, some wind damage evident. Homeowner inquired about future maintenance and mowing support

Maintenance Comments: Continue low mow regime, stake and guy trees damaged by wind. Chemical control of thistle recommended. Thistle is present throughout site but large notable stand identified on notes line. Replace zip ties to re-attach shelters to the wooden stakes.

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- Notes Line
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Smith A
Site ID: HA21APY000046

0 75 150 300

1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Smith Property, Site A, HA21APY000046



Photo 1: Interior of site looking south, healthy tree plantings and understory.



Photo 5: Interior of site looking south, healthy tree plantings and understory.



BMP Type: Forest Planting
Total Trees: 254
Trees per Acre: 256
Planted Acres: 0.99
Total IA Credit: 1.09

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Trees establishing very well - 8-15' tall on average. Site well maintained via low mow

Maintenance Comments: Clear bittersweet within tubes, chemical control for thistle sp., shelter repair

Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Smith B
Site ID: HA21APY000112

0 75 150 300
ft
1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

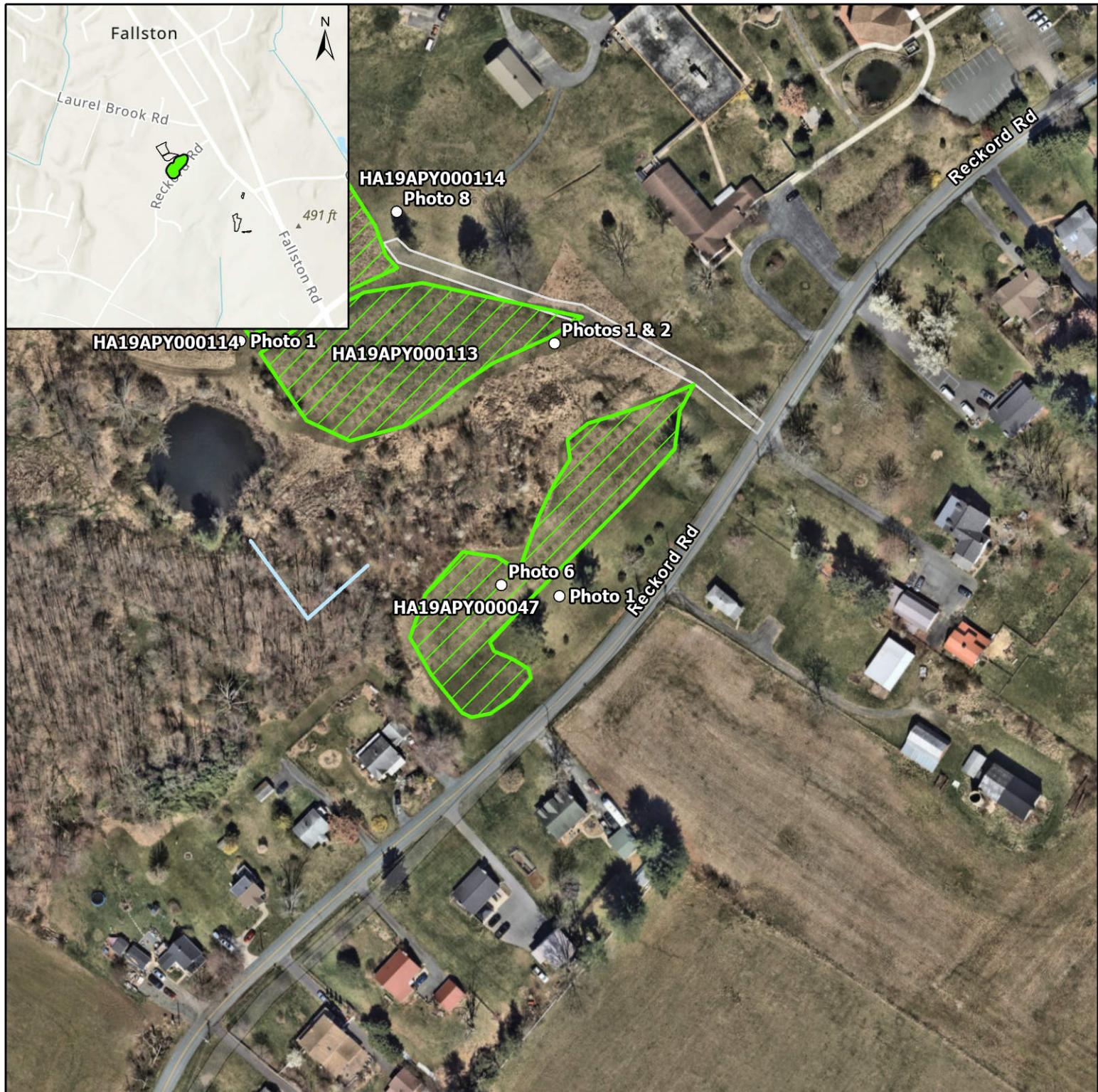
Smith Property, Site B, HA21APY000112



Photo 1: Overview photo facing south.



Photo 8: Overview photo facing east.



BMP Type: Forest Planting

Total Trees: 132

Trees per Acre: 178

Planted Acres: 0.74

Total IA Credit: 0.81

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Site generally looks good. Lower survival than St Mark's B. Some small survival gaps. Trees are 8-15 feet tall.

Maintenance Comments: Actively mowed and maintained by church. Small amount of multiflora at base of tree pits. Expect landowner will continue mowing and managing invasives.

Owner Type: Church

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

St. Mark's A
Site ID: HA19APY000047

0 75 150 300 ft

1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

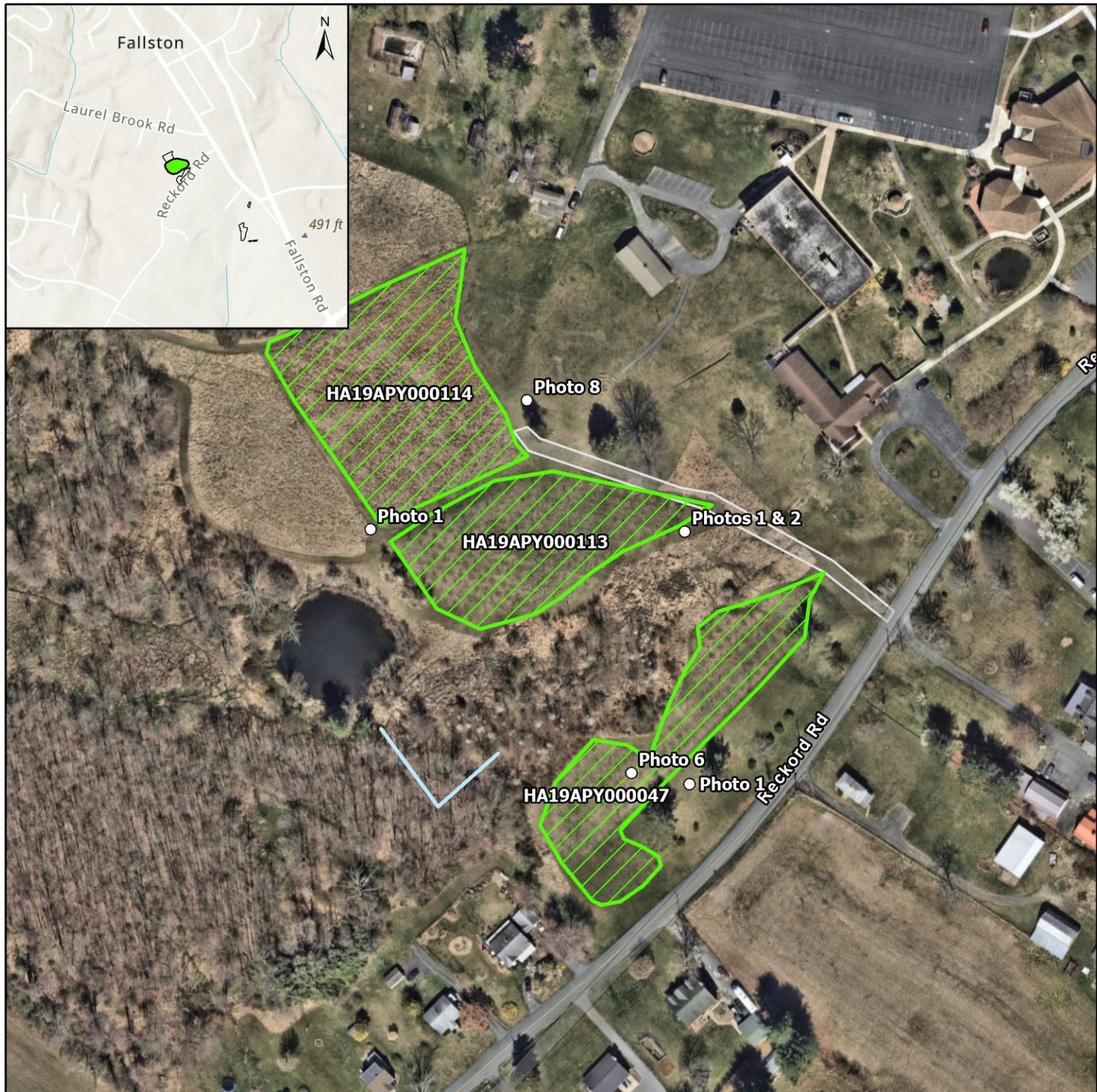
St. Mark's Property, Site A, HA19APY000047



Photo 1: Overview photo facing southwest.



Photo 6: Interior of site, facing northeast.



BMP Type: Forest Planting
Total Trees: 190
Trees per Acre: 248
Planted Acres: 0.76
Total IA Credit: 0.84
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Maintained Turf
General Comments: Site is doing well overall, trees are 10-20 feet tall, high survival, site is well maintained. Tree shelters have been removed. Minor buck rub. Staking and guying on some trees.
Maintenance Comments: No maintenance needed. Currently maintained by church facilities.
Owner Type: Church

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**St. Mark's B
Site ID: HA19APY000113**

0 75 150 300

N

1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

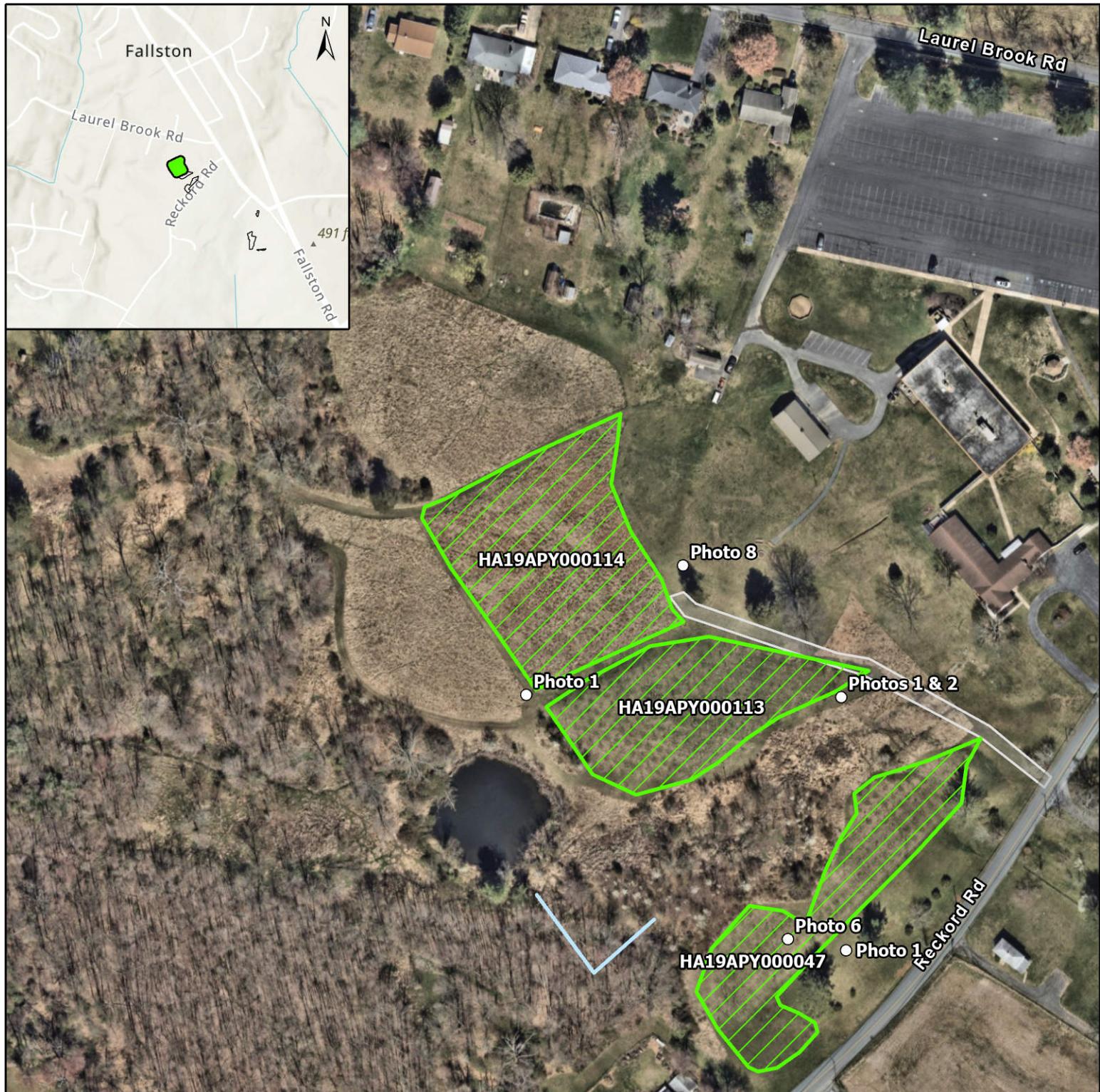
St. Mark's Property, Site B, HA19APY000113



Photo 1: Overview photo facing southwest.



Photo 2: Overview photo facing west.

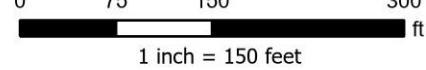


BMP Type: Forest Planting
Total Trees: 0
Trees per Acre: 0
Planted Acres: 1.06
Total IA Credit:
Site Condition: Does Not Exist
Inspection Method: Total Site Count
Understory:
General Comments: This area was not planted with trees but was instead installed as a meadow. Meadow generally looks very good.
Maintenance Comments:
Owner Type: Church

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

**St. Mark's C
Site ID: HA19APY000114**

0 75 150 300


November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

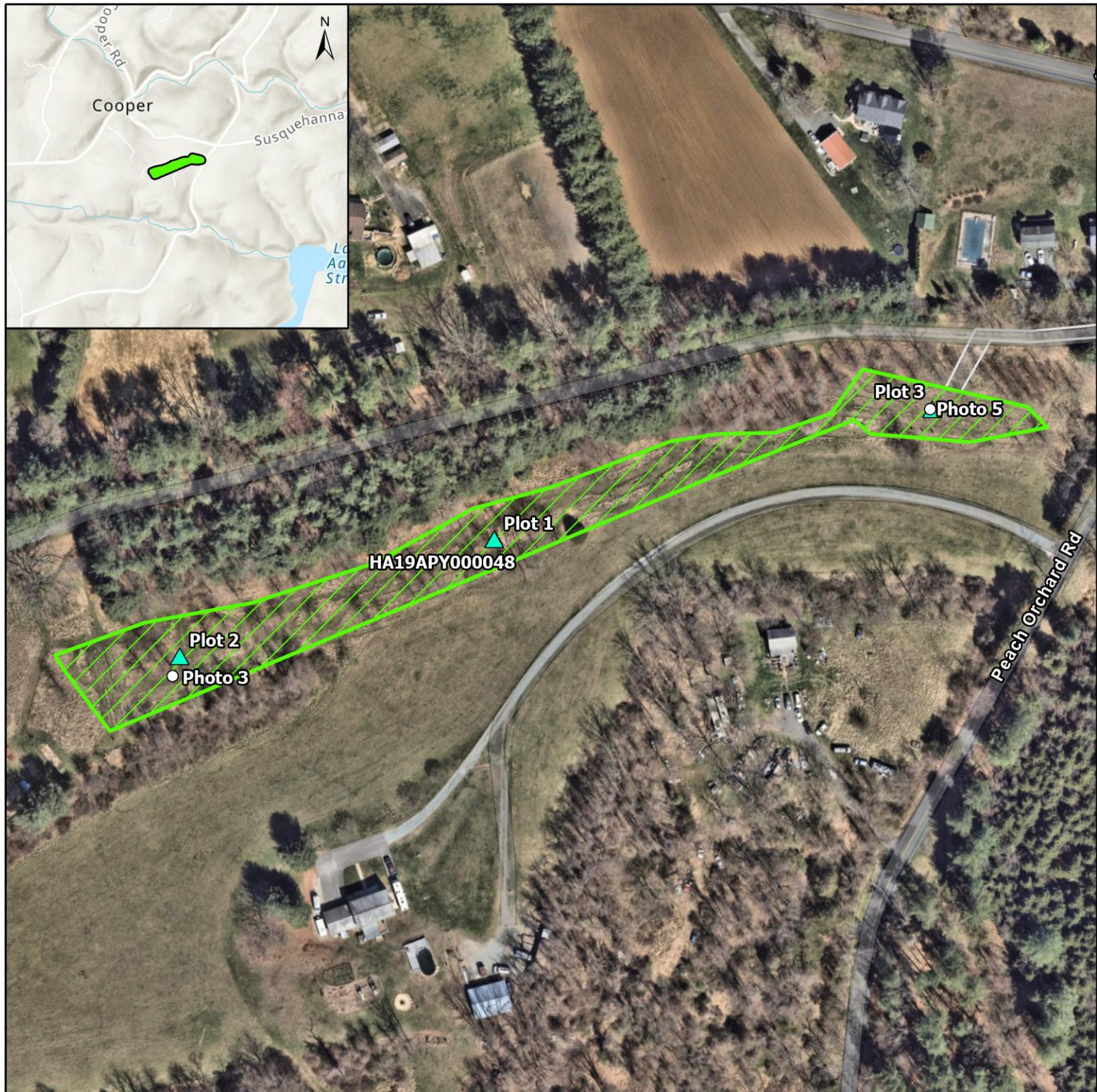
St. Mark's Property, Site C, HA19APY000114



Photo 1: Overview photo of meadow facing north.



Photo 8: Overview photo of meadow facing southwest.



<p>BMP Type: Forest Planting Total Trees: 10 Trees per Acre: 200 Planted Acres: 1.51 Total IA Credit: 1.66 Site Condition: Functioning Inspection Method: 0.05 Acre Plots Understory: Unmanaged General Comments: Understory is unmaintained herbaceous with some mowing paths for walking trail. Trees are generally establishing well and are 6-12' tall. Trees are planted in individual species groupings at approximately 50 trees per group. Maintenance Comments: Site is generally well maintained. Some shelters have been removed, but deer browse and buck rub is limited. Property owner requested invasive control along existing forest stands and planting along driveway. Owner Type: Homeowner</p>
--

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Stansbury
Site ID: HA19APY000048

0 75 150 300
ft
1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

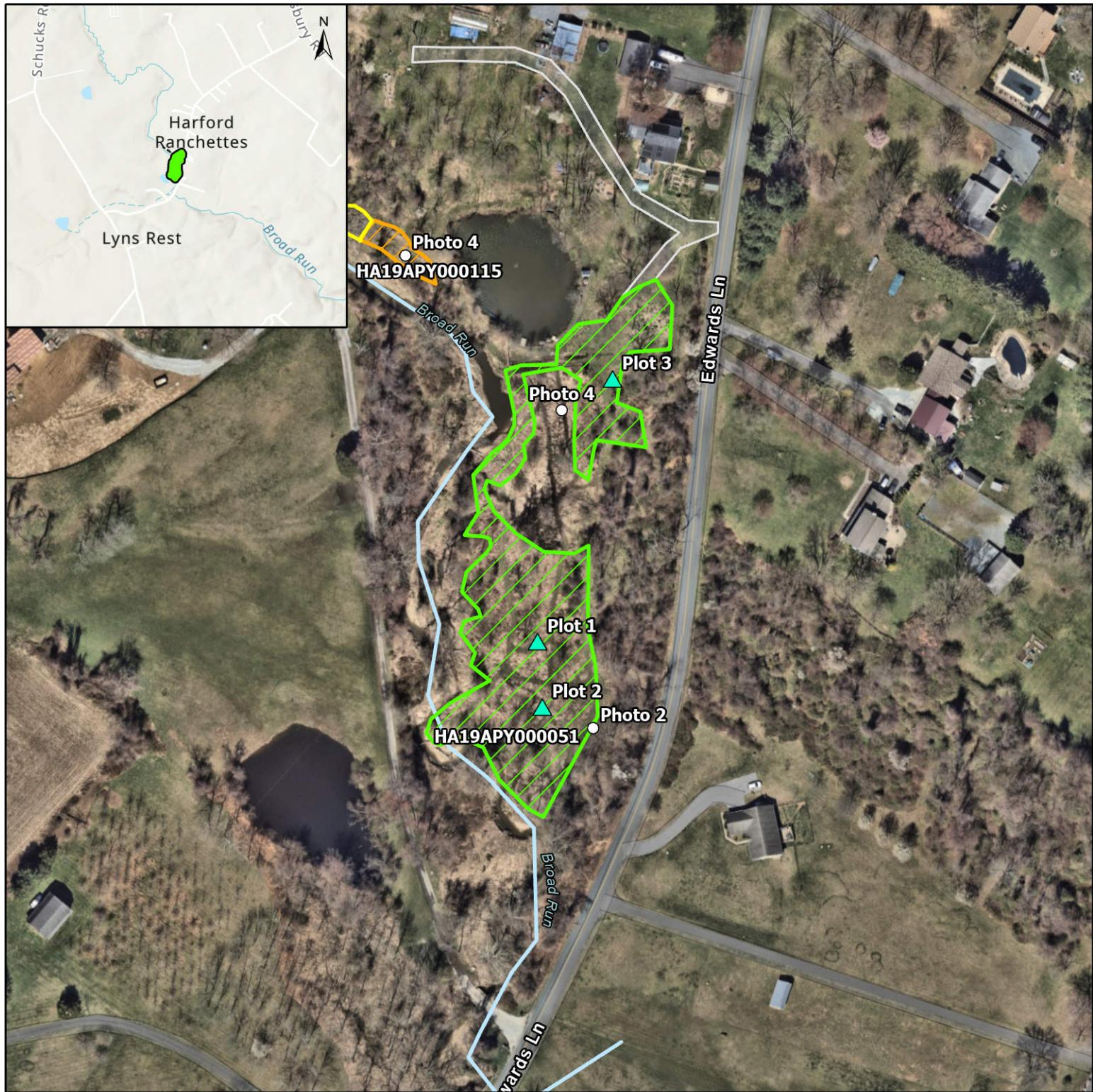
Stansbury Property, HA19APY000048



Photo 5: Overview photo facing west.



Photo 3: Overview photo facing east.



BMP Type: Forest Planting
Total Trees: 3
Trees per Acre: 60
Planted Acres: 1.24
Total IA Credit: 1.37
Site Condition: Not Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Active floodplain with wetland conditions beginning at toe of slope. Appears to be maintained due to lack of invasive woody species. Entire site could use infill with wetland species like sycamore, river birch, black willow, willow oak, and swamp white oak.
Maintenance Comments: Conduct infill planting throughout. Clear plant debris as needed for access.
Owner Type: Homeowner

- Forest Planting
- Urban Tree Canopy
- Access Route
- Potential Infill Area
- DNR Waters
- Photo Point
- ▲ Plot Point

**Alliance for the Chesapeake Bay
Fall 2024 Planting Inspections**

Tepper A
Site ID: HA19APY000051

0 75 150 300
ft
1 inch = 150 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

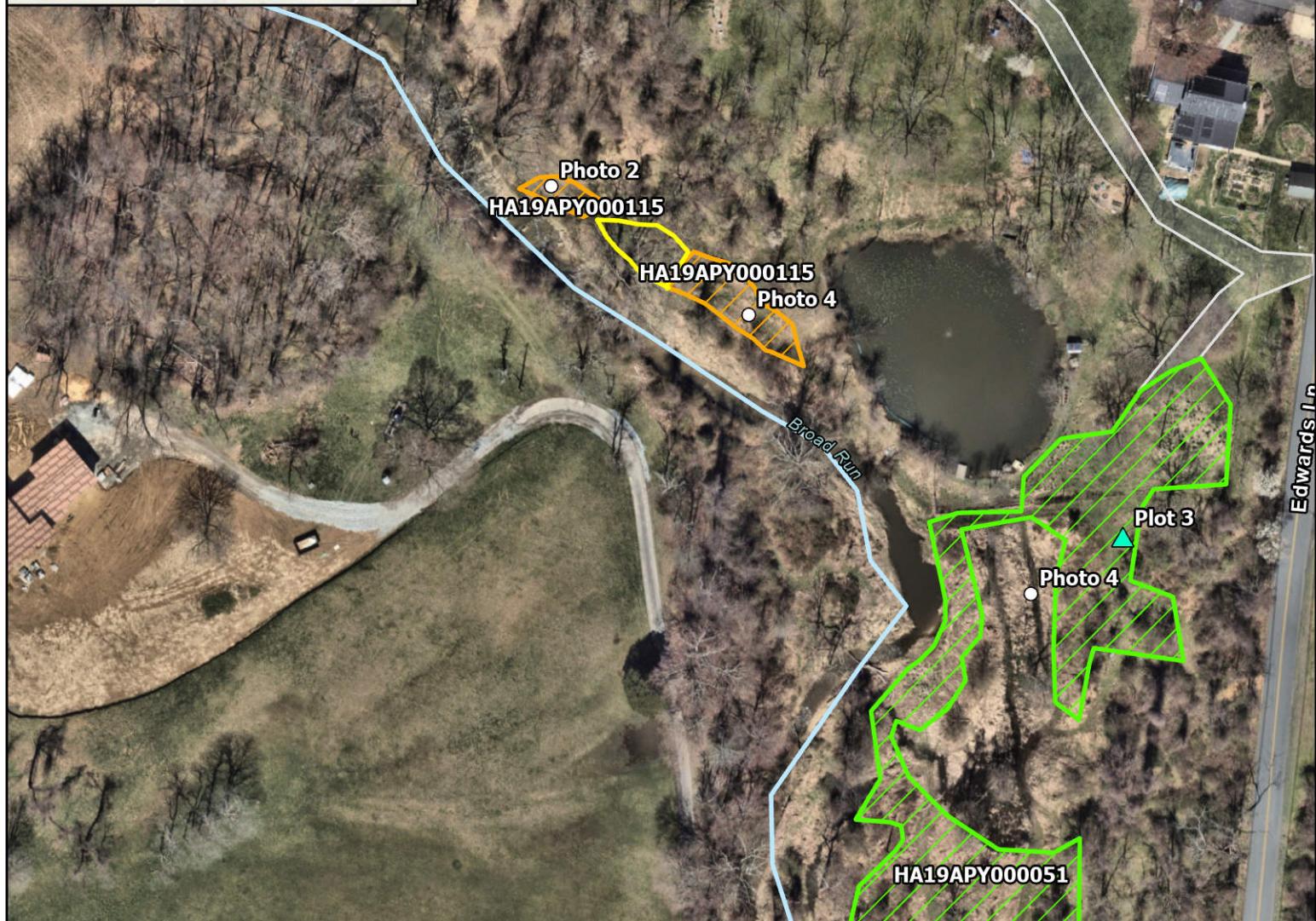
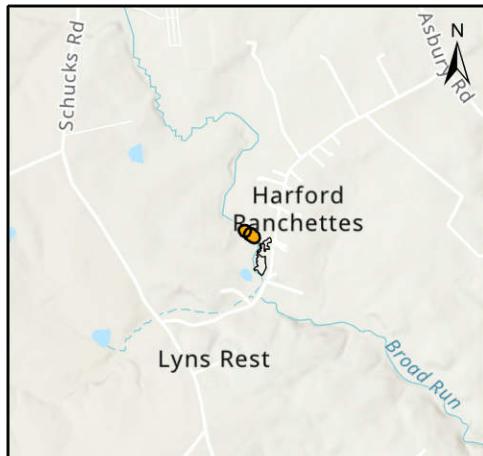
Tepper Property, Site A, HA19APY000051



Photo 2: Overview photo facing north.



Photo 4: Overview photo facing west.



BMP Type: Urban Tree Canopy

Total Trees: 19

Planted Acres: 0.06

Total IA Credit: 0.05

Inspection Method: Total Site Count

Understory: Unmanaged

General Comments: Native regeneration of woody species observed, including 2-4' tall persimmon. Potential Infill Area as shown.

Maintenance Comments: Use brush hogging, hand tools, and targeted herbicide application for invasive species control. Some trees require staking and guying.

Owner Type: Homeowner

Forest Planting

Urban Tree Canopy

Access Route

Potential Infill Area

DNR Waters

Photo Point

Plot Point

Alliance for the Chesapeake Bay Fall 2024 Planting Inspections

Tepper B
Site ID: HA19APY000115

0 50 100 200
1 inch = 100 feet

November 2024

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Harford County Fall 2024 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Tepper Property, Site B, HA19APY000115



Photo 2: Overview photo facing southeast.



Photo 4: Overview photo facing southeast.

Appendix B – Plot Point Table

Site ID	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native Regen	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
Cyrulik	Plot 1	0.05 ac	14	280	0	80	0	Plot includes primarily black locust, northern red oak, and American sycamore. Planted species are vigorous. Understory includes rye grass, violet, and American pokeweed. There is no woody regeneration due to mowing, however, American pokeweed is spreading.
Cyrulik	Plot 2	0.05 ac	12	240	0	90	2	Plot includes black locust and northern red oak. Black locust is vigorous, northern red oak is not. Invasives include high Japanese stiltgrass, Oriental bittersweet, and violet.
Cyrulik	Plot 3	0.05 ac	20	400	0	90	2	Plot includes vigorous American sycamore, river birch, and pin oaks. White oaks appear stressed. Understory consists primarily of Japanese stiltgrass and rye grass. Some shelters can be removed/repaired.
AVERAGE			15	307	0	87	1	
John Sutton, Jr.	Plot 1	0.05 ac	21	420	0	5	2	Plot includes persimmon, river birch, black walnut, and American plum. All species are vigorous. Oriental bittersweet present on trees and ground ivy in herbaceous layer. Evidence of Oriental bittersweet removal.
John Sutton, Jr.	Plot 2	0.05 ac	18	360	0	5	25	Plot includes white oak, persimmon, pin oak, northern red oak, and river birch. Some white oaks are much less vigorous than other species. Persimmon are very vigorous. Invasives include multiflora rose and Oriental bittersweet, which are present in some shelters.
John Sutton, Jr.	Plot 3	0.05 ac	17	340	0	5	25	Plot includes American sycamore, swamp white oak, northern red oak, American plum, and redbud. American sycamore, swamp white oak, and persimmon are vigorous. Single white oak in poor condition. Invasives include multiflora rose and Oriental bittersweet. Shelter removal is needed on some trees. Ground ivy is present but is mowed.
John Sutton, Jr.	Plot 4	0.05 ac	17	340	0	5	0	Plot includes willow oak, white oak, and pin oak. Willow oak is vigorous. Invasive cover is low. Some white oak struggling but overall trees are doing well.
John Sutton, Jr.	Plot 5	0.05 ac	12	240	0	5	30	Plot includes American sycamore, persimmon, pin oak, swamp white oak, white oak, and river birch. Persimmon is most vigorous. Invasives include multiflora rose in some shelters and ground ivy in herbaceous layer but is maintained and mowed by the owner. Multiple trees are leaning over and require staking and guying.
AVERAGE			17	340	0	5	16	
Kinzinger C	Plot 1	0.05 ac	16	320	8	85	10	Very heavy Johnsongrass present. American sycamore, tulip poplar, and black cherry are vigorous. One planted mulberry in plot. Trees in good condition overall, currently outcompeting Johnsongrass.
Kinzinger C	Plot 2	0.05 ac	12	240	35	60	10	Trees in good condition. Plot includes tulip poplar, black cherry and white pine, which are vigorous. Herbaceous layer includes goldenrod competing with invasive species, including Johnsongrass, Oriental bittersweet, and wineberry.
Kinzinger C	Plot 3	0.05 ac	10	200	2	60	10	Plot includes vigorous black cherry and tulip poplar. Plantings are healthy overall. Johnsongrass and goldenrod are dominant in herbaceous. Johnsongrass needs to be controlled.

Site ID	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native Regen	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
Kinzinger C	Plot 4	0.05 ac	10	200	2	85	5	Johnsongrass is dominant in herbaceous, needs to be controlled. Trees generally in good condition, few shelters missing trees.
AVERAGE			12	240	12	73	9	
Preston B	Plot 1	0.10 ac	24	240	30	40	5	Plot includes chestnut oak, black locust, pawpaw and American sycamore. Herbaceous layer includes cinquefoil, violet sp., and Japanese stiltgrass. Mostly goldenrod in understory. High American sycamore regeneration and some red maple regeneration. Some multiflora rose and Oriental bittersweet in tubes. 4 rows of more planted mature black locust were present. Invasives are high between rows.
Preston B	Plot 2	0.10 ac	15	150	0	25	5	Plot includes vigorous chestnut oak, hazelnut and redbud. Majority of native understory layer includes goldenrod, pokeweed, dogbane, and lady's thumb. Invasives include Japanese honeysuckle, Japanese stiltgrass, and multiflora rose.
Preston B	Plot 3	0.10 ac	21	210	10	15	5	Plantings are doing well, particularly American sycamore and northern red oak. Hackberry is experiencing leader dieback. One black locust and some American sycamore regeneration. Some multiflora rose and Oriental bittersweet present in tubes. Mostly goldenrod in understory and some white panicle aster present in understory.
Preston B	Plot 4	0.10 ac	21	210	10	20	3	Plot includes black locust and pawpaw. Some larger planted black locust are present. Understory species include Carolina horse nettle, little bluestem, white panicle aster, and goldenrod. Some Oriental bittersweet is present in tubes and Japanese stiltgrass and cinquefoil in herbaceous layer. There is some American sycamore and black locust regeneration. Grass makes up half the plot.
AVERAGE			20	203	13	25	5	
Smith A	Plot 1	0.05 ac	12	240	0	20	2	Plot includes pin oak, swamp white oak, American sycamore, and river birch. Invasives include thistle sp. and Oriental bittersweet.
Smith A	Plot 2	0.05 ac	12	240	0	0	0	Plot includes primarily American sycamore and pin oak. Trees generally doing well and are 6-15' high.
Smith A	Plot 3	0.05 ac	12	240	0	10	2	Plot includes pin oak, river birch, American sycamore, and swamp white oak. Invasives include foxtail, thistle sp. and Oriental bittersweet.
Smith A	Plot 4	0.05 ac	13	260	0	10	0	Plot includes persimmon, American sycamore, pin oak, and river birch. Invasives include thistle sp.
AVERAGE			12	245	0	10	1	
Stansbury	Plot 1	0.05 ac	11	220	0	60	0	Plot includes persimmon and red cedar stand with older black locust onsite. Japanese stiltgrass is dominant in herbaceous layer.
Stansbury	Plot 2	0.05 ac	8	160	0	40	5	Plot includes flowering dogwood, white oak, and redbud. Invasives include Oriental bittersweet, autumn olive and Japanese stiltgrass.
Stansbury	Plot 3	0.05 ac	11	220	0	5	5	Plot includes black walnut, sweetgum, and red cedar. Some autumn olive is establishing. No maintenance needed other than knock down mowing.
AVERAGE			10	200	0	35	3	

Harford County Fall 2024 Alliance Site Inspections - Plot Point Table

Site ID	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native Regen	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
Tepper A	Plot 1	0.05 ac	7	140	5	40	10	All planted trees are American sycamore. American sycamore regeneration present. Persicaria and swamp argrimony also present. Area is floodplain and likely wetland.
Tepper A	Plot 2	0.05 ac	1	20	0	40	0	Plot includes American sycamore. Plot located in a very wet floodplain. Low survival due to floodplain activity. Invasives include Japanese stiltgrass.
Tepper A	Plot 3	0.05 ac	1	20	20	15	20	Regeneration is mostly persimmon. Strong presence of goldenrod. Invasives include multiflora rose, Japanese stiltgrass, and Japanese honeysuckle. Survival is low.
AVERAGE			3	60	8	32	10	



MEMORANDUM

700 East Pratt Street, Suite 500
Baltimore, MD 21202
Phone 410.728.2900
Fax 410.728.2834
www.rkk.com

Date: December 20, 2024
To: Andrew Bodt – Harford County Department of Public Works
From: Rich Lefebure – RK&K
CC: Danielle Hankins – Harford County Department of Public Works
Kate Gordon & Emily Haight – RK&K
Re: Susquehannock Wildlife Society Fall 2024 Triennial Tree Planting Site Inspection Memo

EXECUTIVE SUMMARY

RK&K environmental scientists conducted an inspection of the Susquehannock Wildlife Society (SWS) Food Forest and Forest Edge/Chestnut Planting sites located in Harford County on October 17, 2024. The sites were planted by Bry's Lawn Care and Landscaping in 2021 and 2022 and are included in the County's Watershed Protection and Restoration program's portfolio for compliance with the requirements of their Municipal Separate Storm Sewer System permit (MS4 Permit 22-DP-3310). The inspection included a total count of the live trees and an assessment of the maintenance needs and overall site conditions. The SWS sites will be credited as Urban Tree Canopy (UTC) Best Management Practices (BMP). The sites do not meet the Forest Planting BMP as the Chestnut Planting site is less than 0.50 acres, and the Food Forest does not meet the definition of a natural forest. The two SWS planting sites include a total of 185 surviving trees, resulting in 0.52 impervious acre (IA) credits. Site mapping with the inspection results and photos for each SWS site can be found in **Appendix A**.

INTRODUCTION

In Fall 2024, Harford County Department of Public Works (DPW) tasked RK&K to inspect the Susquehannock Wildlife Society (SWS) tree planting sites for compliance with the triennial inspection requirement of their MS4 permit. The SWS Chestnut Planting and Food Forest triennial site inspections were completed on October 17, 2024. The Chestnut Planting site is spread across three areas: on the hillslope south of Hopkins Branch and directly adjacent to the existing forest, a small area directly adjacent to the SWS trail, and a small area east of the footbridge that crosses over Hopkins Branch (**Appendix A, Figure 1**). Bry's Lawncare and Landscaping completed the Chestnut Planting site in November 2021. Due to low planting survival from the 2021 planting, 14 American plums (*Prunus americana*) were planted by Bry's within the Chestnut Planting in April 2022. Due to further planting failure in 2022, an additional 27 chestnut trees were sourced and replanted by Bry's within the Chestnut Planting in December 2022. The replacement chestnut plantings were Chinese chestnuts (*Castanea mollissima*), which are not acceptable to SWS, and need be replaced with American chestnuts (*Castanea dentata*) or another native canopy species, at the direction of the SWS property manager, John Garrison.

The Food Forest site contains two areas adjacent to each other south of the Chestnut Planting site (**Appendix A, Figure 2**). The upper food forest was originally planted by SWS with limited success. Bry's completed infill planting at the upper food forest with trees sourced by SWS while they were completing the Chestnut Planting site in November 2021. The lower food forest planting was completed by Bry's in April 2022. Regular inspections have occurred at both sites since 2021, and in May 2023, Bry's completed minor replanting at both sites to boost survival rates. Maintenance will continue into 2025 at both sites.

METHODS

RK&K environmental scientists conducted a total site count of live trees at both sites. After conducting the total site count, RK&K environmental scientists documented general site assessments to determine the level of maintenance needed on the site, trends in the planted species, and the presence of invasive species. RK&K scientists also took photos to capture the overall condition of the site and confirmed the previously determined site boundaries and access routes. Digital data was collected using the ArcGIS Field Maps application on an iPad equipped with an external GPS unit.

Impervious acre credits were calculated by multiplying the total live trees on site by 0.01 to determine the equivalent acres of implementation. The equivalent acres of implementation were then multiplied by 0.28, which is the equivalent impervious acre (EIA) conversion factor for the UTC BMP, per MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated".

RESULTS

The Chestnut Planting site is in fair to poor condition overall. Of the 86 trees planted, 44 are surviving for a 51% survival rate and 0.123 IA credits. The low survival rate is largely due to the lack of success from the chestnuts (*Castanea* sp.) and American plum (*Prunus americana*). The chestnuts are generally 2 feet to 6 feet tall. The redbud (*Cercis canadensis*), Canadian serviceberry (*Amelanchier canadensis*) and flowering dogwood (*Cornus florida*) are robust and approximately 8 to 12 feet tall. Invasive species observed on site include wineberry (*Rubus phoenicolasius*) and multiflora rose (*Rosa multiflora*). John Garrison has requested that we do not brushhog or clear extensively on the slopes, so recommended site maintenance includes weed whacking only around cages, planting pit maintenance, and replanting the chestnuts and plums. The Chestnut Planting site tree survival data is documented in **Appendix B**.

The Food Forest site is in good condition overall. In April 2022, 116 trees were planted by Bry's. Including the original SWS plantings and subsequent infill plantings completed by Bry's, there are now 141 live trees in the Food Forest site, totaling 0.395 IA credits. The Allegheny serviceberry (*Amelanchier laevis*) and pawpaw (*Asimina triloba*) are establishing well and are displaying robust growth. Persimmon (*Diospyros virginiana*) growth is inconsistent and their height ranges from 3 to 5 feet tall. There is good establishment of grass (*Poa* sp.), wingstem sunflower (*Verbesina alterniflora*), and golden rod (*Solidago* sp.) in the food forest understory. John Garrison regularly mows the site, which generally controls the larger stands of multiflora rose, oriental bittersweet (*Celastrus orbiculatus*) and Japanese honeysuckle (*Lonicera japonica*). Thistle (*Cirsium* sp.) was also observed on site, which will require selective herbicide treatment. Recommended site maintenance includes mowing, planting pit maintenance, selective herbicide treatment for thistle, spring mulching, and repairing and replacing tree cages. The Food Forest site tree survival data is documented in **Appendix B**.

The SWS sites include a total of 185 surviving trees, resulting in 0.52 IA credits. The results of the site evaluations are summarized in **Table 2** below.

Table 2: Site Inspection Results

Site Name	Date of Inspection	Total Trees	Current Acres	Current IA Credit
Food Forest	10/17/2024	141	0.66	0.123
Chestnut Planting	10/17/2024	44	0.39	0.395
Total IA Credit				0.52*

**Rounded to match MDE credit reporting requirements*

CONCLUSION

The Chestnut Planting site is in fair to poor condition, while the Food Forest is in good condition overall. Typical site maintenance required includes herbicide treatment of invasive species, hand clearing around tree pits, removing or repairing tree shelters, weed whacking around cages and replanting the chestnut and plum trees at the Chestnut Planting site. Common causes of tree planting mortality include lack of watering and maintenance, and vegetative competition from invasive species.

REFERENCES

Maryland Department of the Environment. (2021). *Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated*. Maryland Department of the Environment. Baltimore, MD.
<https://mde.maryland.gov/programs/water/StormwaterManagementProgram/Documents/Final%20Determination%20Dox%20N5%20202021/MS4%20Accounting%20Guidance%20FINAL%2011%2005%202021.pdf>

Maryland Department of the Environment. (2014). *National Pollution Discharge Elimination System Municipal Separate Storm Sewer System Discharge Permit, 22-DP-3310*. Maryland Department of the Environment. Baltimore, MD.
<https://mde.maryland.gov/programs/Water/StormwaterManagementProgram/Documents/Harford%20Permit-Signed-with%20Attachments.pdf>

Appendix A- Site Mapping and Photos



BMP Type: Urban Tree Canopy

Total Trees: 44

Current Acres: 0.34

Current IA Credit: 0.12

Inspection Method: Total Count

Understory: Unmanaged

General Comments: Redbud, serviceberry and flowering dogwood all doing very well. Plum and chestnut were less successful.

Maintenance Comments:

Planting pit maintenance and replanting. SWS has requested we avoid brushhogging along the slope. Weed wack around cages only. Chinese chestnuts need to be replaced with native species.

Owner Type: Public - State

■ Current Site Boundary

● Photo Points

2024 SWS Triennial Planting Inspections

Figure 1: Chestnut Planting Site

0 50 100 200 N
1 inch = 100 feet

December 2024

RK&K
Responsive People | Creative Solutions



Susquehannock Wildlife Society 2024 Triennial Tree Planting Site Inspections
Photo Log

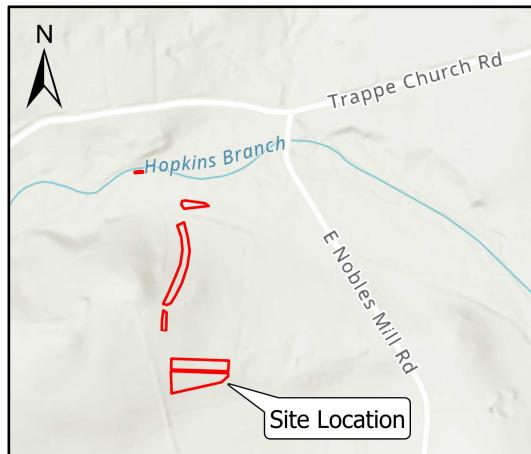
Chestnut Planting Site



Photo 014: Overview photo looking northwest.



Photo 012: Overview photo looking southwest.



BMP Type: Urban Tree Canopy
Total Trees: 141
Current Acres: 0.66
Current IA Credit: 0.40
Inspection Method: Total Count
Understory: Unmanaged
General Comments: Native understory is developing with grasses, wingstem and goldenrod. General survival is strong and serviceberries have notable growth.
Maintenance Comments:
 Regular mowing and hand tools around/within pits to keep invasives at bay. Backpack sprayers for thistle spot control.
Owner Type: Public - State

Current Site Boundary
 Photo Points

2024 SWS Triennial Planting Inspections

Figure 2: Food Forest Site

0 25 50 100
1 inch = 50 feet

December 2024

R&K
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Susquehannock Wildlife Society 2024 Triennial Tree Planting Site Inspections
Photo Log

Food Forest Site



Photo 016: Overview photo of upper food forest looking east.



Photo 003: Overview photo of lower food forest looking east.

Appendix B- Site Data Tables

Chestnut Planting							
Scientific Name	Common Name	Size	Quantity	1-Yr Total Count	1-Yr Survival Rate	Triennial Total Count	Triennial Survival Rate
Trees							
<i>Castanea mollissima</i>	Chinese chestnut*	2-3'	48	34	71%	17	35%
<i>Cercis canadensis</i>	Redbud	3 gal	8	8	100%	6	75%
<i>Amelanchier arborea</i>	Serviceberry	3 gal	8	8	100%	8	100%
<i>Cornus florida</i>	Flowering dogwood	3 gal	8	8	100%	7	88%
<i>Prunus americana</i>	American plum**	-	14	6	43%	6	43%
Others							
Total	-	86	64	74%	44	51%	
Dead trees	-		14			15	
Comments							
General	Chestnuts are all Chinese and should be removed and replaced with American chestnuts or native canopy species. Chestnuts are generally 2-6'. Redbud, serviceberry, and dogwood all doing very well where surviving (8-12' height). Plant survival was spotty and some that established got to 6' and died. Recommend planting pit maintenance and replanting chestnuts and plums. Weed whack only around cages. Wineberry and multiflora rose are present onsite but SWS generally hasn't wanted brushhogging on slopes.						

*7 of the original 48 chestnut survived and Bry's replanted 27 chestnuts in December 2022. All of the remaining chestnut appear to be the Chinese chestnuts Bry's provided.

**This quantity does not include the 8 plums that were replanted following the one-year warranty inspection.

Food Forest							
Scientific Name	Common Name	Size	Quantity	1-Yr Total Count*	1-Yr Survival Rate	Triennial Total Count**	Triennial Survival Rate
Trees							
<i>Asimina triloba</i>	Pawpaw	2'	41	36	88%	46	112%
<i>Amelanchier arborea</i>	Serviceberry	5'	40	40	100%	44	110%
<i>Diospyros virginiana</i>	Persimmon	2'	35	33	94%	45	129%
<i>Corlyus americana</i>	Hazelnut***	-	-	-	-	3	-
<i>Celtis occidentalis</i>	Hackberry***	-	-	-	-	2	-
<i>Quercus palustris</i>	Pin oak***	-	-	-	-	1	-
Others							
Total	-	116	109	94%	141		122%
Dead trees	-		7			17	
Comments							
General	Mulched somewhat recently. Reapply mulch in spring. Repair/replace cages. Pit maintenance required. Control thistle with selective herbicide. SWS (John) has been mowing woodies and invasives (multiflora rose, Oriental bittersweet, Japanese honeysuckle) largely kept at bay. Strong grass, wingstem sunflower, golden rod establishment. Serviceberry doing well, 10-12' aggressive and robust. Pawpaw doing well, 3-5' on average, same growth. Persimmon growth is spotty, not great.						

*The 1 Year total counts do not include the 7 pawpaw and persimmon that were replanted following the one-year warranty inspection.

**The Triennial counts include additional plantings that occurred after the 1-year warranty inspection.

***These species were planted prior to Bry's work at SWS, but qualify for UTC credit.



MEMORANDUM

700 East Pratt Street, Suite 500
Baltimore, MD 21202
Phone 410.728.2900
Fax 410.728.2834
www.rkk.com

Date: August 15, 2025
To: Danielle Hankins – Harford County Department of Public Works
From: Heaven Aziz – RK&K
CC: Brittany Ayers, Kate Gordon and Rich Lefebure – RK&K
Re: Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspections

EXECUTIVE SUMMARY

RK&K environmental scientists conducted inspections of 44 tree planting sites located throughout Harford County from March through May 2025. The Alliance for the Chesapeake Bay (Alliance) planted and maintained a total of 52 sites across 95.81 acres between 2018 and 2024, financed by the DNR Trust Fund. Access was denied to 3 of the properties and a response was never received from 3 properties (6 properties total which included 8 individual sites). The remaining 44 sites were evaluated for potential credit under Harford County's Watershed Protection and Restoration program for compliance with the requirements of the County's Municipal Separate Storm Sewer System (MS4) permit (MS4 Permit 22-DP-3310). The inspections spanned 80.40 acres and included an assessment of the planting site boundaries, the number of live trees per acre, invasive species presence, maintenance needs and overall site conditions. Of the 44 sites inspected, 36 sites were evaluated based on MDE's forest planting Best Management Practice (BMP) criteria, which requires a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. Of those sites over 0.5 acre, 35 met the forest planting BMP criteria, one forest planting site failed to meet the forest planting BMP criteria due to a minimum tree density under the required 100 trees per acre, and one site was never planted and does not exist. The one forest planting site with less than 100 trees per acre will be credited as an Urban Tree Canopy (UTC) BMP. Eight sites were less than 0.5 acre and will also be credited as Urban Tree Canopy (UTC) BMPs, for a total of 9 sites credited as UTC. The 35 passing forest planting sites are the equivalent of 75.19 impervious acre (IA) credits, and the 9 UTC sites are the equivalent of 2.35 IA credits, for a total of 87.36 IA credits across all Alliance sites. If the one failing forest planting site is replanted to at least 100 trees per acre, an additional 2.55 IA credit could be gained. If the site that was never planted by the Alliance was planted to a tree density of at least 100 trees per acre, an additional 3.66 IA credit could be gained. Site mapping with the inspection results and photos for each site can be found in **Appendix A**.

INTRODUCTION

In January 2025, Harford County Department of Public Works (DPW) tasked RK&K to inspect tree planting sites in Harford County for potential credit to meet the requirements of the County's National

Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) permit. The sites were planted on private property in Harford County by the Alliance for the Chesapeake Bay (the Alliance) under financing from the Maryland Department of Natural Resources (DNR) Trust Fund. The Alliance planted and maintained a total of 52 sites on approximately 95.81 acres between 2018 and 2024. Sites received three years of maintenance, though frequency and extent of maintenance was variable from site to site. RK&K received signed permission from the property owners before accessing the sites on private property. On the permission letter, property owners were also asked about their interest in long-term maintenance assistance. See **Table 3** in the **Results** section for maintenance information on properties with owners interested in maintenance assistance.

METHODS

Using site boundaries digitized either from Healthy Forest Healthy Waters Tree Planting Plan maps or from aerial imagery, RK&K environmental scientists conducted field inspections to determine the number of surviving trees and the tree density per acre for each site. The collected data was used to determine whether each tree planting site meets MDE's forest planting BMP criteria, which requires survival of at least 100 trees per acre across a contiguous area of 0.5 acres or greater. UTC BMP credit may be taken for sites less than 0.5 acres based on the number of surviving trees at the time of inspection. Site assessment data was collected using the ArcGIS Field Maps application on an iPad equipped with an external GPS unit.

The site assessment began with walking the site boundary to determine if the existing site boundary accurately reflected the limits of the site. If the existing site boundary included an area without planted trees or planted trees extended beyond the site boundaries, the site boundaries were adjusted to reflect the current site conditions. After evaluating the site boundary, RK&K environmental scientists assessed the density of trees within the site. If the site was less than 1.0 acres, a total count of all trees ≥ 4.5 feet tall was conducted. If the site was greater than 1.0 acres, the tree density was estimated using plot points. Random plots points were developed for sites greater than 1.0 acres prior to the field investigations using desktop GIS and the number of plot points were determined using **Table 1** below:

Table 1: Number of Plots per Site Acreage

Site Size (acres)	Plot Size (acre)	Radius (ft.)	# of Plots
1.0 to 1.7	0.05	26.3	3
1.8 to 2.2	0.05	26.3	4
2.3 to 2.7	0.05	26.3	5
2.8 to 3.0	0.05	26.3	6
3.1 to 3.4	0.1	37.24	3
3.5 to 4.4	0.1	37.24	4
4.5 to 5.4	0.1	37.24	5
5.5 to 6.4	0.1	37.24	6
6.5 to 7.4	0.1	37.24	7
7.5 to 8.4	0.1	37.24	8
8.5 to 9.4	0.1	37.24	9
9.5 to 10	0.1	37.24	10

At sites with plot points, RK&K environmental scientists navigated to the plot point and set up a circular plot using the radius designated in **Table 1** and counted the number of trees \geq 4.5 feet tall. To determine tree density within each plot, the number of trees counted per plot was divided by the size of the plot. The location of each plot point can be found on the site mapping provided in **Appendix A**, and the data captured for each plot point is provided in **Appendix B**. At sites that were too narrow to fit in a circular 1/10th or 1/20th acre plot, a rectangular plot was used.

At all sites, RK&K environmental scientists evaluated the percent coverage of native seedling regeneration and the percent coverage of invasive herbaceous and woody vegetation. After conducting the total site count or plot point assessments, RK&K environmental scientists made general site assessments to determine the level of maintenance needed on the site, trends in the planted species and the invasive species present. Field staff also took photos to capture the overall condition of the site and determined an access route to each site for future maintenance needs.

On sites with plot points, the number of trees counted per plot point was averaged to determine the sitewide average trees per plot. The average trees per plot was divided by the plot size to determine the average trees per acre, and then the average trees per acre was multiplied by the updated site acreage, following any necessary site boundary revisions. For sites with a total site count, the total number of trees per acre was determined by dividing the total trees counted by the updated site acreage following any necessary site boundary revisions. Forest planting sites (sites 0.5 acres or greater) with a density of at least 100 trees per acre were designated as passing. Impervious acre credits for forest planting and riparian forest planting sites were calculated by multiplying the current site acreage by 1.1 and 1.5 respectively, which are the BMP's equivalent impervious acre conversion factors (EIA_f) per MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated". All sites that were less than 0.5 acres or had less than 100 trees per acre were credited as UTC sites. For crediting UTC sites, 1 tree is equal to 0.01 acres of treatment. Impervious acre credits for UTC were calculated by multiplying the total trees by 0.01, then by the BMP EIA_f of 0.28.

RESULTS

Prior to any site inspections, three landowners denied property access and three landowners did not respond to the request for permission (which included 8 individual sites), see **Table 2** below. Of the 36 forest planting sites evaluated for inclusion in Harford County's Watershed Protection and Restoration program, 35 forest planting sites passed the inspection, for a total of 85.01 IA credits. One site was never planted and did not exist; this site represents a potential of 3.66 forest planting IA credits if it is planted to at least 100 trees per acre. One site failed to meet the forest planting BMP criteria due to a minimum tree density under the required 100 trees per acre and was credited as a UTC BMP. Eight sites were less than 0.5 acre in size and were credited as UTC BMPs. The nine UTC BMPs combined for a total of 2.35 IA credits. See **Table 3** below for maintenance needs on properties that indicated they were interested in maintenance support, and **Tables 4-5** below for the results of the site evaluations.

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August 2025

Table 2: Summary of Sites Without Access

Site Name	Assumed BMP Type	Response	Acres	EIA Credit	Potential IA Credit
Allen Morris	Urban Tree Canopy	No response	0.20	0.28	0.06
Bonnie Warren and Adele Cooper	Forest Planting	Access denied	5.32	1.1	5.85
Bonnie Warren and Adele Cooper	Urban Tree Canopy	Access denied	0.12	0.28	0.03
Cheryl Boyle	Forest Planting	Access denied	1.57	1.1	1.73
Crossroads Church (2 sites)	Forest Planting	Access denied	3.87	1.1	4.26
Janet Myers	Forest Planting	No response	0.91	1.1	1.00
Todd Cherry and Sarah Murphy	Forest Planting	No response	2.84	1.1	3.12
Total			14.83		16.05

Table 3: Maintenance Needs for Interested Property Owners

Site ID	Landowner Name	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
HA24APY000002	Andrew and Cecilia League	Andrew and Cecilia League	1.02	2	Medium	Weed whack around planting pits and manually remove multiflora rose, followed by chemical spraying.
HA24APY000042	Christopher and Suzanne Golley	Christopher and Suzanne Golley A	2.16	3	High	Brush hog understory of honeysuckle and multiflora rose.
HA24APY000043	Christopher and Suzanne Golley	Christopher and Suzanne Golley B	0.46	1	Low	Clear brush around trees and shelters. Manage 12 Bradford pear trees on site with stump cut treatment.
HA24APY000092	David Warfield	David Warfield A	0.55	1	Low	Remove or replace damaged tree shelters. Control invasive species within tree tubes and planting pits.
HA24APY000093	David Warfield	David Warfield B	1.22	3	Medium	Remove or replace damaged tree shelters. Control invasive species in tree tubes and on trees with hand tools and backpack sprayers. Recent mowing has been completed.
HA24APY000046	Frederick and Linda Robbins	Frederick and Linda Robbins	0.63	1	High	Remove or replace damaged cages and stakes. Manually remove invasive species and follow-up with herbicide treatment.

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Site ID	Landowner Name	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
HA24APY000101	Harford Friends School	Harford Friends School	1.39	2	Medium	Brush hog understory.
HA24APY000099	Justin Johnson	Justin Johnson	0.46	0.5	Low	Mow understory.
HA24APY000091	Michael and Elizabeth Faro	Michael and Elizabeth Faro	1.64	1	Low	Use hand tools to remove invasive species from tree shelters. Shelter repair or replacement needed. Owner is actively maintaining site.
HA24APY000088	Mike Zyski	Mike Zyski	1.11	1	Low	Site is well maintained by land owner and regularly mowed, but property owner is interested in maintenance support moving forward including mowing and regular shelter maintenance.
HA24APY000079	Peter Jay	Peter Jay A	3.33	10	High	Site has not been planted, so no maintenance is currently recommended. The Alliance tentatively plans to clear invasive species and plant the site in the near future.
HA24APY000080	Peter Jay	Peter Jay B	2.08	2	Low	Control multiflora rose with brush hog and backpack sprayers, repair tree shelters.
HA24APY000081	Peter Jay	Peter Jay C	6.95	10	Medium	Brush hog in between rows & apply herbicide as spot treatment for invasive species. Re-stake and repair shelters.
HA24APY000082	Peter Jay	Peter Jay D	2.28	3	Low	Repair shelters and use hand tools to remove invasive species.
HA24APY000094	Peter Jay	Peter Jay E	7.35	12	Medium	Evidence of herbicide circle burns in plant pits. Use brush hog and hand tools to remove invasive honeysuckle and multiflora rose. Follow up with backpack herbicide application as spot treatment. Shelter repairs needed.
HA24APY000095	Peter Jay	Peter Jay F	1.84	4	Medium	Use brush hog and hand tools to remove invasive honeysuckle and multiflora rose. Follow up with backpack herbicide application as spot treatment. Shelter repairs needed.
HA24APY000047	Stephen & Noelle Hersl	Stephen & Noelle Hersl	2.32	4	High	Landowner is enthusiastic about replanting entire site and more. The original

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Site ID	Landowner Name	Site Name	Acres	Crew Days	Maintenance Need	Maintenance Notes
						planting site largely failed. Surviving trees are almost entirely Norway spruce.
HA25APY000003	Stephen Graefe	Stephen Graefe A1	5.86	10	High	Landowner has expressed interest in county maintenance to remove tree shelters and stakes. Invasive removal with brush hog needed throughout site.
HA24APY000016	Stephen Graefe	Stephen Graefe A2	0.21	1	Low	Landowner has expressed interest in county maintenance to remove tree shelters and stakes.
HA25APY000005	Stephen Graefe	Stephen Graefe A3	1.84	10	High	Landowner has expressed interest in county maintenance to remove tree shelters and stakes. Invasive removal with brush hog needed throughout site.
HA24APY000017	Stephen Graefe	Stephen Graefe B	2.42	3	Medium	Use hand tools and herbicide to control oriental bittersweet, multiflora rose, and autumn olive. Shelter and planting pit maintenance required.
HA24APY000018	Stephen Graefe	Stephen Graefe C	2.28	2	Low	Use hand tools and herbicide to control oriental bittersweet and multiflora rose. Shelter and planting pit maintenance required, could replant gaps where trees died. Recommend replanting with floodplain species if additional planting is desired.
HA24APY000019	Stephen Graefe	Stephen Graefe D	2.00	3	Medium	Planting pit maintenance required. Use herbicide to control large multiflora rose thickets.
HA24APY000090	Zack Schmitt	Zack Schmitt	1.57	1	Low	Shelters and stakes can be removed from trees, minor manual removal of multiflora rose and bittersweet as well as herbicide treatment.
Totals			52.97	89.50		

Table 4: Forest Planting Site Inspection Results

Site ID	Site Name	Trees per Acre	Acres	EIA Credit	Total IA Credit	Date of Inspection	Status
HA24APY000002	Andrew and Cecilia League	253	1.02	1.1	1.12	4/1/25	Pass
HA24APY000005	Brian Bancewicz	410	0.92	1.1	1.02	5/13/25	Pass
HA24APY000006	Charles Dougherty A	230	3.40	1.1	3.74	4/1/25	Pass
HA24APY000007	Charles Dougherty B	380	2.20	1.1	2.42	4/1/25	Pass
HA24APY000008	Charles Dougherty C	260	1.85	1.1	2.03	4/2/25	Pass
HA24APY000009	Charles Dougherty D	2040	2.64	1.1	2.91	4/3/25	Pass
HA24APY000010	Charles Dougherty E	260	4.06	1.1	4.47	4/3/25	Pass
HA25APY000002	Charles Dougherty G	259	0.59	1.1	0.65	4/2/25	Pass
HA24APY000042	Christopher and Suzanne Golley A	160	2.16	1.5	3.25	3/28/25	Pass – Needs Maintenance
HA24APY000045	Craig and Margret Johnson	330	0.55	1.1	0.60	4/1/25	Pass
HA24APY000011	Dale Davis	347	0.62	1.1	0.68	5/13/25	Pass
HA24APY000092	David Warfield A	217	0.55	1.1	0.60	4/1/25	Pass
HA24APY000093	David Warfield B	192	1.22	1.1	1.34	4/10/25	Pass
HA24APY000046	Frederick and Linda Robbins	235	0.63	1.1	0.69	4/21/25	Pass
HA24APY000101	Harford Friends School	140	1.39	1.1	1.53	4/2/25	Pass
HA24APY000013	Jason Turner	260	1.09	1.1	1.19	4/1/25	Pass
HA25APY000006	Jim Garrison A	210	4.63	1.1	5.10	4/10/25	Pass
HA24APY000014	John Richards	203	0.80	1.1	0.88	3/26/25	Pass
HA24APY000015	Matthew C. Rothwell	300	1.12	1.5	1.68	4/1/25	Pass
HA24APY000091	Michael and Elizabeth Faro	160	1.64	1.1	1.81	4/1/25	Pass
HA24APY000088	Mike Zyski	284	1.11	1.1	1.22	4/3/25	Pass
HA24APY000079	Peter Jay A	-	3.33	-	-	3/27/25	DNE
HA24APY000080	Peter Jay B	120	2.08	1.1	2.29	4/1/25	Pass
HA24APY000081	Peter Jay C	200	6.95	1.1	7.64	3/27/25	Pass
HA24APY000082	Peter Jay D	160	2.28	1.1	2.51	3/27/25	Pass
HA24APY000094	Peter Jay E	310	7.35	1.1	8.08	3/26/25	Pass
HA24APY000095	Peter Jay F	380	1.84	1.1	2.03	3/26/25	Pass

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August 2025

Site ID	Site Name	Trees per Acre	Acres	EIA Credit	Total IA Credit	Date of Inspection	Status
HA24APY000089	Ron Fisher	200	1.88	1.1	2.07	4/16/25	Pass
HA24APY000047	Stephen & Noelle Hersl	86	2.32	1.1	2.55	5/27/25	Fail
HA25APY000003	Stephen Graefe A1	190	5.86	1.1	6.45	4/18/25	Pass
HA25APY000005	Stephen Graefe A3	190	1.84	1.5	2.77	4/18/25	Pass
HA24APY000017	Stephen Graefe B	120	2.42	1.1	2.66	4/15/25	Pass
HA24APY000018	Stephen Graefe C	120	2.28	1.1	2.50	4/15/25	Pass
HA24APY000019	Stephen Graefe D	160	2.00	1.1	2.20	4/15/25	Pass
HA24APY000023	Steve Tracy C	360	2.06	1.1	2.26	4/16/25	Pass
HA25APY000004	Steve Tracy D	360	0.59	1.5	0.89	4/16/25	Pass
HA24APY000090	Zack Schmitt	260	1.57	1.1	1.73	4/21/25	Pass
Total IA Credits Passing			75.19		85.01		
Total IA Credits Failing*			2.32		2.55		

*See Table 5 for failed forest planting sites IA credits.

Table 5: Urban Tree Canopy Site Inspection Results

Site ID	Site Name	Total Trees	Acres	EIA Credit	Total IA Credit**	Date of Inspection
HA24APY000043	Christopher and Suzanne Golley B	103	0.46	0.28	0.29	3/28/25
HA25APY000001	Charles Dougherty F	80	0.21	0.28	0.22	4/1/25
HA24APY000044	Evelyn Golley	6	0.48	0.28	0.02	3/28/25
HA24APY000087	Jim Garrison B	20	0.20	0.28	0.06	4/10/25
HA24APY000099	Justin Johnson	109	0.46	0.28	0.31	4/21/25
HA24APY000047	Stephen & Noelle Hersl*	200	2.32	0.28	0.56	5/27/25
HA24APY000016	Stephen Graefe A2	37	0.21	0.28	0.10	4/18/25
HA24APY000021	Steve Tracy A	176	0.46	0.28	0.49	4/16/25
HA24APY000022	Steve Tracy B	106	0.41	0.28	0.30	4/16/25
Total IA Credits		837	5.21		2.35	

*Originally forest planting sites that did not meet the forest BMP criteria due to tree density under 100 TPA.

**IA Credit for UTC was calculated by multiplying Total Trees by 0.01, then by the 0.28 EIA_f credit multiplier.

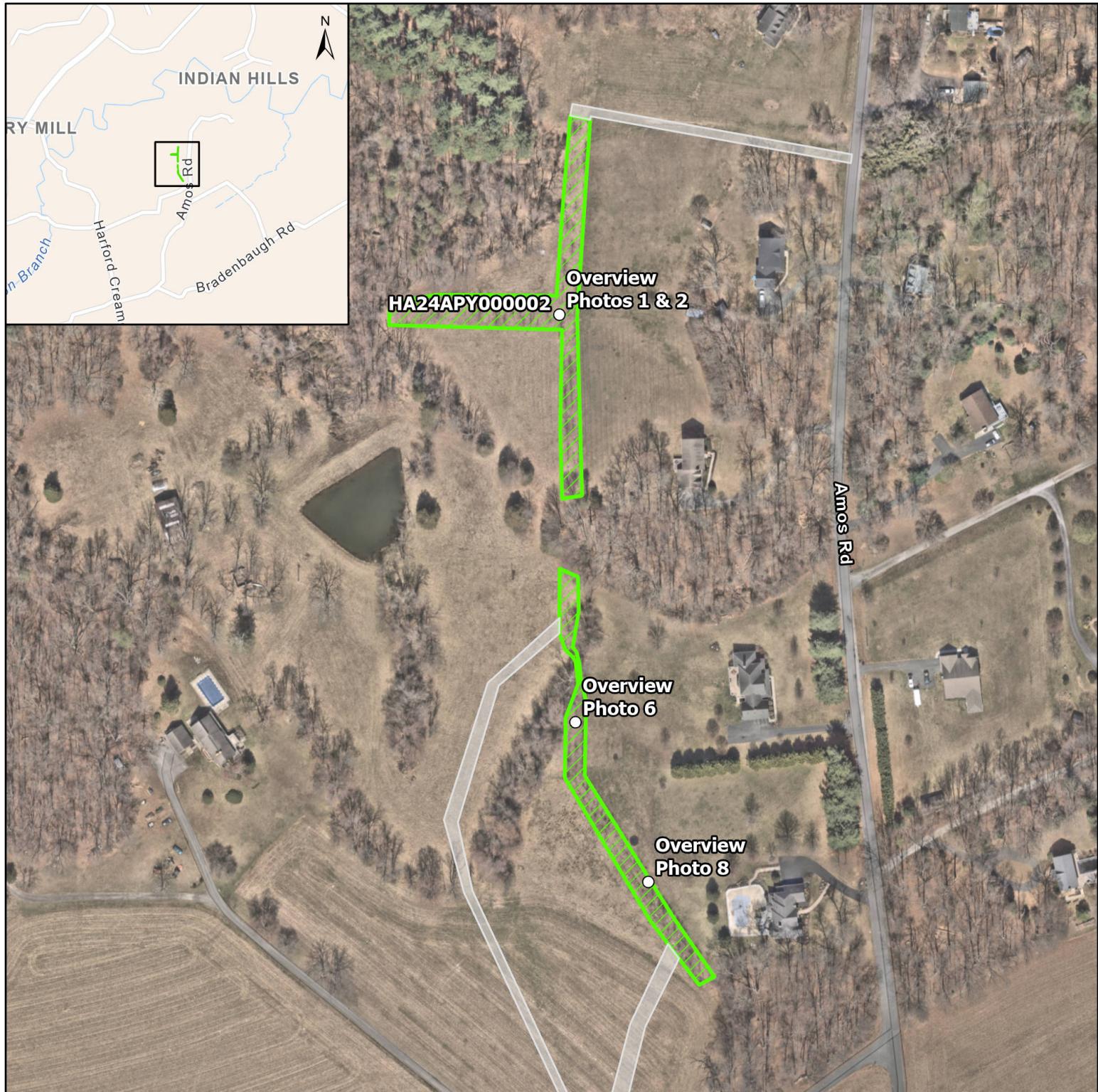
Each tree is the equivalent of 1/100th of an acre, according to MDE's 2021 document "Accounting for Stormwater Wasteload Allocations and Impervious Acres Treated".

CONCLUSION

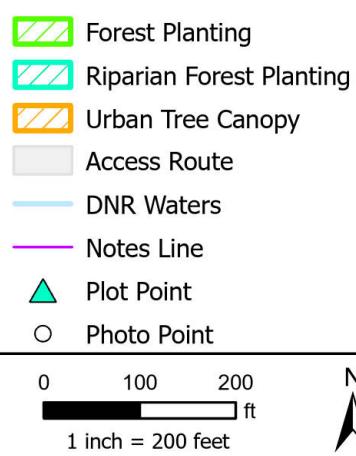
Of the 44 Alliance sites inspected, 35 sites passed the inspection and will be counted as forest planting BMPs since they met MDE's forest planting BMP criteria, which requires a minimum tree density of 100 trees per acre across a contiguous area of 0.5 acres or greater. One assumed forest planting site was

never planted but could be planted for credit. As a result, that site does not exist. One site failed to meet the forest planting BMP criteria due to a minimum tree density under the required 100 trees per acre. Seven sites were less than 0.5 acre and will be counted as UTC BMPs, along with the one failed forest planting site, for a total of 8 UTC sites. The IA credit at all Alliance sites totals 87.36 IA credits, as the 35 passing forest planting sites are the equivalent of 85.01 IA credits, and the 9 UTC sites are the equivalent of 2.35 IA credits. If the forest site that was never planted and does not exist was planted to a tree density of at least 100 trees per acre, it would meet the forest planting BMP criteria for a total of 3.66 IA credit. Typical site maintenance required includes brush hogging/mowing, vine removal, removal of Bradford pear, herbicide treatment of invasive species, hand clearing around tree pits, and removing, repairing, or adding tree shelters. Some sites have infill planting opportunities, though infill is not required for crediting purposes. Common causes of tree planting mortality include poor soils, inappropriate species selection, mower damage, deer browse, buck rub, and vegetative competition from invasive species.

Appendix A – Site Mapping and Photos



BMP Type: Forest Planting
Total Trees: 257
Trees per Acre: 1.02
Planted Acres: 1.02
Total IA Credit: 1.12
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site appears actively managed, minor herbaceous growth could be cut back. Oaks planted predominantly in middle row and exhibiting slower growth. Northern section has a primarily unmanaged understory and southern section appears managed/regularly mowed.
Maintenance Requested: Yes
Maintenance Comments: Weed whacking around planting pits and manual removal of multiflora rose needed followed by chemical spraying.
Owner Type: Homeowner



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Andrew and Cecilia League
Site ID: HA24APY000002
2710 Hitchcock Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Andrew and Cecilia League Property, HA24APY000002



Photo 1: Overview photo facing west.



Photo 2: Overview photo facing north.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Andrew and Cecilia League Property, HA24APY000002



Photo 6: Overview photo facing northeast.



Photo 8: Overview photo facing north.



BMP Type: Forest Planting
Total Trees: 379
Trees per Acre: 410
Planted Acres: 0.92
Total IA Credit: 1.02
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is well maintained by landowner, trees look healthy overall. Landowner is managing gypsy moth infestation. Site appears to be mowed multiple times a year. Owner has replanted trees multiple times.
Maintenance Requested: No
Maintenance Comments: Landowner removed multiple shelters, general planting pit maintenance. Landowner requested oaks and hickories if infill planting is available. New stakes needed on various trees.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet

Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

Brian Bancewicz
Site ID: HA24APY000005
3746 Peach Orchard Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Brian Bancewicz Property, HA24APY000005



Photo 1: Interior of site, healthy tree plantings.



Photo 2: Overview photo facing north.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

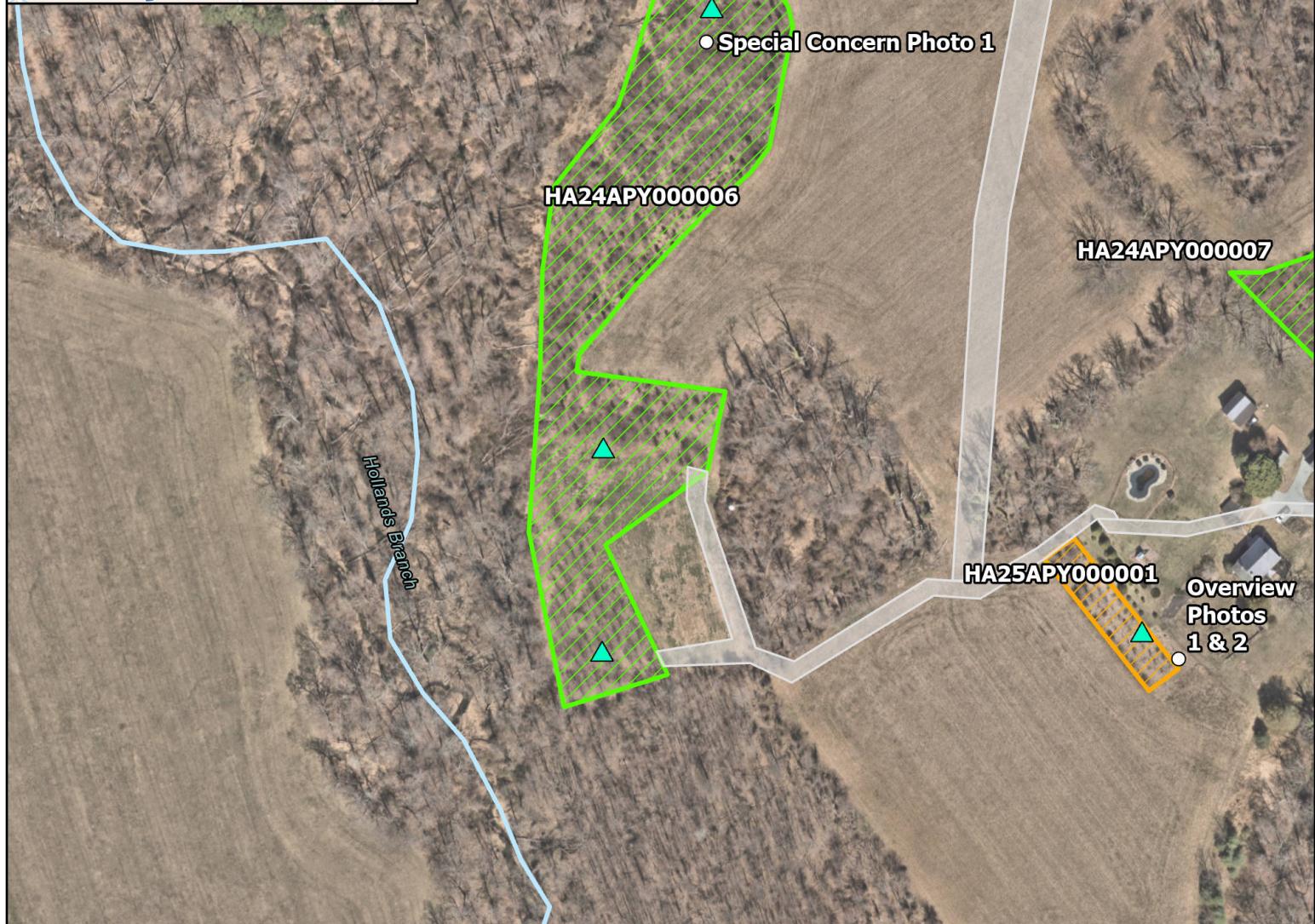
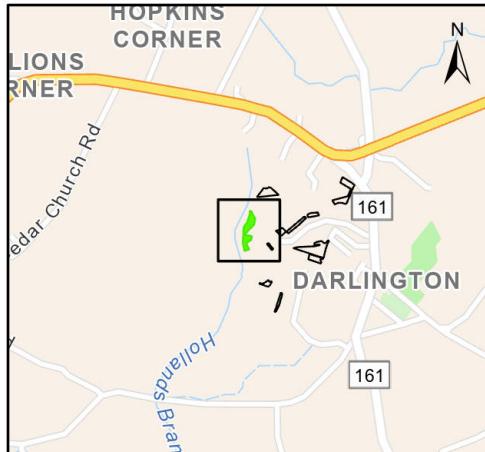
Brian Bancewicz Property, HA24APY000005



Photo 7: Overview photo facing west.



Special Concern Photo 2: Deer buck rub.



BMP Type: Forest Planting
Total Trees: 782
Trees per Acre: 230
Planted Acres: 3.40
Total IA Credit: 3.74
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is generally in good/fair condition. Trees average 2-4" DBH and 8-14' tall. Many trees have fallen over or have unusual growth form due to windthrow. Invasive control is recommended.
Maintenance Requested: No
Maintenance Comments: Majority of site appears to be brush hogged a couple times a year. Recommend hand tools and herbicide for multiflora rose and Bradford pear. Re-stake smaller fallen trees.
Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point

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 ft
 1 inch = 200 feet

Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

Charles Dougherty A
Site ID: HA24APY000006
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

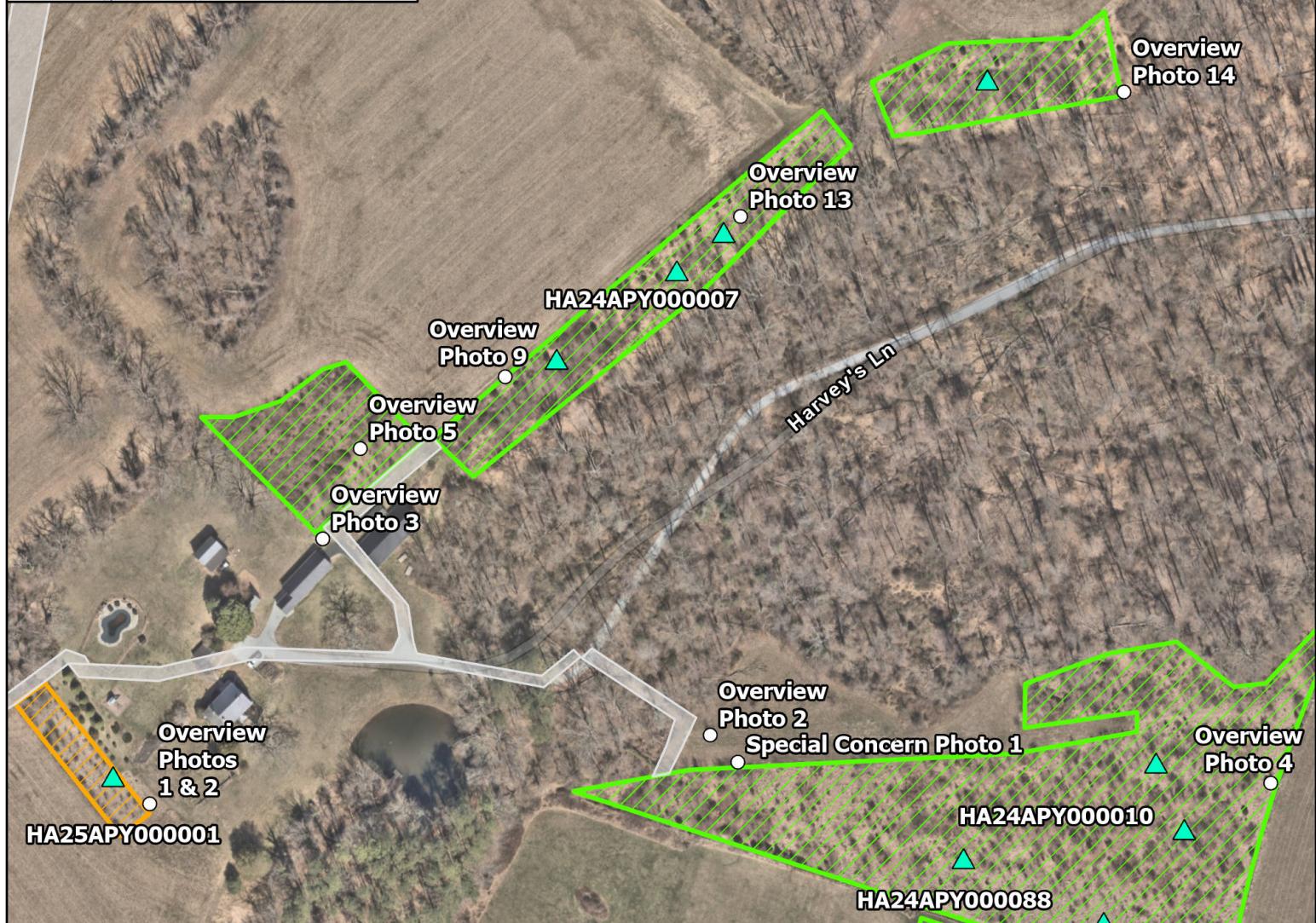
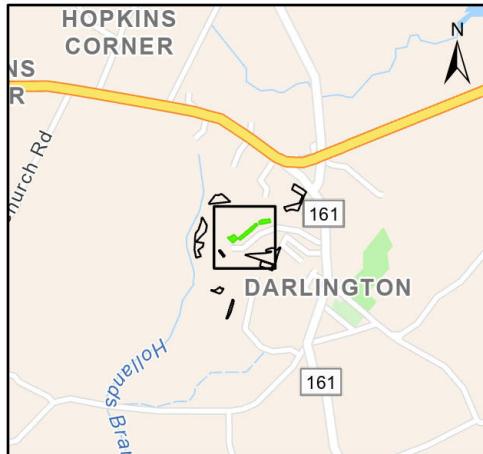
Charles Dougherty Property, Site A, HA24APY000006



Photo 1: Overview photo facing northwest.



Special Concern Photo 1: Windthrow damage.



BMP Type: Forest Planting
Total Trees: 837
Trees per Acre: 380
Planted Acres: 2.20
Total IA Credit: 2.42
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Trees are vigorous and establishing well; canopy is almost closed in some areas. Trees average 2-4" DBH and 10-12' tall. One section of site was not plot sampled due to heavy poison ivy. High deer activity observed. Ash, sweetgum, and sycamore regeneration is present.
Maintenance Requested: No
Maintenance Comments: Hand tools and herbicide application recommended for multiflora rose control, brushhog for wineberry, re-stake smaller trees, remove shelters from larger trees.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 100 200
 1 inch = 200 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Charles Dougherty B
Site ID: HA24APY000007
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site B, HA24APY000007



Photo 3: Overview photo facing east.



Photo 5: Special concern photo of high poison ivy.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site B, HA24APY000007



Photo 9: Overview photo facing southwest.



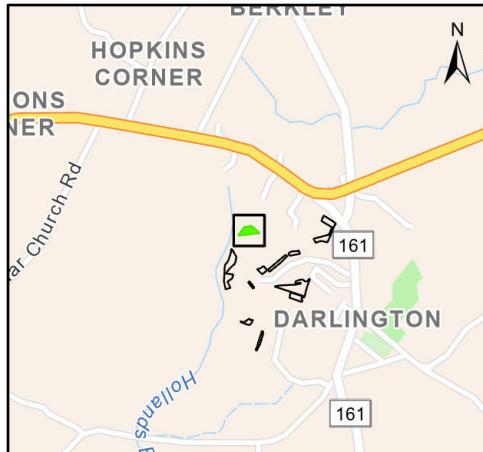
Photo 13: Overview photo of small drainage ditch.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site B, HA24APY000007



Photo 14: Overview photo facing northeast.



BMP Type: Forest Planting
Total Trees: 480
Trees per Acre: 260
Planted Acres: 1.85
Total IA Credit: 2.03
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Planted species in good condition and growing well. Extensive regen present throughout site
Maintenance Requested: No
Maintenance Comments: Due to extensive regen, brush hog not feasible. Manual removal and spot spraying of undesirable vegetation needed throughout site
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Charles Dougherty C
Site ID: HA24APY000008
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

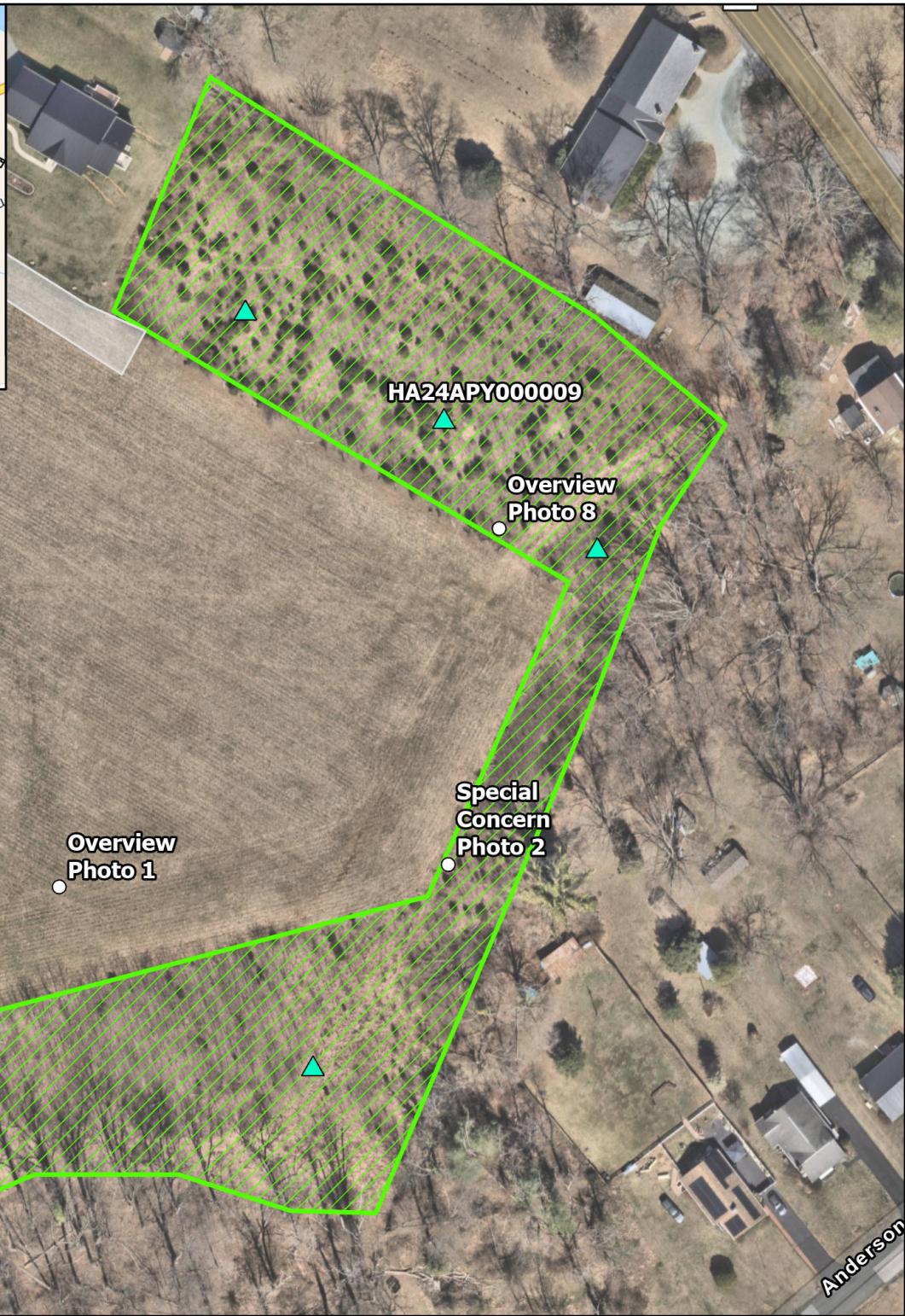
Charles Dougherty Property, Site C, HA24APY000008



Photo 1: Overview photo of green ash regeneration.



Photo 4: Overview photo facing north.



BMP Type: Forest Planting
Total Trees: 5,396
Trees per Acre: 2,040
Planted Acres: 2.64
Total IA Credit: 2.91
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Site is naturalizing and has very high regen, minimal understory due to prolific regen. Trees are establishing well; many were planted by owner. Cedar and pine more dominant in northern section. Poplar and ash regen throughout site. Trees average 1-2" DBH and 8-10' tall.
Maintenance Requested: No
Maintenance Comments: Spot treat multiflora rose, bittersweet, and Bradford pear, general shelter maintenance
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Charles Dougherty D
Site ID: HA24APY000009
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site D, HA24APY000009



Photo 1: Overview photo facing south.



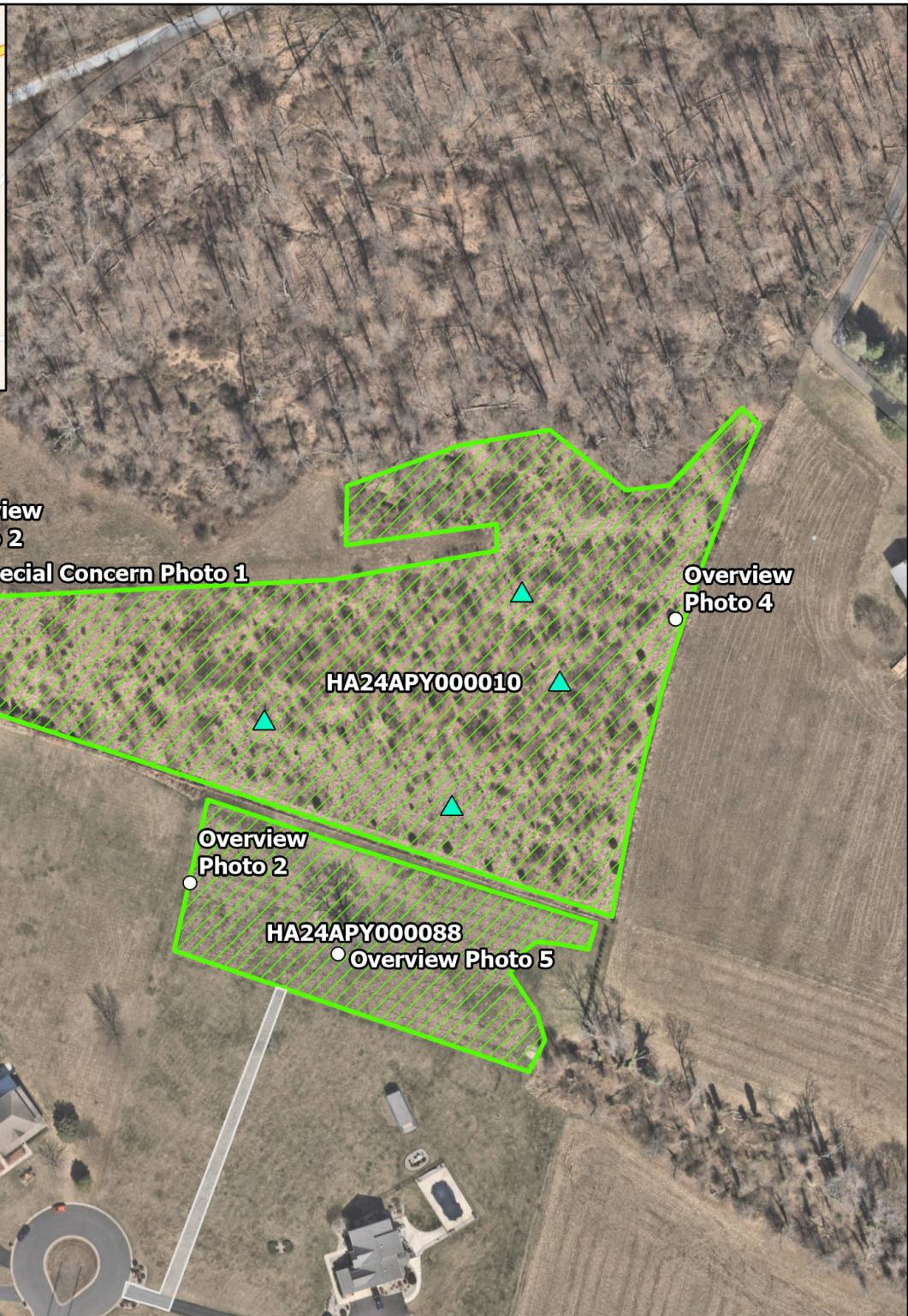
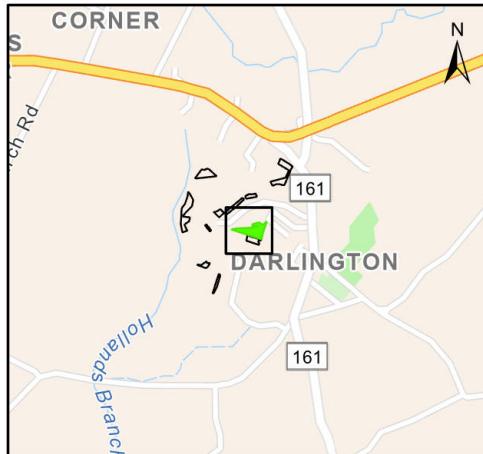
Photo 8: Overview photo facing northwest.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site D, HA24APY000009



Special Concern Photo 2: Photo of tree shelters in need of maintenance.



BMP Type: Forest Planting
Total Trees: 1,057
Trees per Acre: 260
Planted Acres: 4.06
Total IA Credit: 4.47
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is generally in good condition and establishing well, canopy closure will be achieved soon in some areas, high deer activity on site. Trees average 2-3" DBH and 10-12' tall.
Maintenance Requested: No
Maintenance Comments: Shelter maintenance, spot treat for multiflora, honeysuckle, bittersweet, and Bradford pear, continue periodic mowing
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 1 inch = 150 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Charles Dougherty E
Site ID: HA24APY000010
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Charles Dougherty Property, Site E, HA24APY000010



Photo 2: Overview photo facing east.



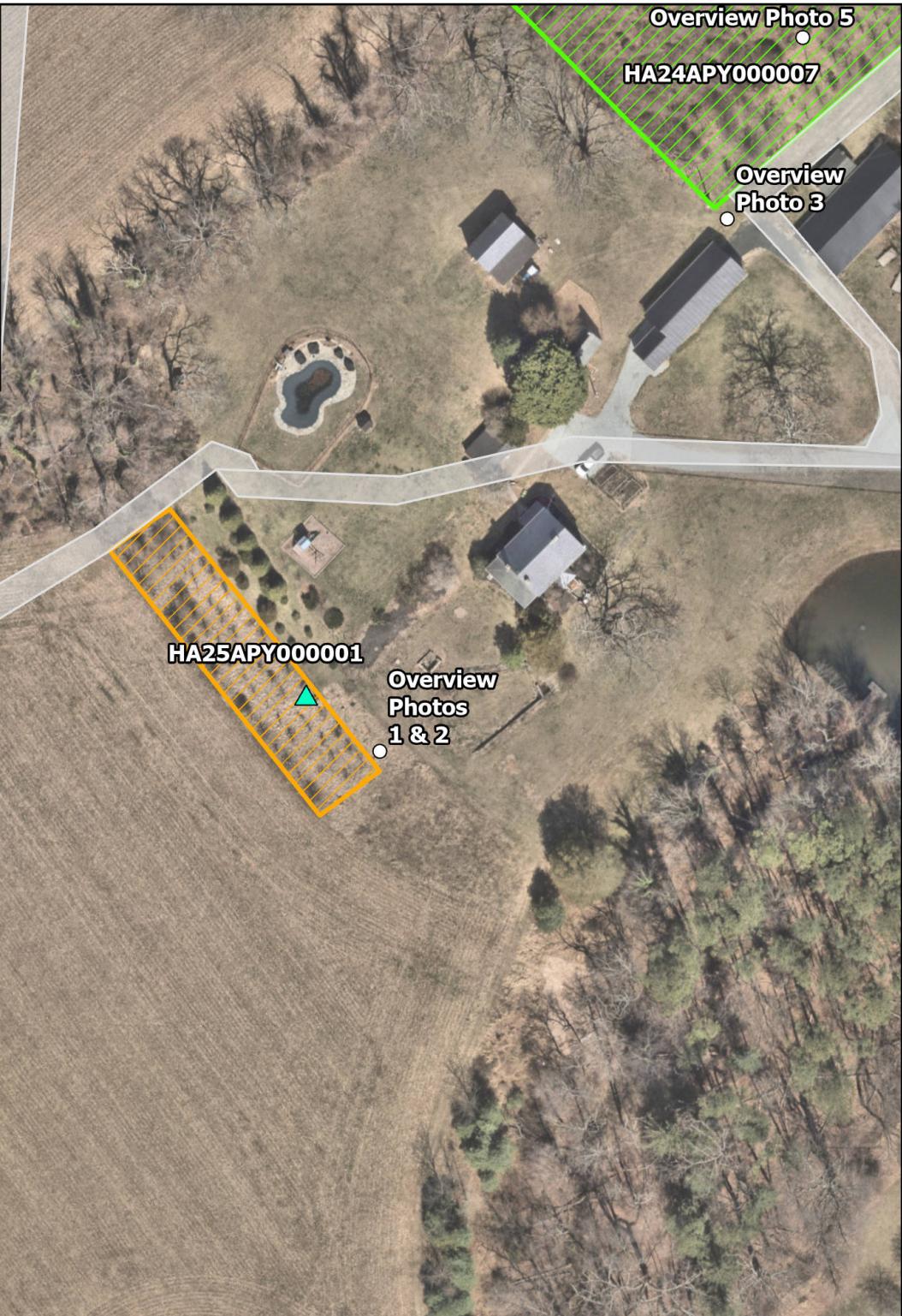
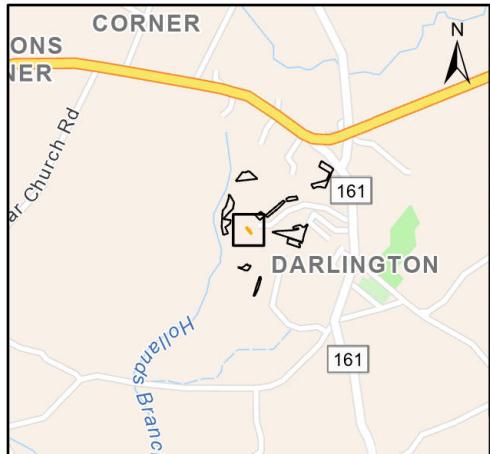
Photo 4: Overview photo facing west.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

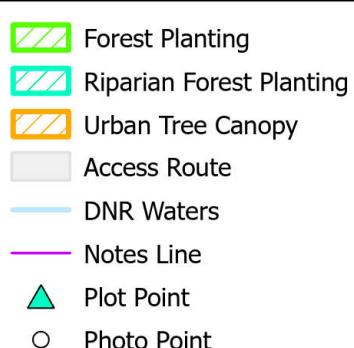
Charles Dougherty Property, Site E, HA24APY000010



Special Concern Photo 1: Deer buck rub.



<p>BMP Type: Urban Tree Canopy Total Trees: 80 Trees per Acre: 379 Planted Acres: 0.21 Total IA Credit: 0.22 Site Condition: Functioning Inspection Method: 0.05 Acre Plots Understory: Unmanaged General Comments: Trees are vigorous and establishing well; canopy is almost closed in some areas. Trees average 2-4" DBH and 10-12' tall. High deer activity observed. Ash, sweetgum, and sycamore regeneration is present. Site was originally included in Dougherty B, but was later split out due to distance. Maintenance Requested: No Maintenance Comments: Hand tools and herbicide application recommended for multiflora rose control, brushhog for wineberry, re-stake smaller trees, remove shelters from larger trees. Owner Type: Homeowner</p>
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0 50 100
 1 inch = 100 feet



**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

Charles Dougherty F
Site ID: HA25APY000001
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

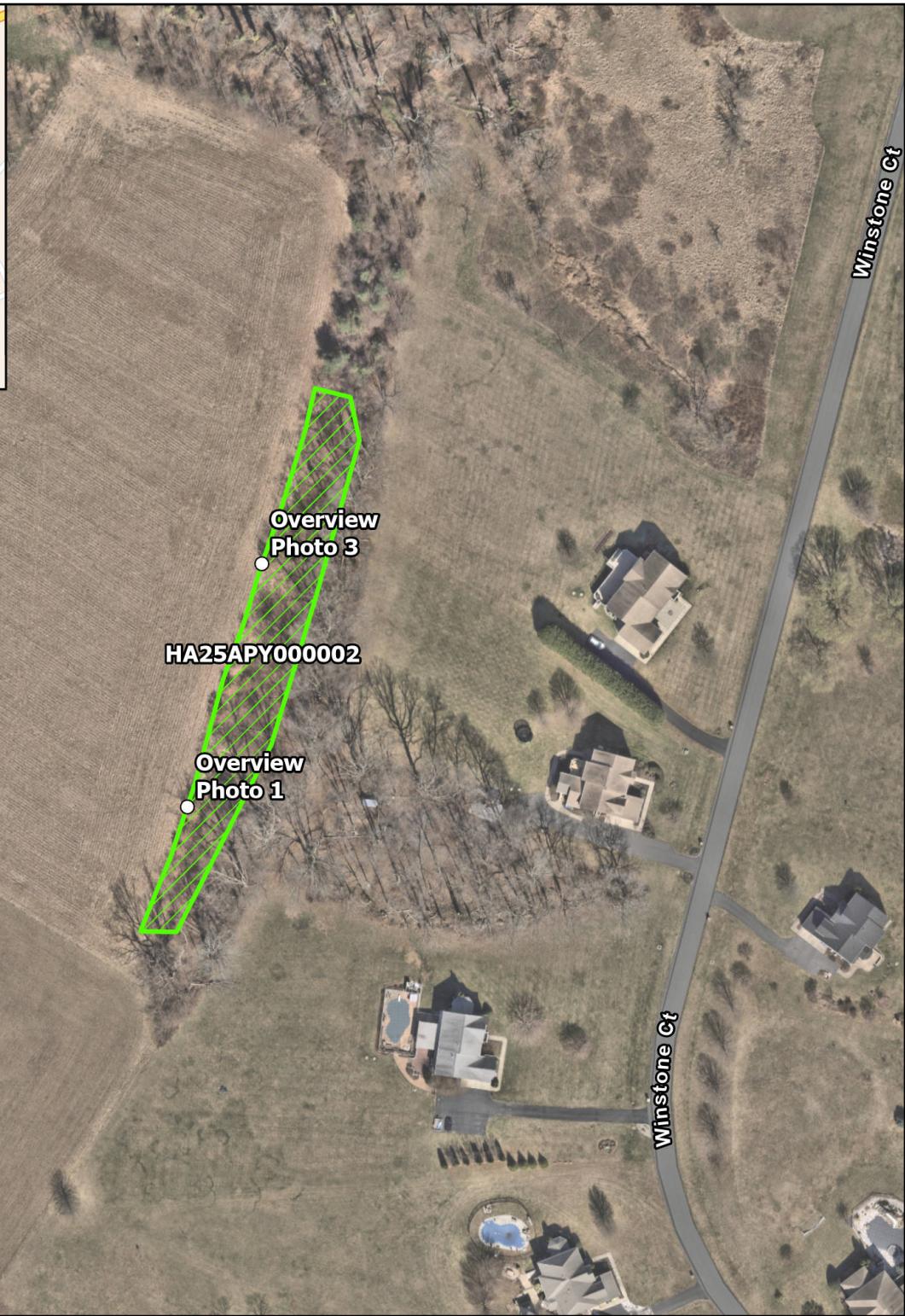
Charles Dougherty Property, Site F, HA25APY000001



Photo 1: Overview photo facing northwest.



Photo 2: Overview photo facing west.



BMP Type: Forest Planting
Total Trees: 152
Trees per Acre: 259
Planted Acres: 0.59
Total IA Credit: 0.65
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Alliance planting. Property owner mentioned site was originally planted as all pines that died. He replanted sawtooth oaks and cedars. Lots of regeneration of tulip poplars, sycamores, and mixed oaks.
Maintenance Requested: No
Maintenance Comments: Completely overgrown understory will need brush hog and NNI spraying of multiflora rose, wineberry, and Japanese knotweed. Minor shelter removal needed.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 75 150

 1 inch = 150 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Charles Dougherty G
Site ID: HA25APY000002
1128 Main St

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

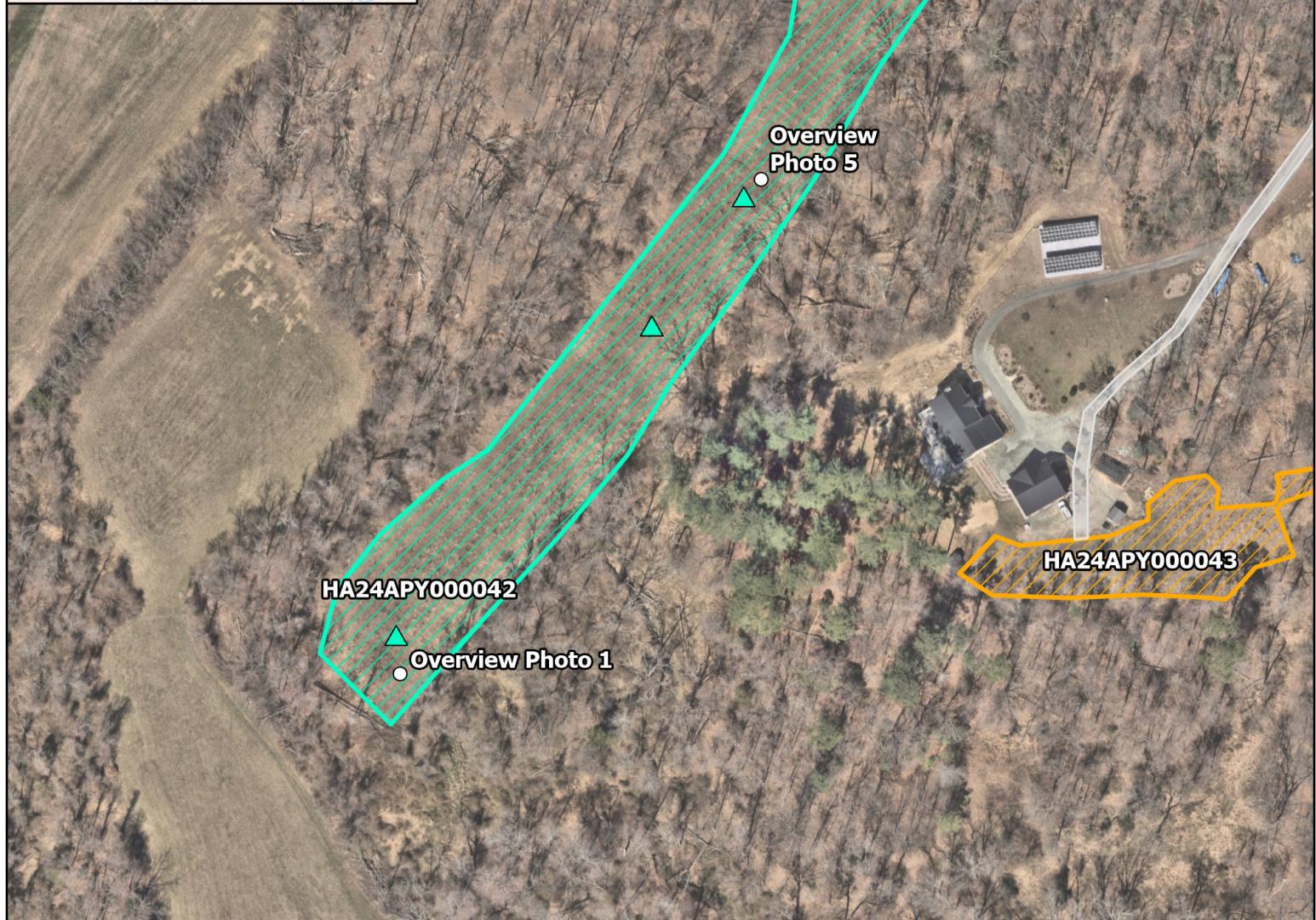
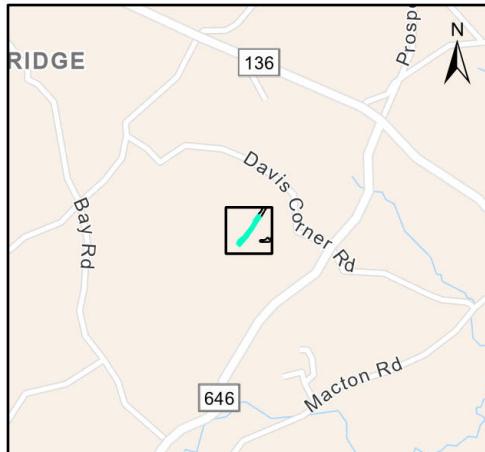
Charles Dougherty Property, Site G, HA25APY000002



Photo 1: Overview photo facing southeast.



Photo 3: Overview photo facing north.



BMP Type: Riparian Forest Planting
Total Trees: 346

Trees per Acre: 160

Planted Acres: 2.16

Total IA Credit: 3.25

Site Condition: Needs Maintenance

Inspection Method: 0.05 Acre Plots

Understory: Unmanaged

General Comments: High mortality throughout site, infill potential high. Some plots fell within areas where there were enough surviving trees to pass a 1/20th acre plot, but the site largely failed.

Maintenance Requested: Yes

Maintenance Comments: Brush hog understory of honeysuckle and multiflora. Entire site can be infilled.

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 1 inch = 150 feet



**Alliance for the Chesapeake Bay
 Spring 2025 Planting Inspections**

Christopher and Suzanne Golley A

Site ID: HA24APY000042

3826 Davis Corner Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

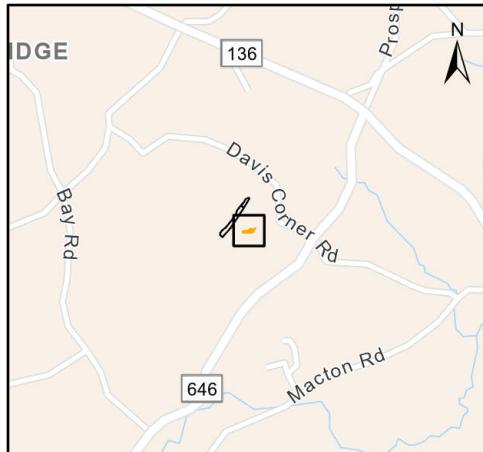
Christopher and Suzanne Golley Property, Site A, HA24APY000042



Photo 1: Overview photo facing northeast.



Photo 5: Overview photo facing northeast.



BMP Type: Urban Tree Canopy
Total Trees: 103
Trees per Acre: 223
Planted Acres: 0.46
Total IA Credit: 0.29
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: 8-12' height 1-1.5" caliper on average. Redbuds and birch doing very well
Maintenance Requested: Yes
Maintenance Comments: Brush clearing around trees and shelters could assist plantings. Roughly a dozen Bradford pears present within planting area. Stump cut treatment recommended
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

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 ft
 1 inch = 100 feet



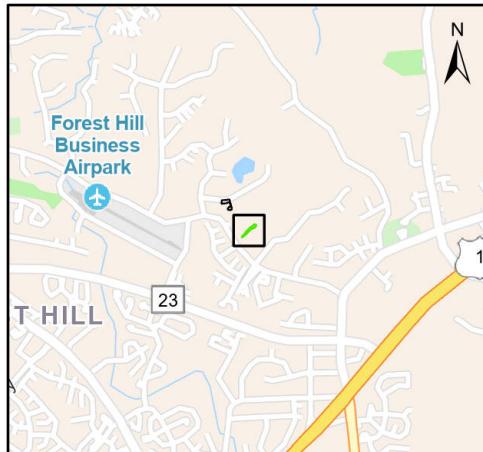
Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Christopher and Suzanne Golley B
Site ID: HA24APY000043
3826 Davis Corner Rd

August 2025

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BMP Type: Forest Planting

Total Trees: 181

Trees per Acre: 330

Planted Acres: 0.55

Total IA Credit: 0.60

Site Condition: Functioning

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Site is well maintained and invasive species are absent. Planted trees are doing well, particularly persimmon and sycamore. Mixed oaks are alive, but smaller and sparse growth. Average tree size 1.5-3" DBH and 15-30' tall.

Maintenance Requested: Yes

Maintenance Comments: Infill in northern section. No maintenance of existing trees needed

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 60 120
ft
1 inch = 120 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Craig and Margaret Johnson

Site ID: HA24APY000045

320A E Jarrettsville Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

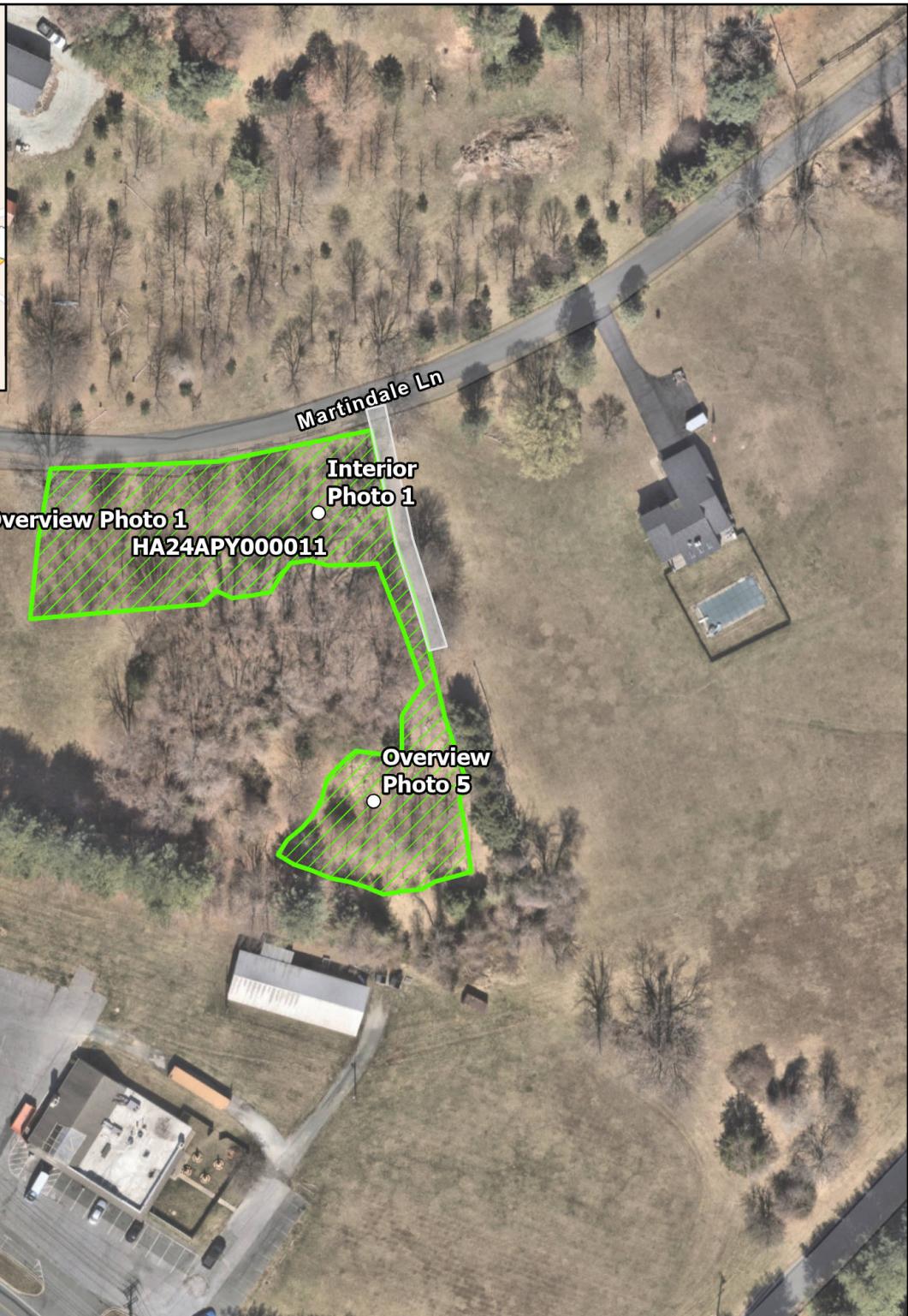
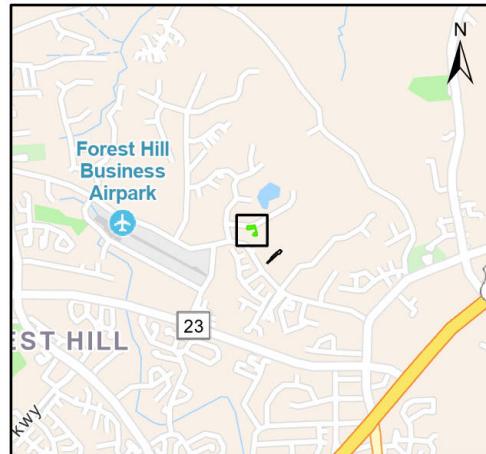
Craig and Margaret Johnson Property, HA24APY000045



Photo 1: Overview photo facing northeast.



Photo 5: Overview photo facing southwest.



BMP Type: Forest Planting
Total Trees: 215
Trees per Acre: 347
Planted Acres: 0.62
Total IA Credit: 0.68
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Maintained Turf
General Comments: Site is well maintained and has reached canopy closure in most areas. Many trees have outgrown their shelters. Understory/flowering species planted closer to house.
Maintenance Requested: No
Maintenance Comments: Shelter maintenance needed, some shelters can be removed. Planting pit maintenance for bittersweet and Japanese honeysuckle.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet

**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

Dale Davis
Site ID: HA24APY000011
303 Martindale Ln

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Dale Davis Property, HA24APY000011



Photo 1: Overview photo facing east.

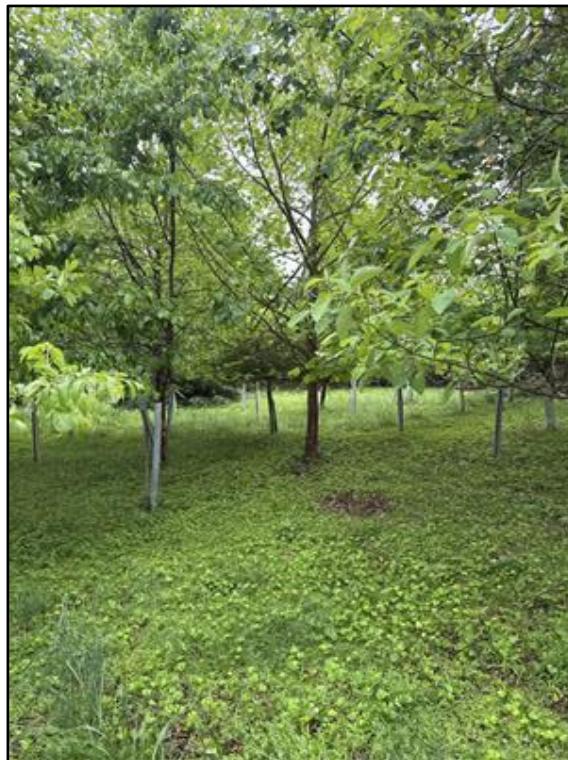
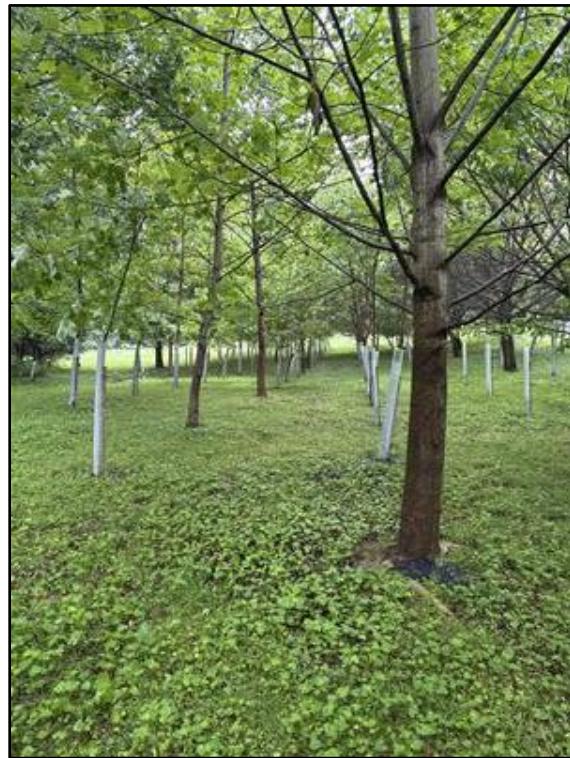


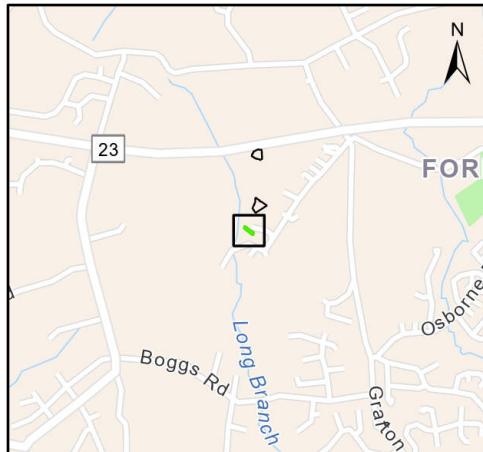
Photo 5: Overview photo facing south.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Dale Davis Property, HA24APY000011



Interior Photo 1: Healthy tree plantings.



BMP Type: Forest Planting
Total Trees: 119
Trees per Acre: 217
Planted Acres: 0.55
Total IA Credit: 0.60
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is establishing well and appears well maintained. Trees are 6-20' tall and 1-6" caliper.
 Understory is naturalizing.
Maintenance Requested: Yes
Maintenance Comments: Shelter repair and removal.
 Invasive species control within tree tubes and planting pits.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet

Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

David Warfield A
Site ID: HA24APY000092
105 1st Ave W

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

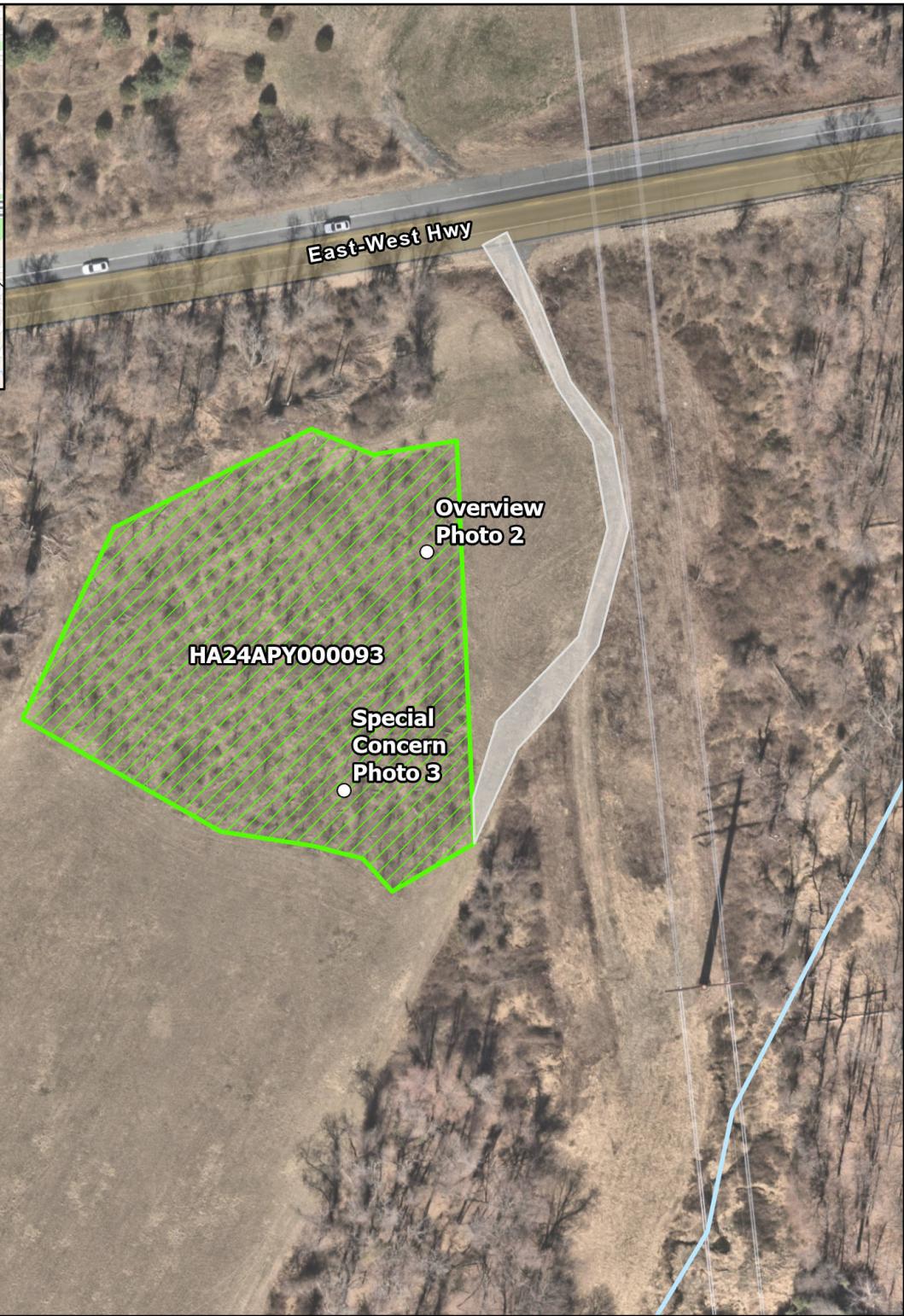
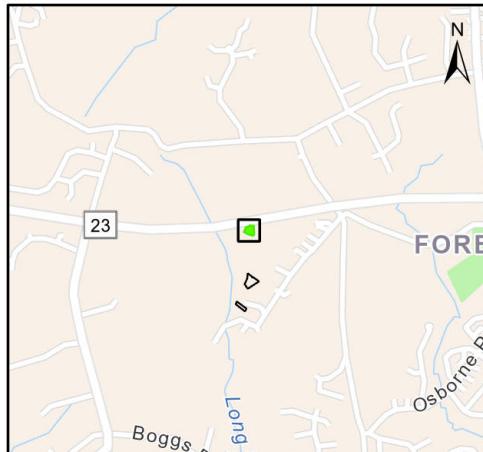
David Warfield, Site A, HA24APY000092



Photo 1: Overview photo facing southwest.



Photo 2: Overview photo facing northeast.



BMP Type: Forest Planting
Total Trees: 235
Trees per Acre: 192
Planted Acres: 1.22
Total IA Credit: 1.34
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is establishing with some gaps in survival. Recent mowing completed but large vines are on trees.
Maintenance Requested: Yes
Maintenance Comments: Shelter repair, shelter removal, hand tools and backpack sprayers for NNIs. NNIs mostly in tubes and on trees. Recent mowing has been completed.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet

**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

David Warfield B
Site ID: HA24APY000093
105 1st Ave W

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

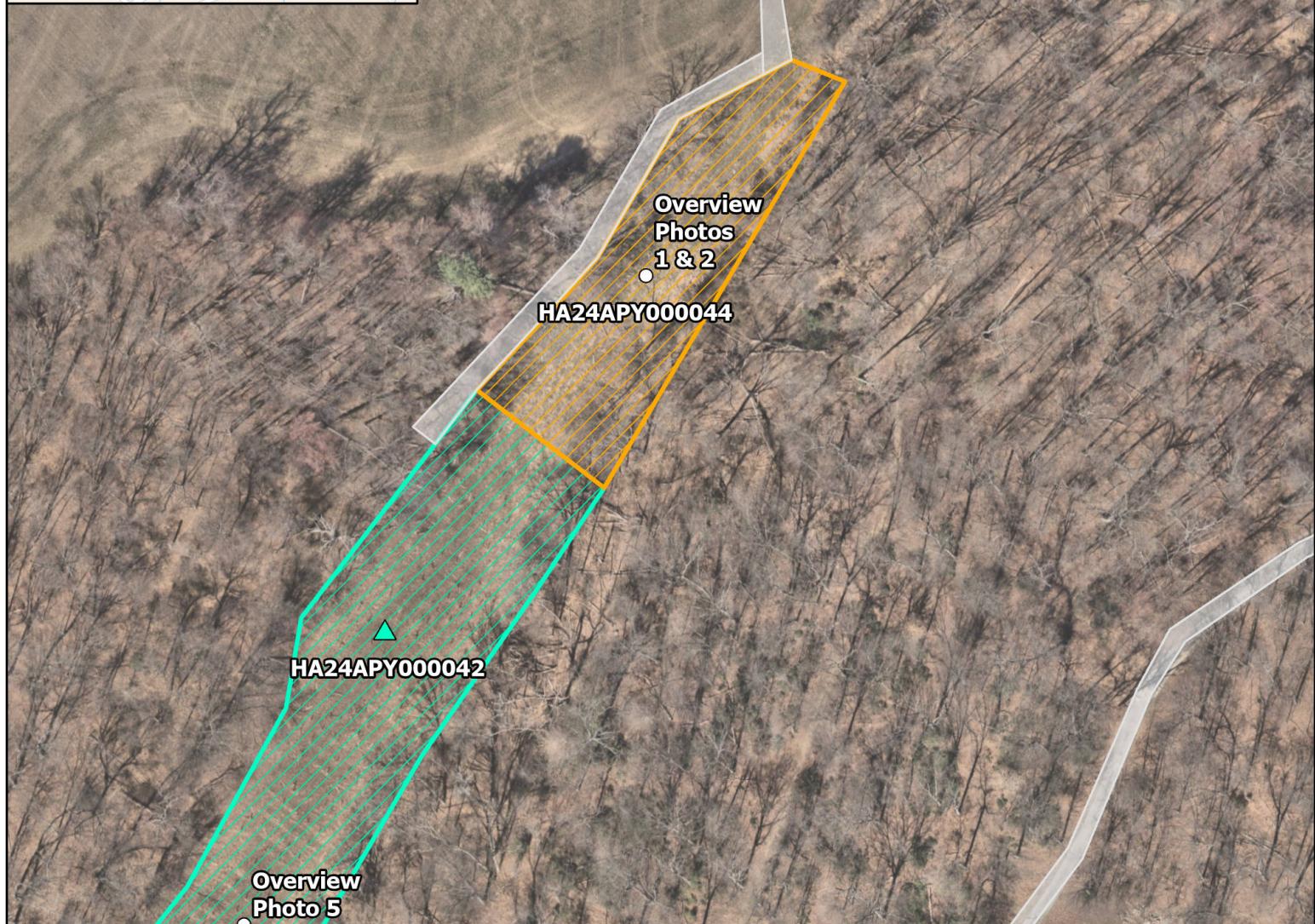
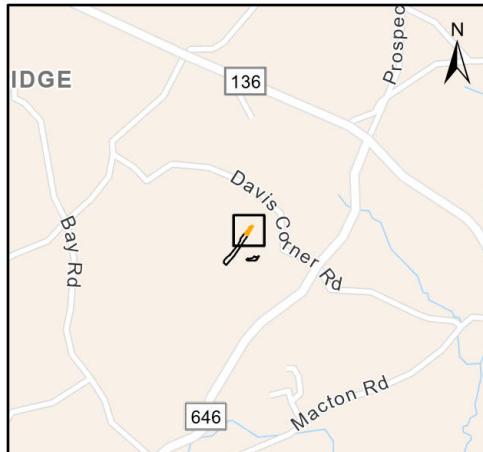
David Warfield, Site B, HA24APY000093



Photo 2: Overview photo facing southwest.



Special Concern Photo 3: Tree shelters in need of maintenance.



BMP Type: Urban Tree Canopy
Total Trees: 6
Trees per Acre: 12
Planted Acres: 0.48
Total IA Credit: 0.13
Site Condition: Not Functioning
Inspection Method: Total Site Count
Understory: Maintained Turf
General Comments: Site has largely failed, complete replanting needed. Landowner mentioned that the forestry board oversaw the initial plantings.
Maintenance Requested: Yes
Maintenance Comments: Removal of invasive honeysuckle needed, followed by replanting/infill of entire site.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Evelyn Golley
Site ID: HA24APY000044
3824 Davis Corner Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

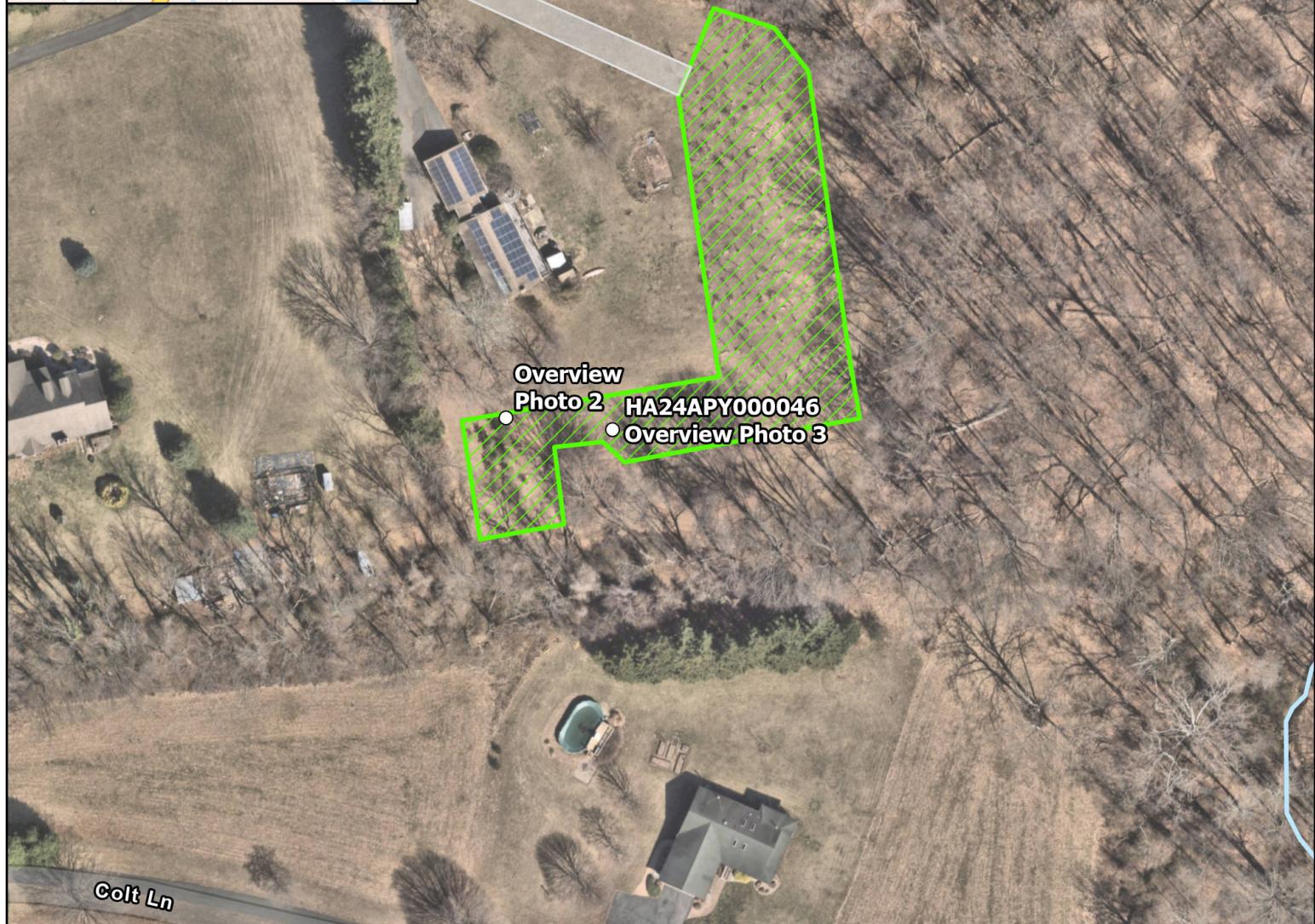
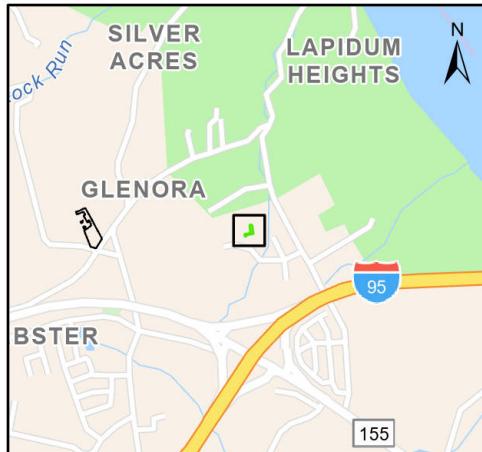
Evelyn Golley Property, HA24APY000044



Photo 1: Overview photo facing northeast.



Photo 2: Overview photo facing southwest.



BMP Type: Forest Planting
Total Trees: 148
Trees per Acre: 235
Planted Acres: 0.63
Total IA Credit: 0.69
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is in fair condition, 35% of planted trees are bent over and/or dead. Live and straight trees are in overall good condition but would benefit from invasive species removal.
Maintenance Requested: Yes
Maintenance Comments: Cage and stake maintenance/ removal. Manual removal of invasive species with follow-up herbicide treatment
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet



**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

Frederick and Linda Robbins
Site ID: HA24APY000046
4411 Quaker Hills Ct

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

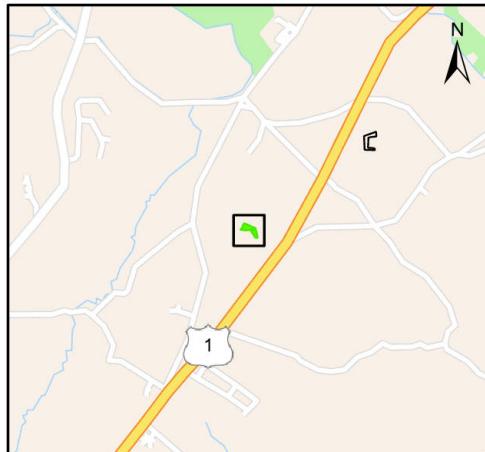
Frederick and Linda Robbins Property, HA24APY000046



Photo 2: Overview photo facing south.



Photo 3: Overview photo facing northeast.



BMP Type: Forest Planting
Total Trees: 195
Trees per Acre: 140
Planted Acres: 1.39
Total IA Credit: 1.53
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: High mortality noted throughout site, site can be reassessed for replanting/infill.
Maintenance Requested: Yes
Maintenance Comments: Herbaceous understory should be brush hogged, southern portion can be selectively infilled
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Harford Friends School

Site ID: HA24APY000101

Conowingo Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

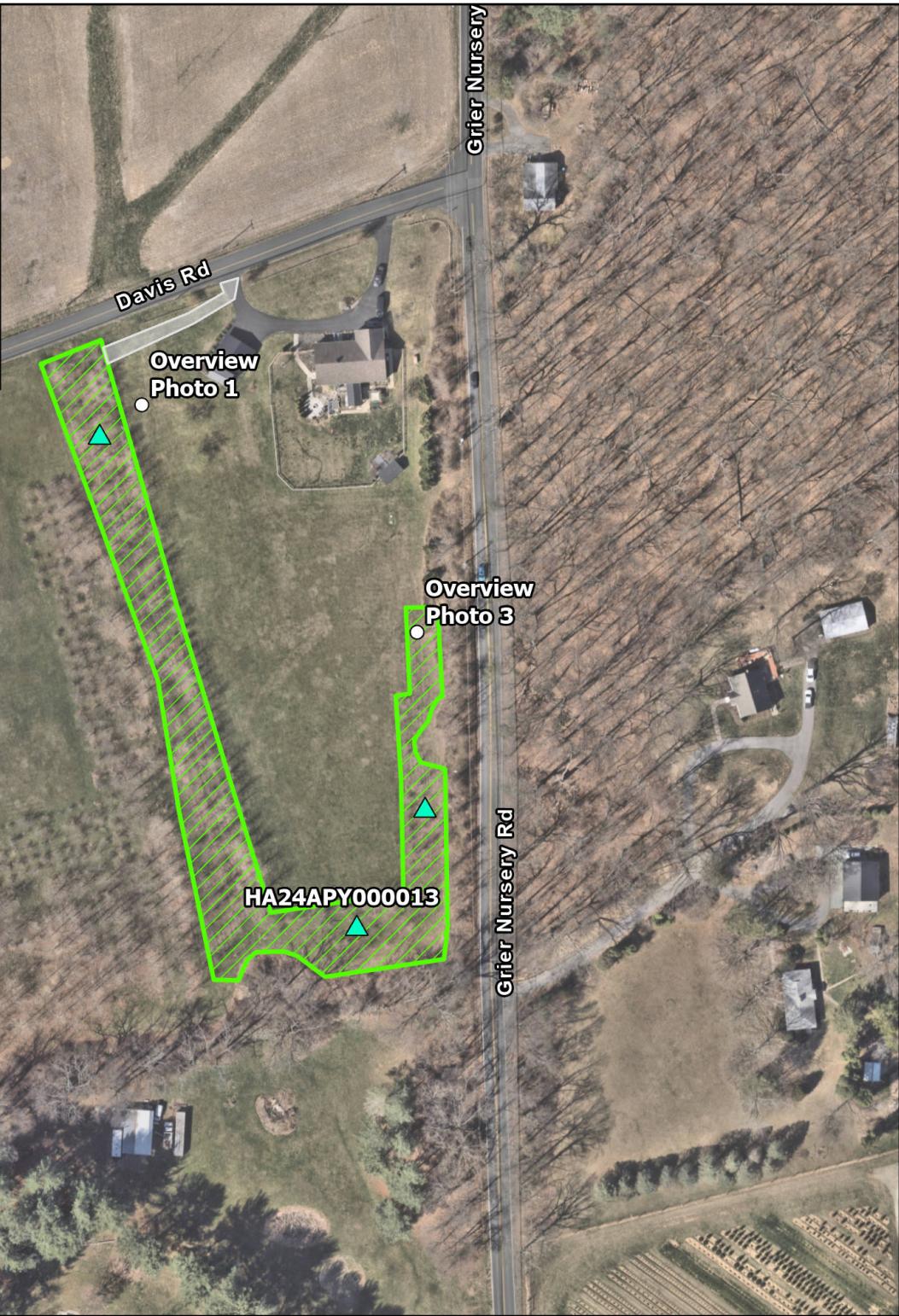
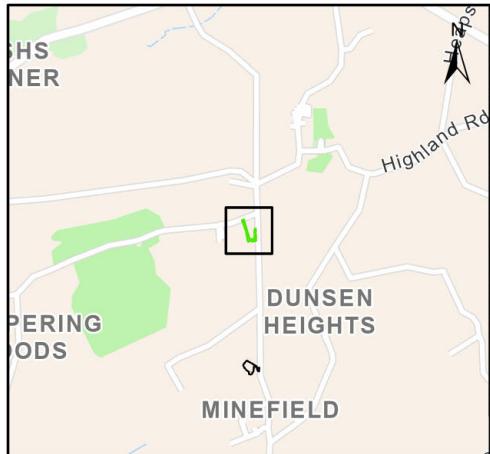
Harford Friends School Property, HA24APY000101



Photo 1: Overview photo facing west.



Photo 2: Plot photo facing northwest.



BMP Type: Forest Planting
Total Trees: 282
Trees per Acre: 260
Planted Acres: 1.09
Total IA Credit: 1.19
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Maintained Turf
General Comments: Well maintained stand. East and South portions are 1-2" caliper and 6-10 ft tall. Western portion are 2-5" and 20-35' tall. Western portion is lower in the landscape and wetter
Maintenance Requested: No
Maintenance Comments: No maintenance needed. Property owner takes great care of site.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 ft
 1 inch = 150 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Jason Turner

Site ID: HA24APY000013

423 Davis Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Jason Turner Property, HA24APY000013

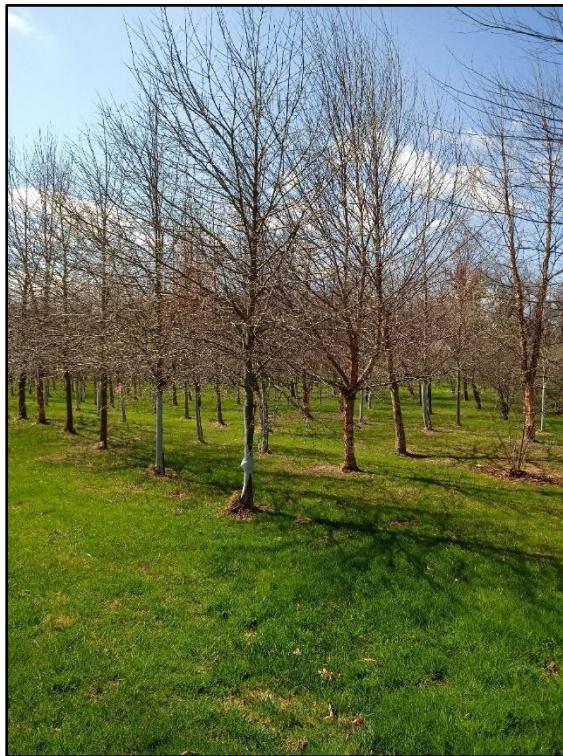
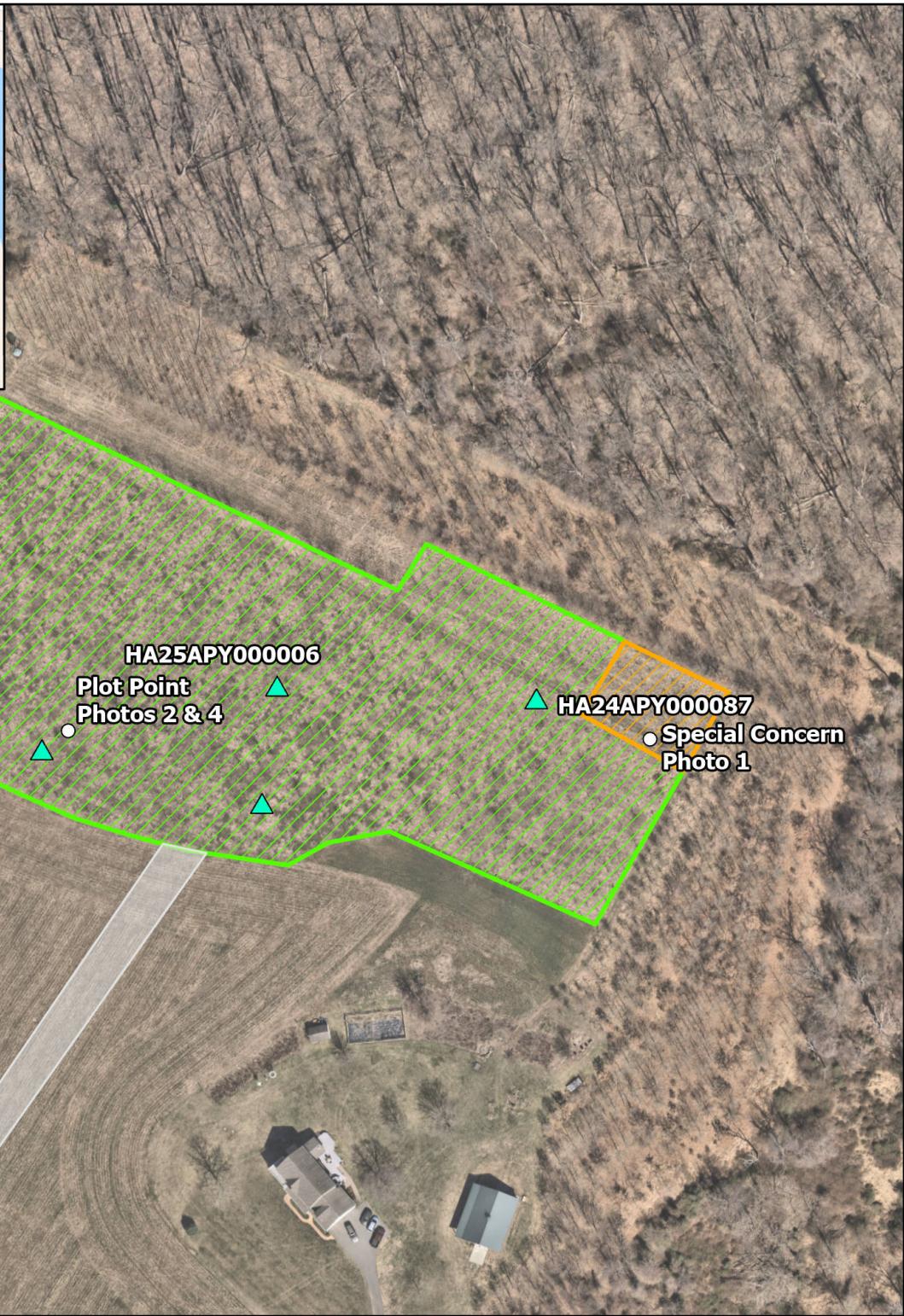
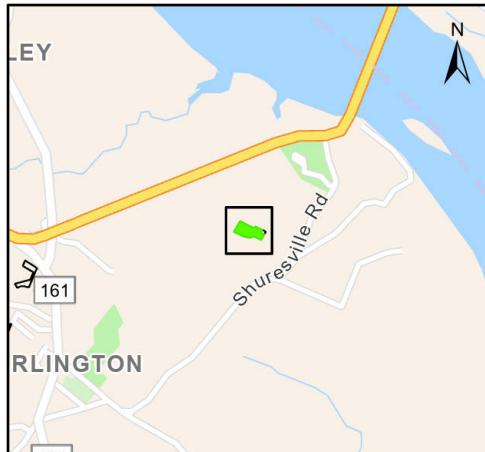


Photo 1: Overview photo facing south.



Photo 3: Overview photo facing south.



BMP Type: Forest Planting
Total Trees: 973
Trees per Acre: 210
Planted Acres: 4.63
Total IA Credit: 5.10
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is well maintained by proactive property owner. Owner indicated he was dissatisfied with contractor maintenance in the past, but is interested in help. Site is establishing well. He has adjacent areas planted under WIP program, potential for credit? Owner expressed interest in more planting.
Maintenance Requested: Yes
Maintenance Comments: Shelter repair and corrective pruning.
Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point

 0 75 150
 ft
 1 inch = 150 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Jim Garrison A
Site ID: HA25APY000006
2430 Shuresville Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

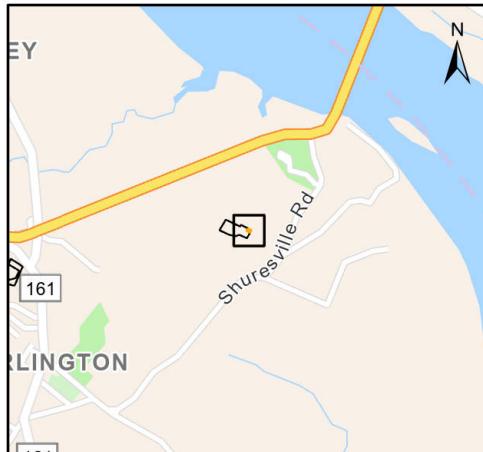
Jim Garrison, Site A, HA25APY000006



Plot Point Photo 2: Overview photo facing east.



Plot Point Photo 4: Overview photo facing south.



BMP Type: Urban Tree Canopy
Total Trees: 20
Trees per Acre: 102
Planted Acres: 0.20
Total IA Credit: 0.05
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: American Chestnut Foundation planting. Planted in 2023, owner expressed concern over the quality of the volunteer work during planting and the plant and shelter materials used.
Maintenance Requested: Yes
Maintenance Comments: Some oriental bittersweet and white mulberry in tubes
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 35 70
 1 inch = 70 feet

**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

Jim Garrison B
Site ID: HA24APY000087
2430 Shuresville Rd

August 2025

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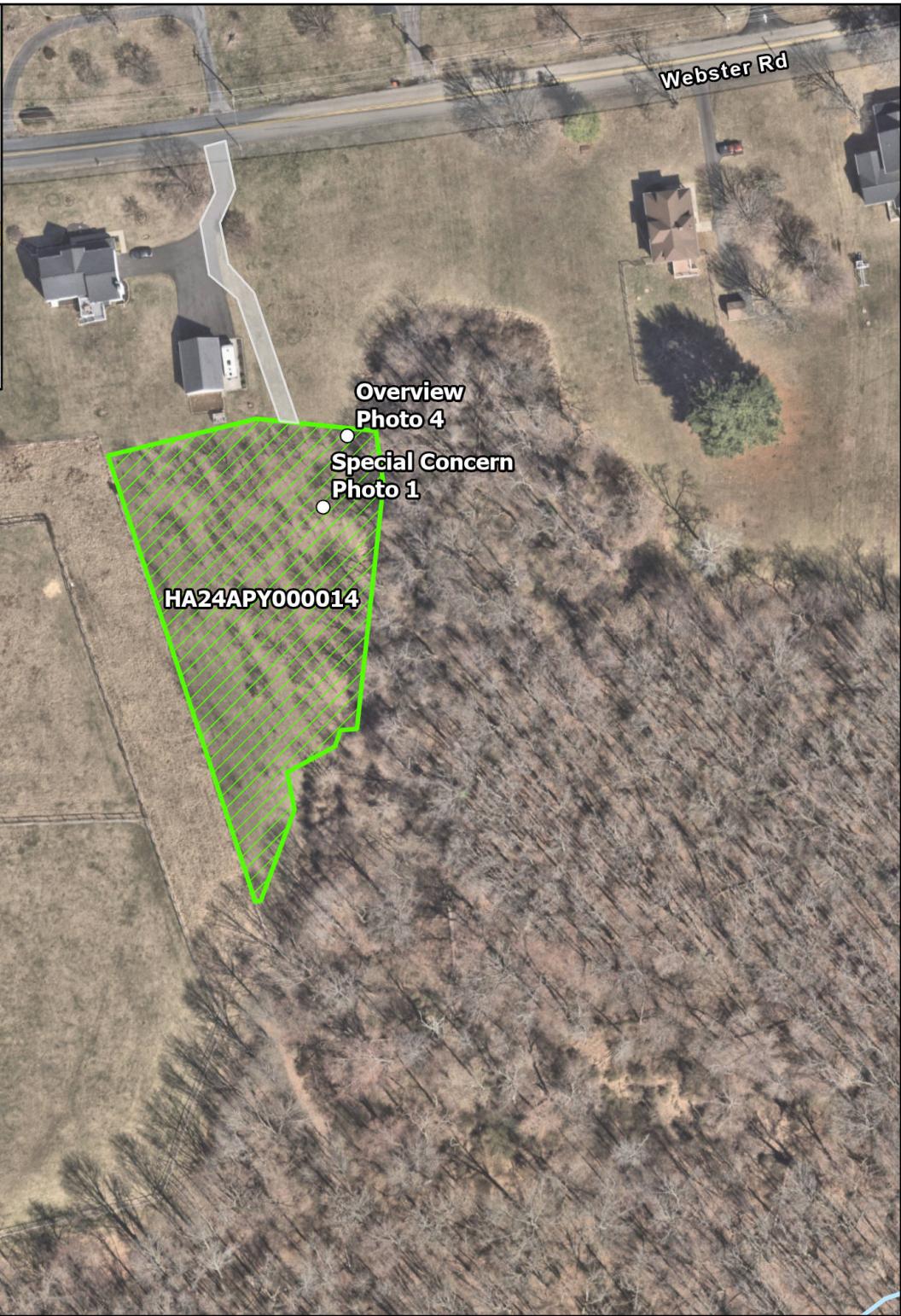
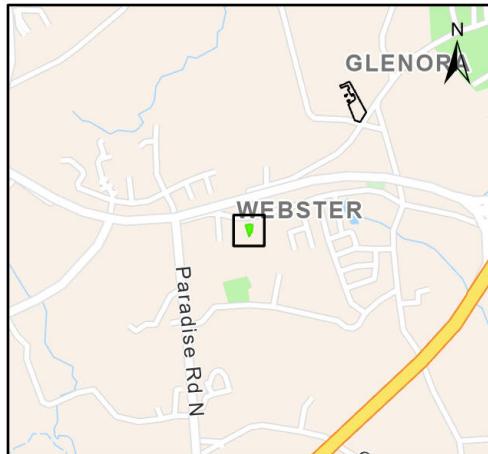


Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

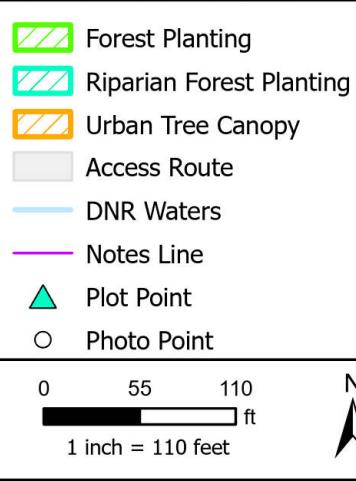
Jim Garrison, Site B, HA24APY000087



Special Concern Photo 1: Deer browse resulting in a deformed crown.



BMP Type: Forest Planting Total Trees: 162 Trees per Acre: 203 Planted Acres: 0.80 Total IA Credit: 0.88 Site Condition: Functioning Inspection Method: Total Site Count Understory: Maintained Turf General Comments: Trees are 2-4" DBH and 12-20 feet in height on average. Well maintained by landowner, no understory. Strong establishment. Appears to have been a second planting as evidenced by smaller trees in south end of planting area. Maintenance Requested: No Maintenance Comments: Removal of Bradford pear needed. Cut stump application recommended Owner Type: Homeowner



**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

John Richards
Site ID: HA24APY000014
4039 Webster Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

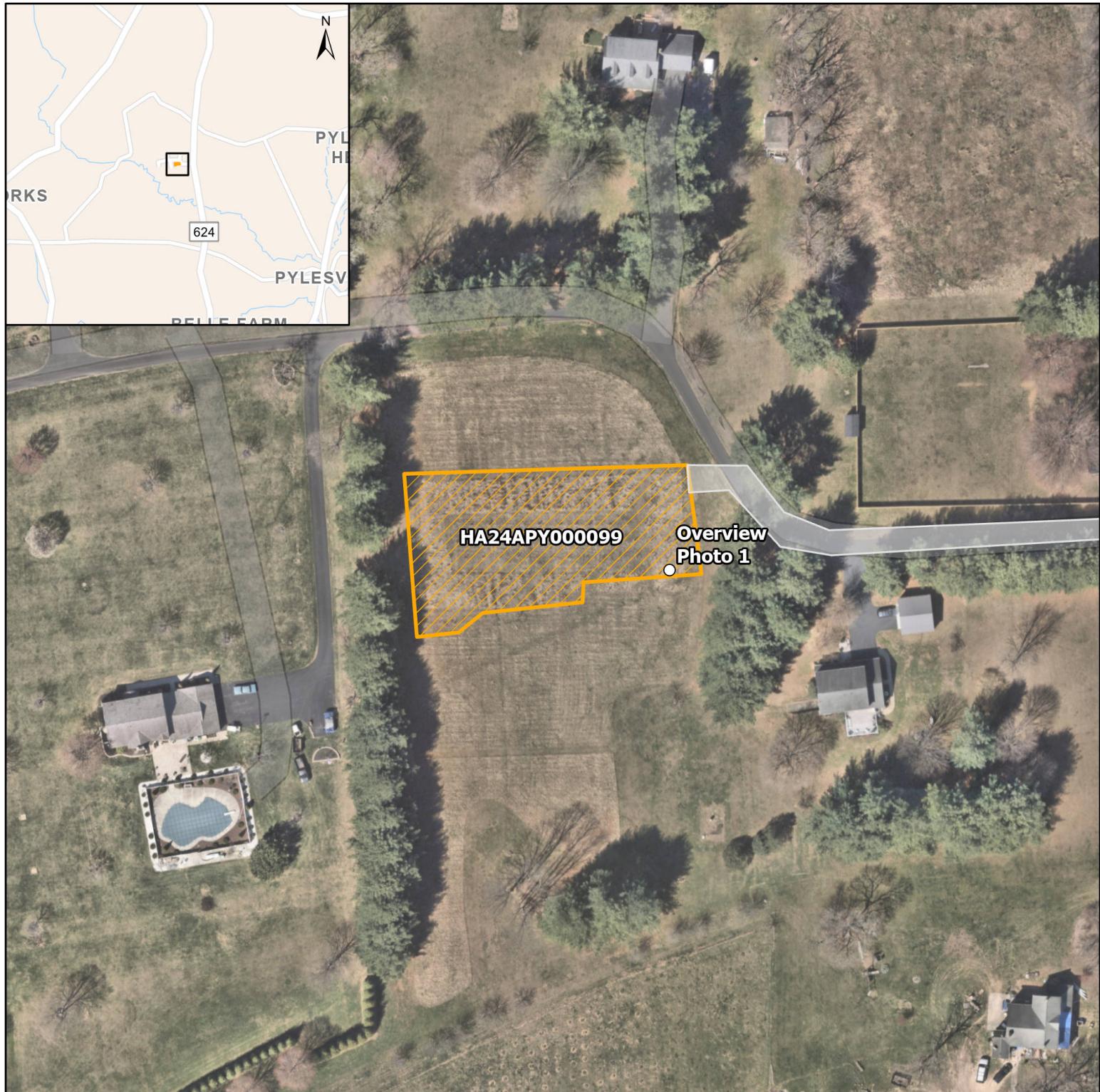
John Richards Property, HA24APY000014



Photo 4: Overview photo facing southwest.



Special Concern Photo 1: Deer buck rub.



BMP Type: Urban Tree Canopy
Total Trees: 109
Trees per Acre: 236
Planted Acres: 0.46
Total IA Credit: 0.31
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is newly planted, shelters and stakes in good working condition. Moderate mortality due to installation failure.
Maintenance Requested: Yes
Maintenance Comments: Mow/weed wack understory
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 50 100
 ft
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Justin Johnson
Site ID: HA24APY000099
4424 Graceton Rd

August 2025

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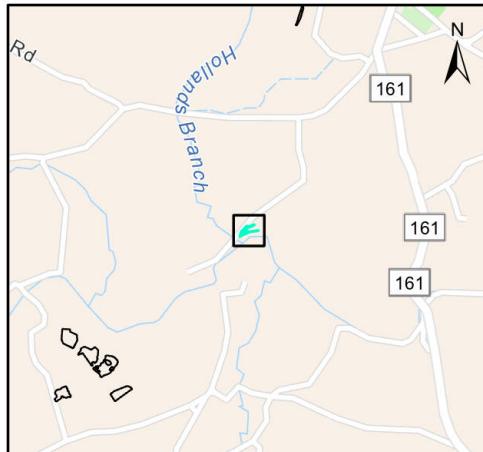


Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Justin Johnson Property, HA24APY000099



Photo 1: Overview photo facing northwest.



BMP Type: Riparian Forest Planting
Total Trees: 336
Trees per Acre: 300
Planted Acres: 1.12
Total IA Credit: 1.68
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Site is generally establishing well and trees are vigorous. Most deer protection can be removed. Trees average 2-4" DBH and 10-14' tall. Understory appears to be brushhogged a couple times a year, continue this to subdue invasives until canopy closure is achieved.
Maintenance Requested: No
Maintenance Comments: Site appears to be brushhogged a couple times a year. Invasives are encroaching/choking multiple trees within the tree sleeves. Remove tree sleeves and use hand tools to remove choking vines. Multiflora rose observed between rows, spot treat.
Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point
0 50 100
 ft
1 inch = 100 feet

**Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections**

Matthew C. Rothwell
Site ID: HA24APY000015
3101 Deths Ford Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Matthew C. Rothwell Property, HA24APY000015



Photo 2: Overview photo facing north.



Photo 6: Overview photo facing west.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

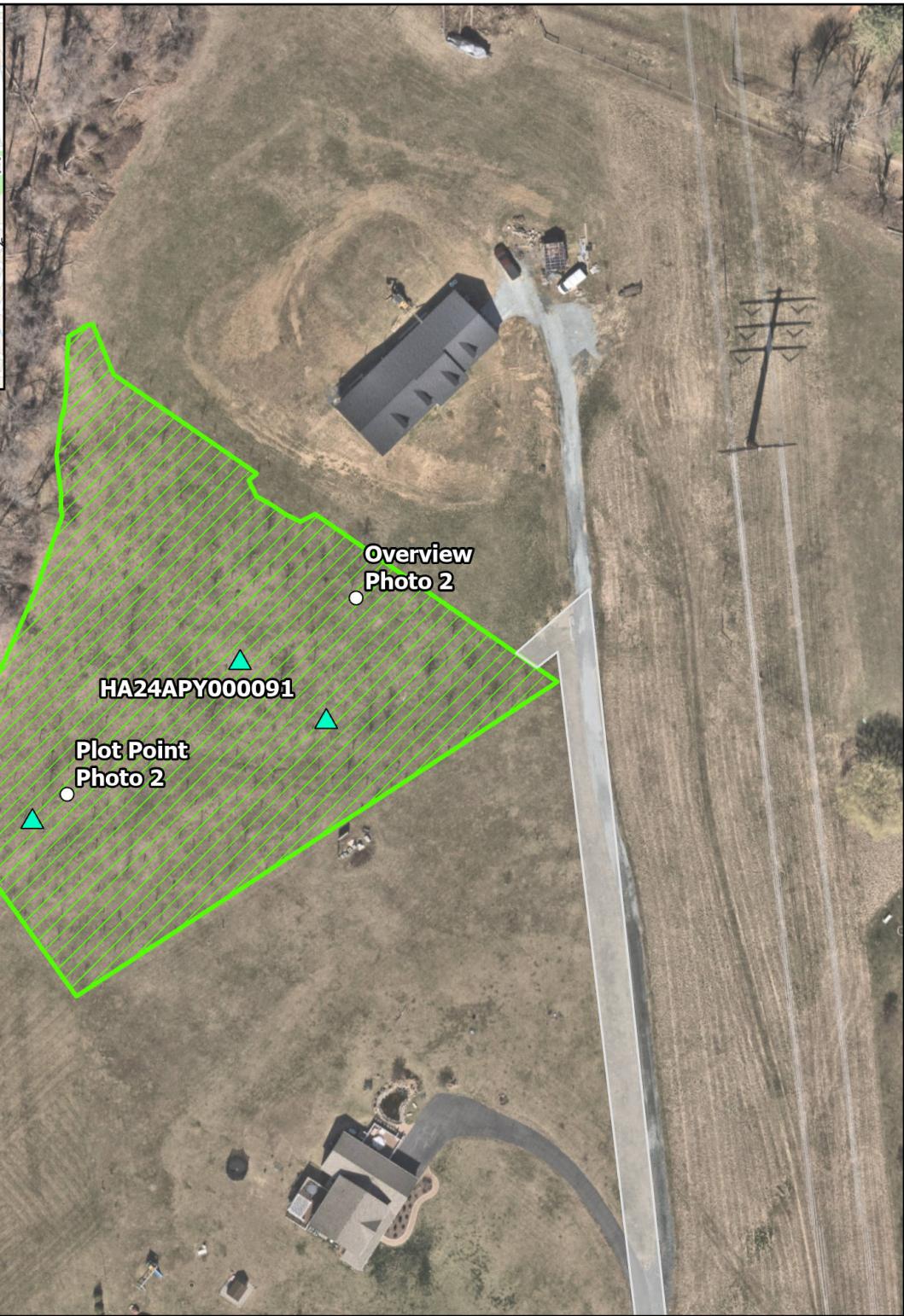
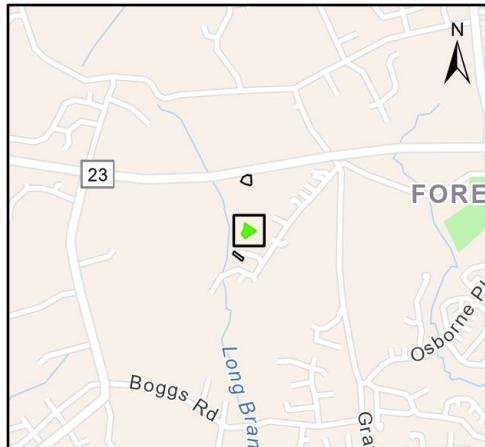
Matthew C. Rothwell Property, HA24APY000015



Photo 8: Overview photo facing southwest.



Special Concern Photo 3: Oriental bittersweet covering a planted tree.



BMP Type: Forest Planting
Total Trees: 263
Trees per Acre: 160
Planted Acres: 1.64
Total IA Credit: 1.81
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Maintained Turf

General Comments: Site is establishing very well overall, trees are generally 6-20' tall, 1-6" caliper.
Maintenance Requested: Yes
Maintenance Comments: Removing invasive species from tubes and repairing shelters. Owner is actively maintaining site.

Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point

0 50 100
 ft
 1 inch = 100 feet

Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

Michael and Elizabeth Faro

Site ID: HA24APY000091

105 1st Ave W

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

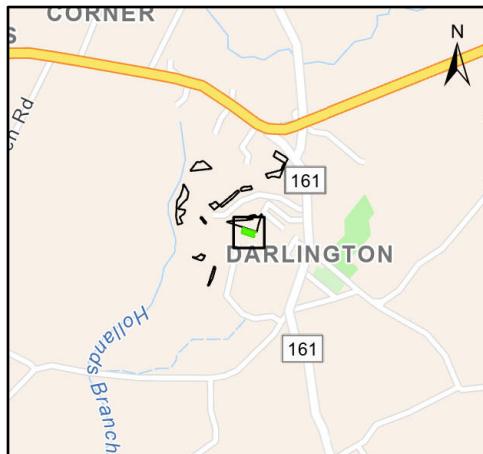
Michael and Elizabeth Faro Property, HA24APY000091



Photo 2: Overview photo facing southwest.



Plot Point Photo 2: Overview photo facing northeast.



BMP Type: Forest Planting
Total Trees: 314
Trees per Acre: 284
Planted Acres: 1.11
Total IA Credit: 1.22
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Maintained Turf
General Comments: Site is very well maintained by owner, invasive presence is minimal, survival generally very good. Trees average 1-2" DBH and 5-10' tall.
Maintenance Requested: Yes
Maintenance Comments: Site is well maintained by land owner and regularly mowed
Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point

0 50 100
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Mike Zyski
Site ID: HA24APY000088
2100 Winstone Ct

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

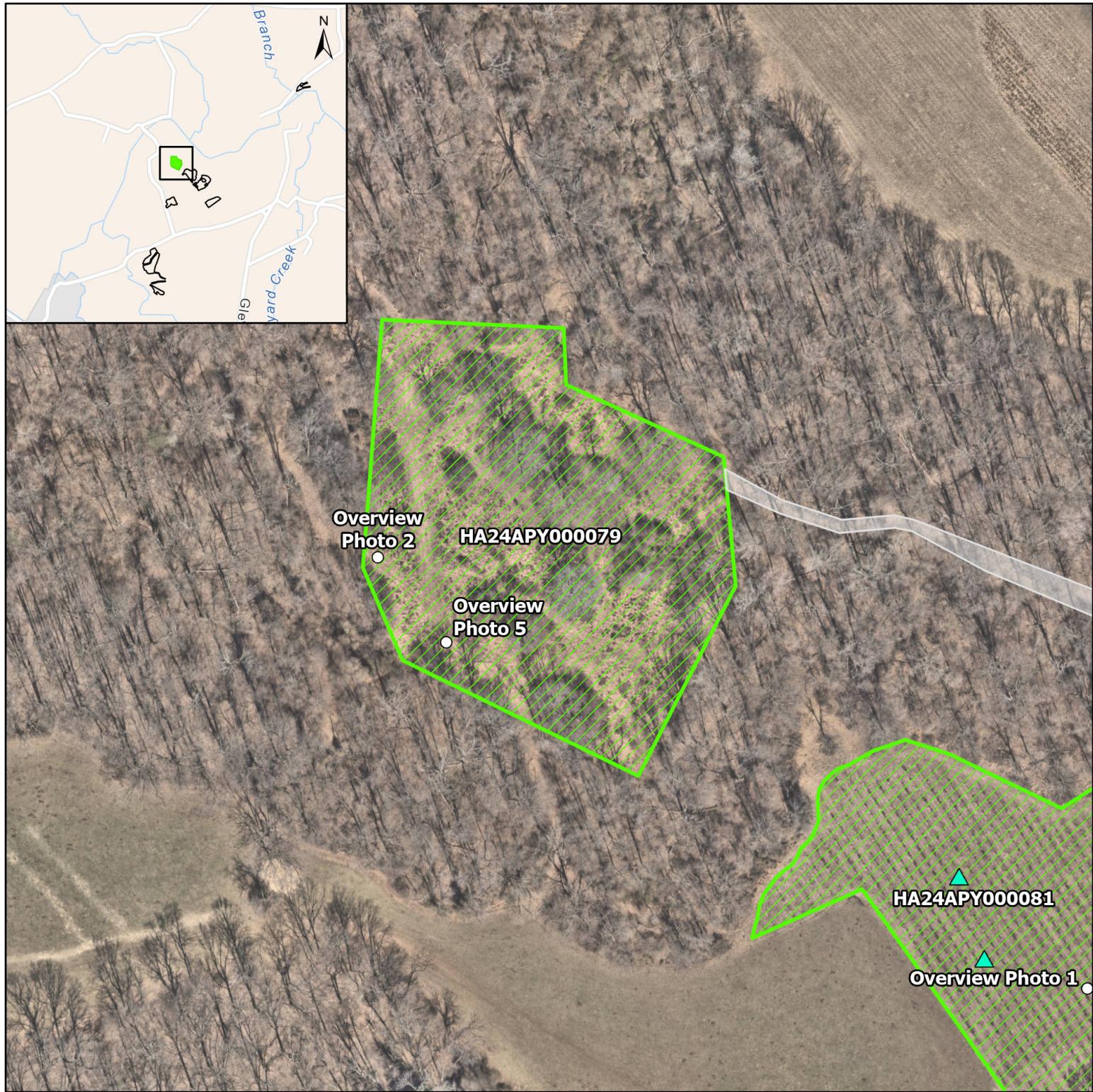
Mike Zyski Property, HA24APY000088



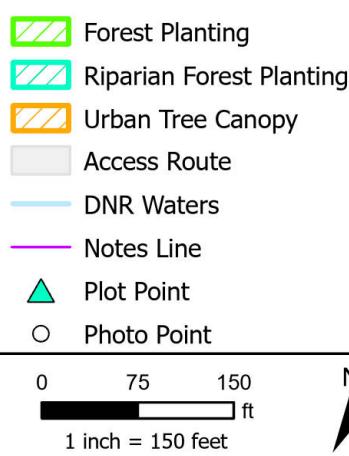
Photo 2: Overview photo facing east.



Photo 5: Overview photo facing east.



BMP Type: Forest Planting
Total Trees: 0
Trees per Acre:
Planted Acres: 3.33
Total IA Credit: 0.00
Site Condition: Does Not Exist
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Scrub shrub site that was never planted. Could be planted after heavy site clearing and prep. Steep slopes present, likely old ag field with poor soils. Some large mature trees with understory around them. Heavy invasive presence. The Alliance may have plans to plant.
Maintenance Requested: Yes
Maintenance Comments: Full site clearing and heavy herbicide use. Brush hogs, hand tools, tank sprayer and backpacks
Owner Type: Homeowner



Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

Peter Jay A
Site ID: HA24APY000079
Nobles Mill Rd

August 2025


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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

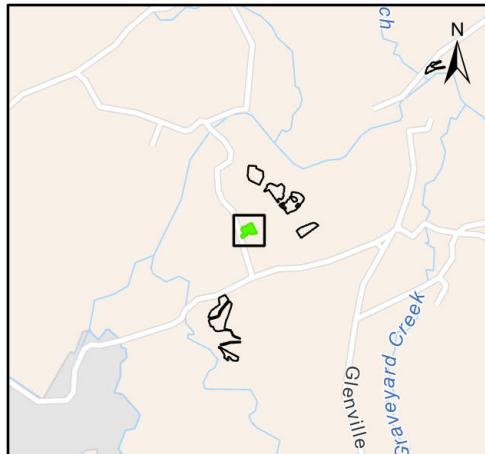
Peter Jay Property, Site A, HA24APY000079



Photo 2: Overview photo facing east.



Photo 5: Overview photo facing south.



BMP Type: Forest Planting
Total Trees: 250
Trees per Acre: 120
Planted Acres: 2.08
Total IA Credit: 2.29
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: North end of site on hill slope, south end sits lower and wetter. Some mature trees existing throughout site, including tulip poplar, black walnut, sycamore.
Maintenance Requested: Yes
Maintenance Comments: Brushhog and backpack sprayers for multiflora rose, shelter repair.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 ft
 1 inch = 150 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Peter Jay B
Site ID: HA24APY000080
Nobles Mill Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Peter Jay Property, Site B, HA24APY000080



Photo 1: Overview photo facing southeast.



Special Concern Photo 1: Linear wetland, photo facing east.



BMP Type: Forest Planting

Total Trees: 1,390

Trees per Acre: 200

Planted Acres: 6.95

Total IA Credit: 7.64

Site Condition: Functioning

Inspection Method: 0.1 A

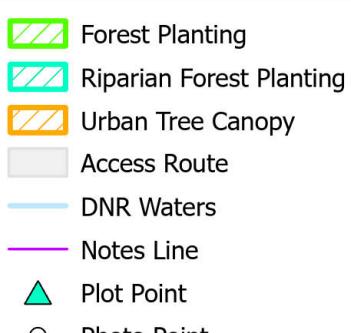
Understory: Unmanaged

General Comments: 6-8' tall trees with some 12-20' trees. Mostly 1" but up to 4" caliper. Site is establishing well overall and appears to have active maintenance. On an upland slope, likely poor soils.

Maintenance Requested: Yes

Maintenance Comments: Brushhog in between rows and apply herbicides. Re-stake and repair shelters.

Owner Type: Homeowner



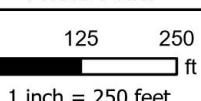
Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Peter Jay C

Site ID: HA24APY000081

Nobles Mill Rd

August 2025



Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

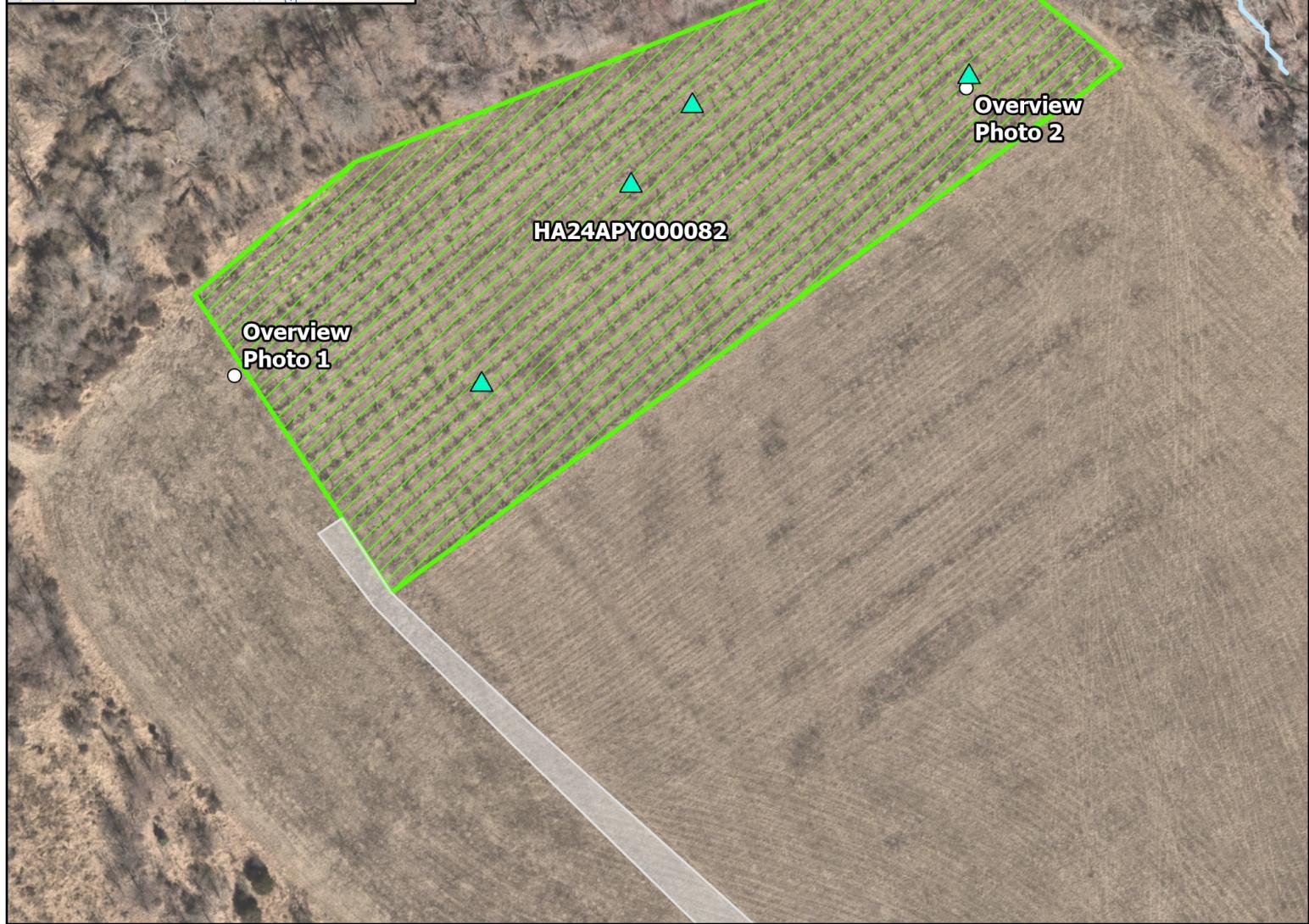
Peter Jay Property, Site C, HA24APY000081



Photo 1: Overview photo facing west.



Special Concern Photo 1: Herbicide burn circle.



BMP Type: Forest Planting
Total Trees: 364
Trees per Acre: 160
Planted Acres: 2.28
Total IA Credit: 2.51
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Area sits lower and wetter with flat topography. Trees are generally 6-12' tall and 1-2" caliper. Site is establishing well overall with limited invasive species interference.
Maintenance Requested: Yes
Maintenance Comments: Shelter repair and hand removal of invasives.
Owner Type: Homeowner

Forest Planting
 Riparian Forest Planting
 Urban Tree Canopy
 Access Route
 DNR Waters
 Notes Line
 Plot Point
 Photo Point

0 50 100
 ft
 1 inch = 100 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Peter Jay D
Site ID: HA24APY000082
Nobles Mill Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

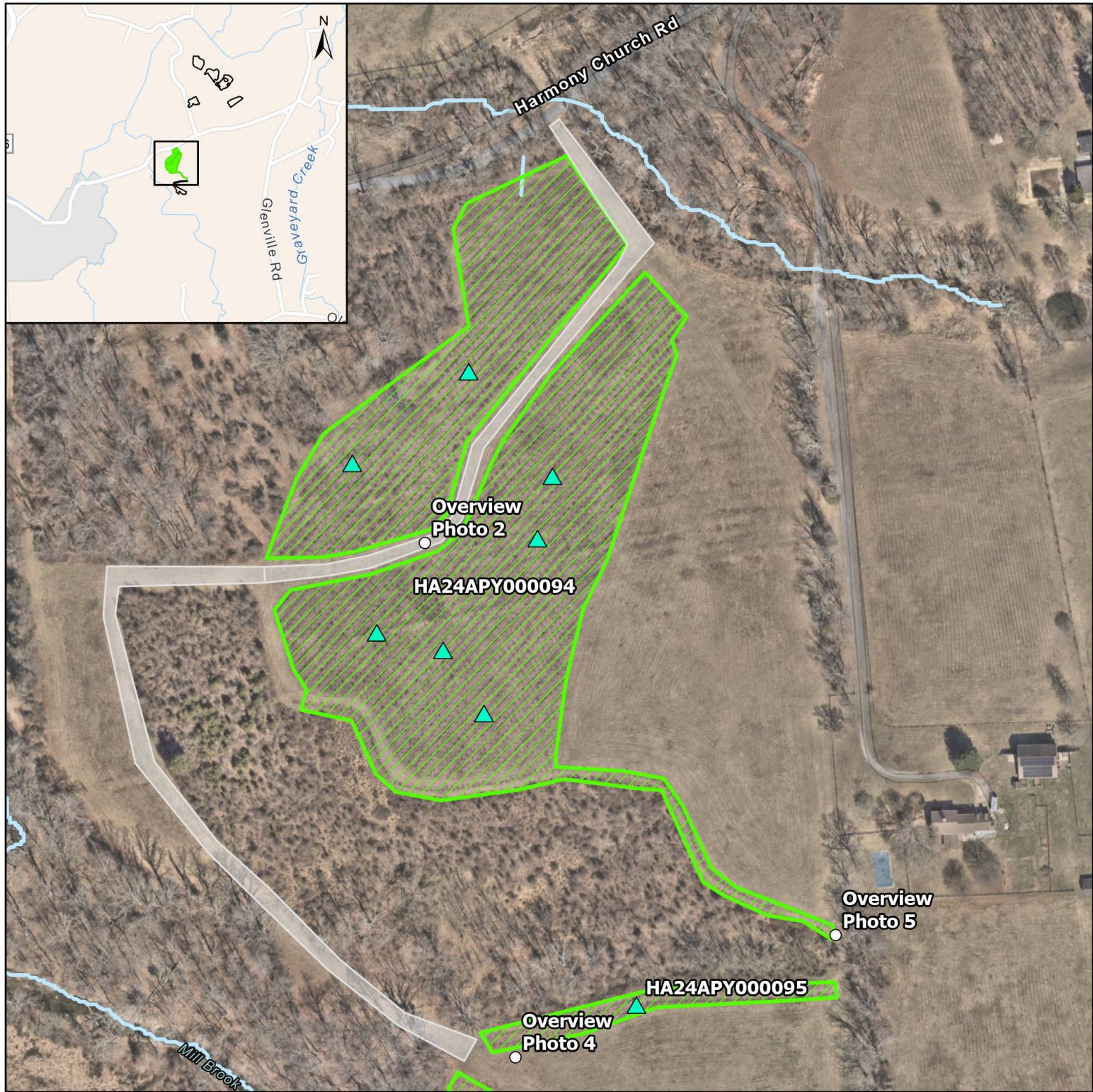
Peter Jay Property, Site D, HA24APY000082



Photo 1: Overview photo facing east.



Photo 2: Overview photo facing southwest.



BMP Type: Forest Planting
Total Trees: 2,277
Trees per Acre: 310
Planted Acres: 7.35
Total IA Credit: 8.08
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is generally well maintained and establishing well. Appears to have been an old fallow field. Steep slopes present. Trees average 1" DBH and 5-8' tall.
Maintenance Requested: Yes
Maintenance Comments: Evidence of herbicide circle burns in plant pits. Brush hog and hand tools for invasive honeysuckle and multiflora rose control. Follow up with backpack herbicide application. Shelter repairs needed.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 100 200
 1 inch = 200 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Peter Jay E
Site ID: HA24APY000094
Nobles Mill Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

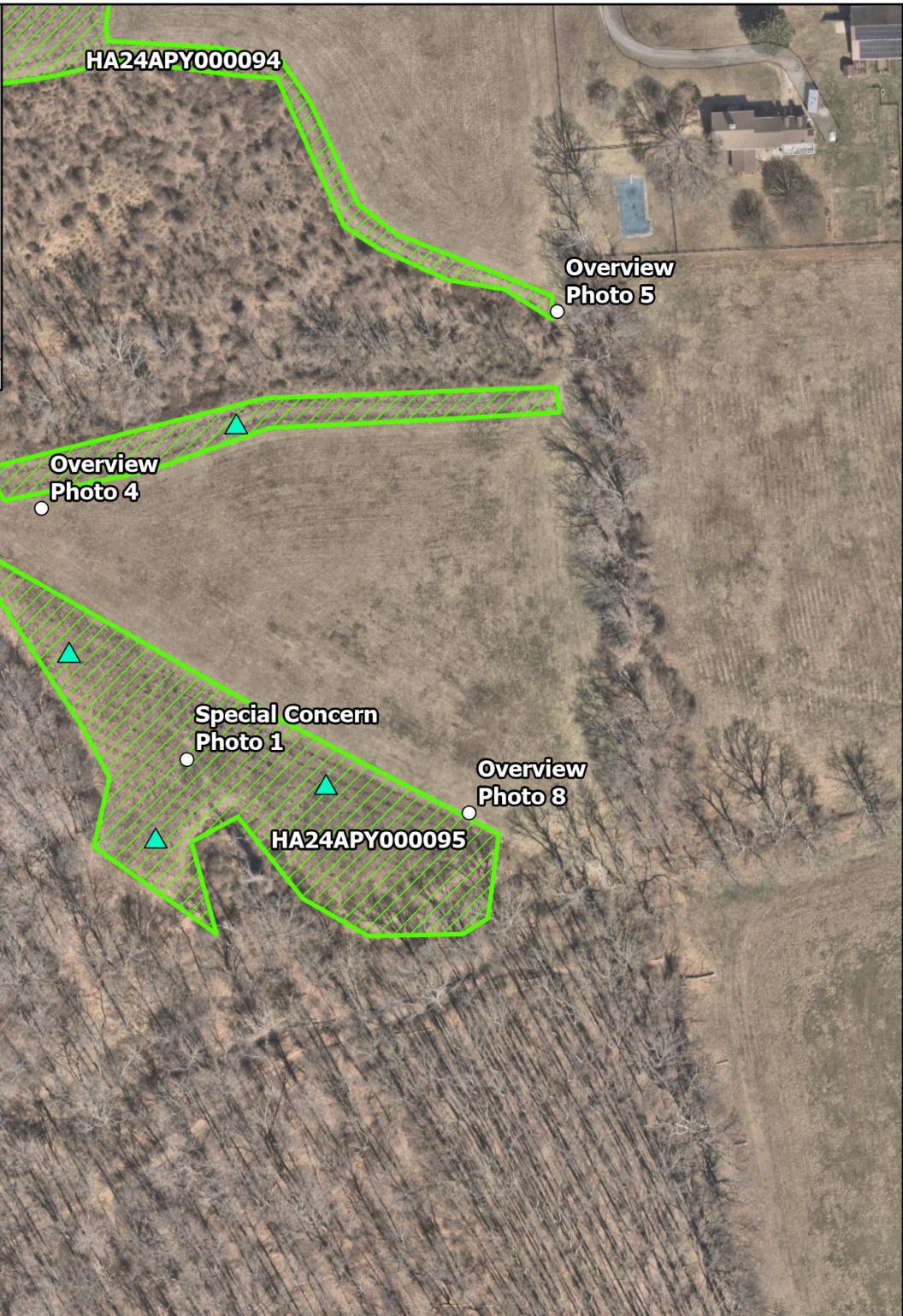
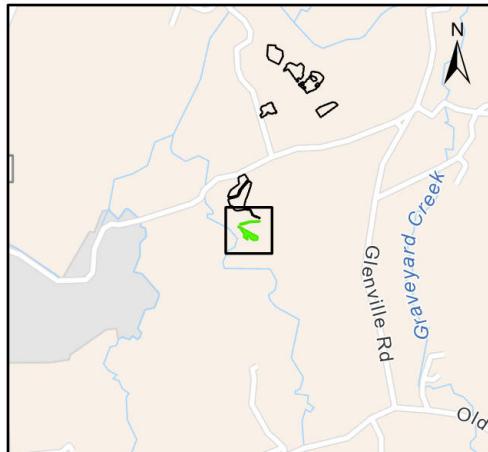
Peter Jay Property, Site E, HA24APY000094



Photo 2: Overview photo facing east.



Photo 5: Overview photo facing northwest.



BMP Type: Forest Planting
Total Trees: 700
Trees per Acre: 380
Planted Acres: 1.84
Total IA Credit: 2.03
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Generally 1" caliper, 6-12 feet tall. Scattered larger 15-20' tall, 3" caliper trees. Border plantings adjacent to larger forest stands. Steep slopes on site.
Maintenance Requested: Yes
Maintenance Comments: Brushhog and hand tools for invasive honeysuckle and multiflora rose control. Follow up with backpack herbicide application. Shelter repairs needed.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 ft
 1 inch = 150 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Peter Jay F
Site ID: HA24APY000095
Nobles Mill Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Peter Jay Property, Site F, HA24APY000095



Photo 4: Overview photo facing east.



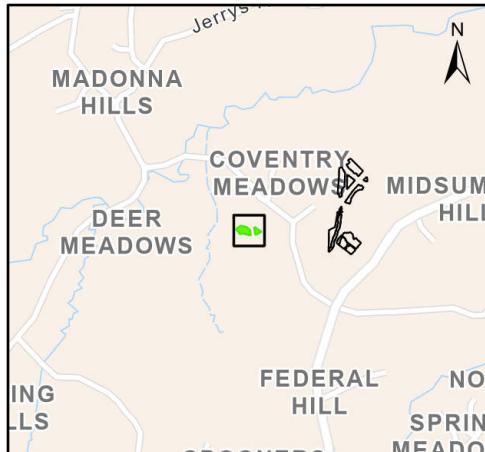
Photo 8: Overview photo facing southwest.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Peter Jay Property, Site F, HA24APY000095



Special Concern Photo 1: Deer buck rub.



BMP Type: Forest Planting
Total Trees: 375
Trees per Acre: 200
Planted Acres: 1.88
Total IA Credit: 2.07
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Maintained Turf
General Comments: Plots are well maintained and clearly managed, all species are growing well, particularly black locusts, tulip poplar, American plum and sycamore. Oaks are alive but slowly growing, almost all eastern red cedars are dead. Trees average 1-1.5" DBH and range from 4-15' in height.
Maintenance Requested: No
Maintenance Comments: Shelter removal in a few years, minor invasive removal
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Ron Fisher
Site ID: HA24APY000089
1965 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

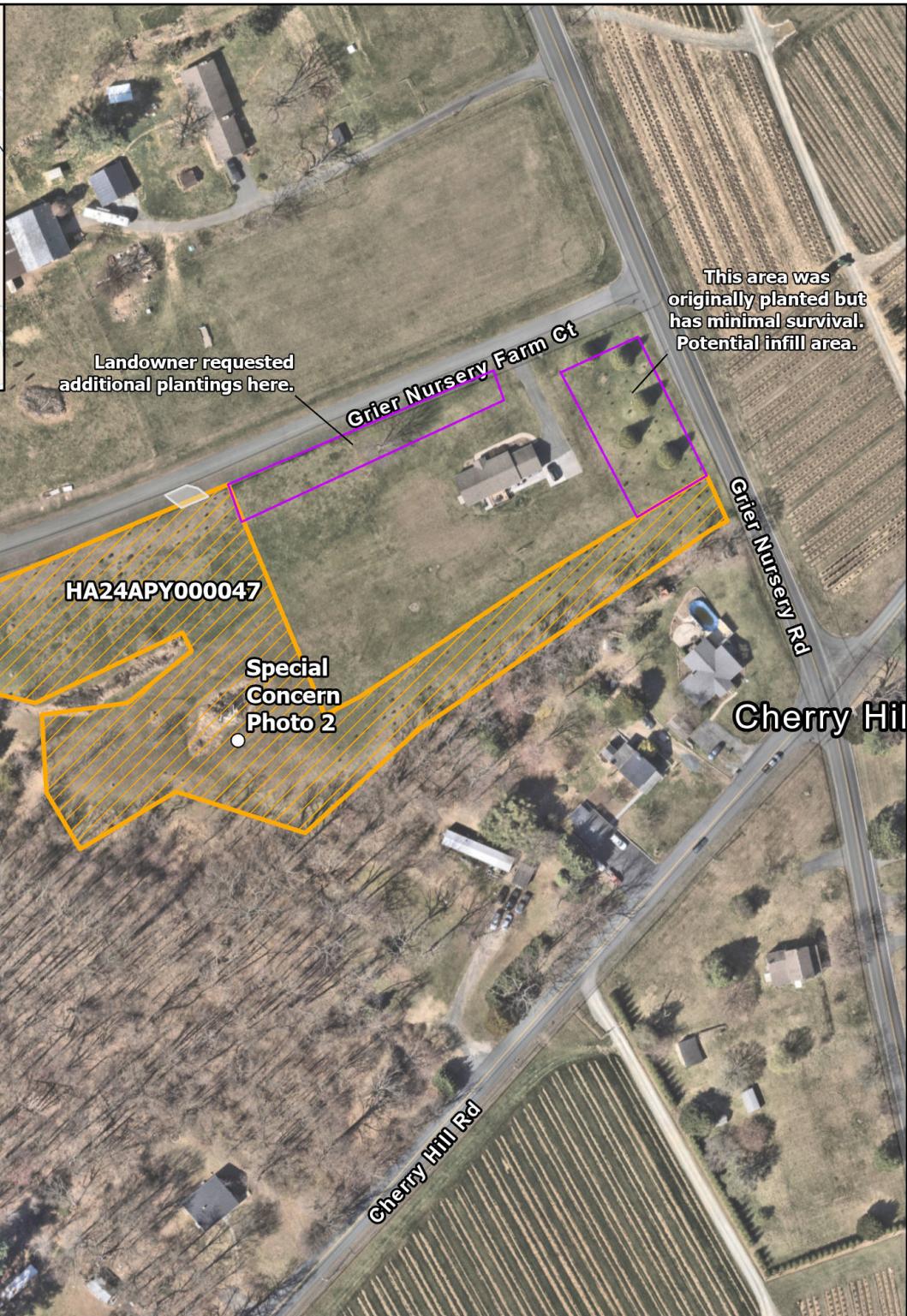
Ron Fisher Property, HA24APY000089



Photo 1: Overview photo facing west.



Plot Photo 13: Plot photo facing north.



BMP Type: Urban Tree Canopy
Total Trees: 200

Trees per Acre: 86

Planted Acres: 2.32

Total IA Credit: 0.65

Site Condition: Needs Maintenance

Inspection Method: Total Site Count

Understory: Maintained Turf

General Comments: Majority of the site failed, owner said that many trees died, site is essentially a monoculture of Norway spruce. Most trees do not have shelters anymore, high deer and groundhog activity, surviving trees are 2-5' tall.

Maintenance Requested: Yes

Maintenance Comments: Owner is enthusiastic about replanting entire site and more

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 75 150
 1 inch = 150 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen & Noelle Hersl

Site ID: HA24APY000047

419 Grier Nursery Farm Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

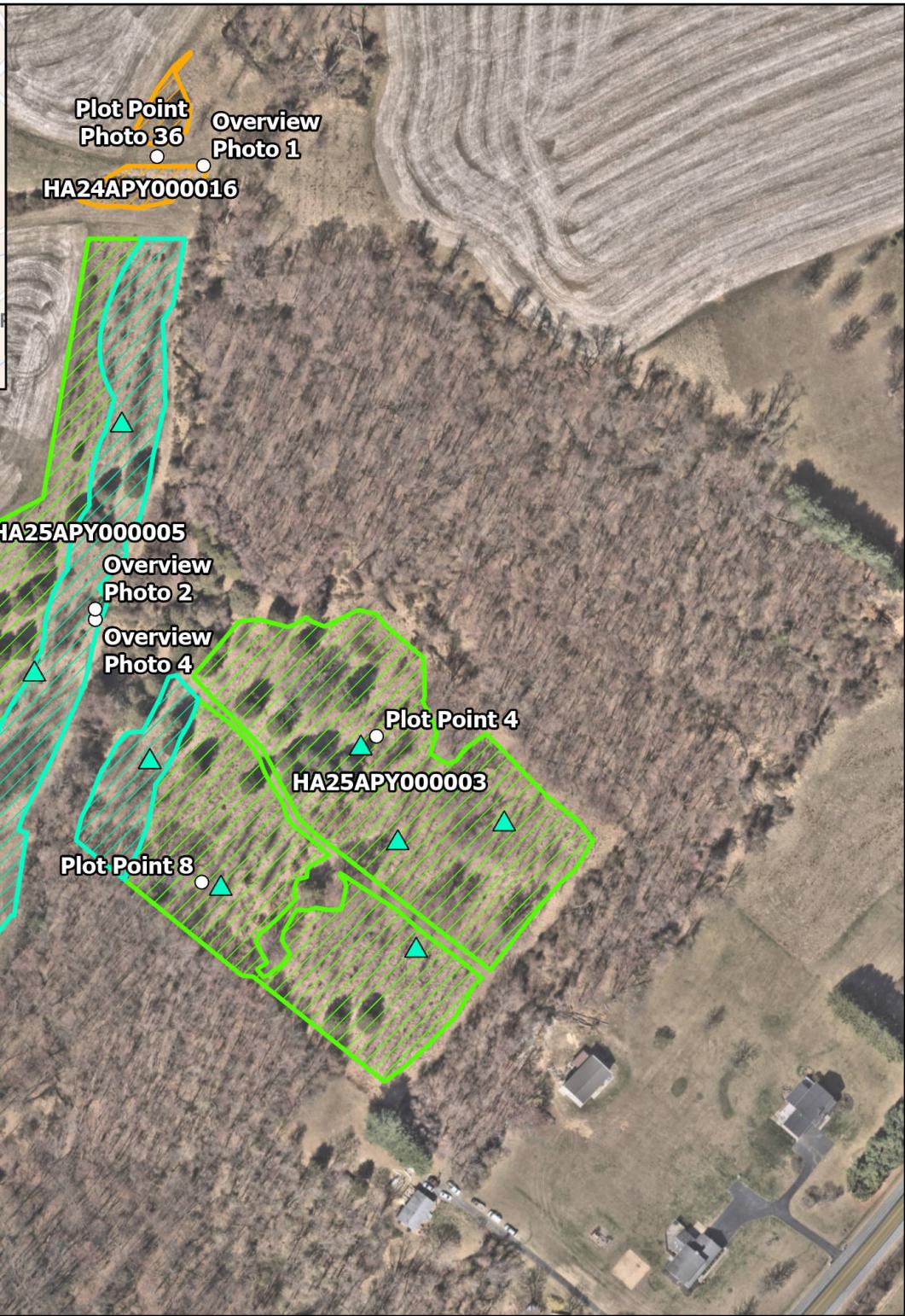
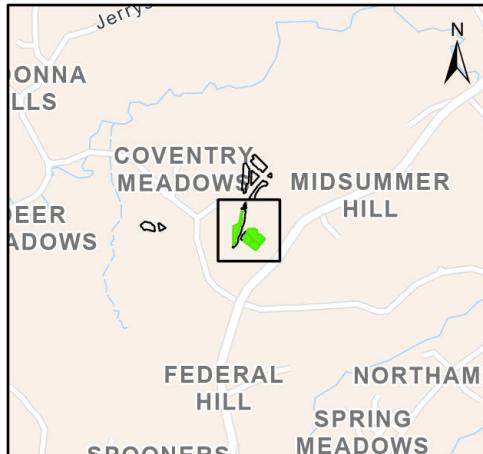
Stephen and Noelle Hersl Property, HA24APY000047



Photo 9: Overview photo facing east.



Special Concern Photo 2: Swamp white oak with oak gall.



BMP Type: Forest Planting
Total Trees: 1,114
Trees per Acre: 190
Planted Acres: 5.86
Total IA Credit: 6.45
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is doing well and was clearly well maintained for many years. Trees could benefit from shelter removal as they are now fully established. Part of site could be used as riparian buffer planting
Maintenance Requested: Yes
Maintenance Comments: Homeowner has expressed interest in county maintenance to remove tree shelters and stakes. Invasive removal with brush hog needed throughout site
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 100 200
 1 inch = 200 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe A1
Site ID: HA25APY000003
1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

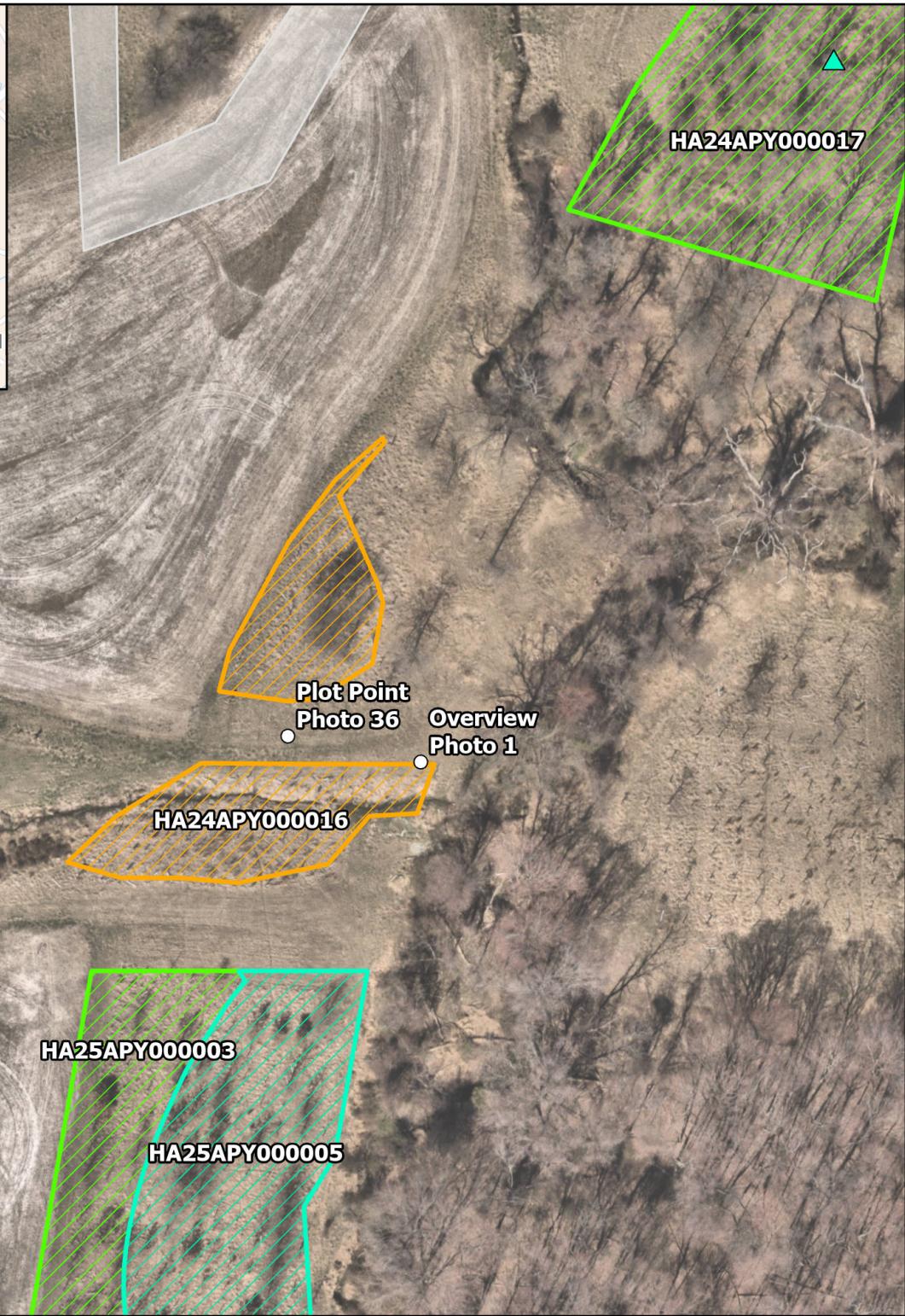
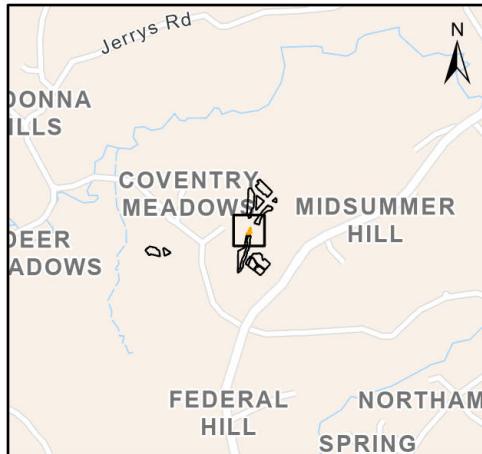
Stephen Graefe Property, Site A1, HA25APY000003



Plot Point Photo 4: Overview photo facing northeast.



Plot Point 8: Overview photo facing southwest.



BMP Type: Urban Tree Canopy
Total Trees: 37
Trees per Acre: 175
Planted Acres: 0.21
Total IA Credit: 0.10
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site possesses many dead trees due to windthrow and deer browse. Low lying area adjacent to stream. Potential wetland.
Maintenance Requested: Yes
Maintenance Comments: Homeowner has expressed interest in county maintenance to remove tree shelters and stakes. Potential infill/replanting also an option in these areas.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 35 70
 1 inch = 70 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe A2
 Site ID: HA24APY000016
 1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

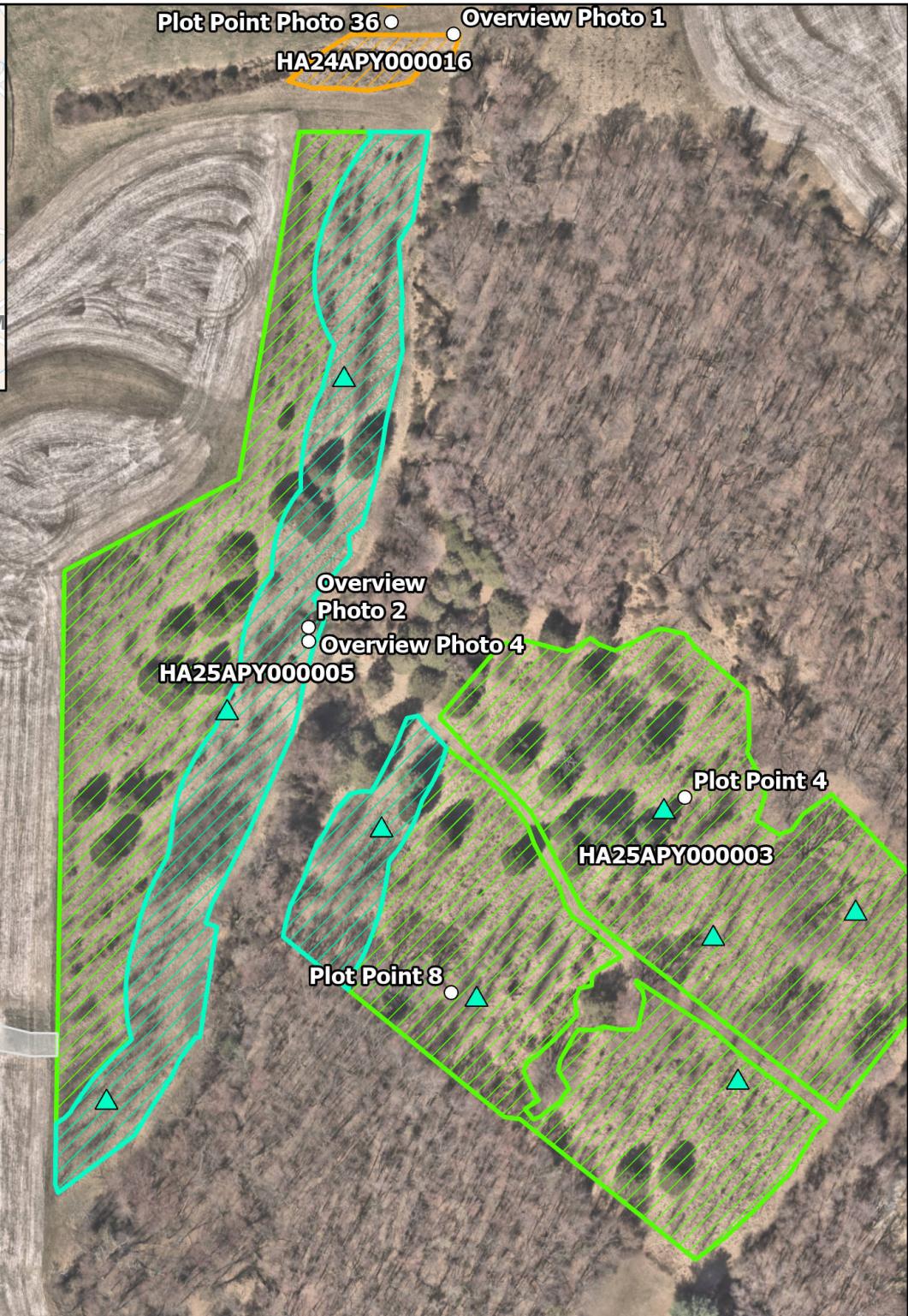
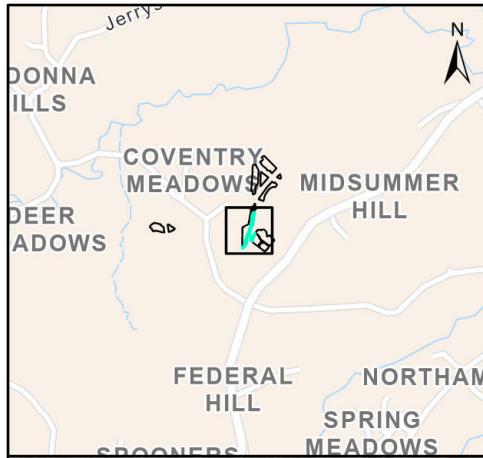
Stephen Graefe Property, Site A2, HA24APY000016



Photo 1: Overview photo facing west.



Plot Point Photo 36: Overview photo facing north. (Plot point was dropped during post-processing due to site boundary revisions and low survival)



BMP Type: Riparian Forest Planting
Total Trees: 350
Trees per Acre: 190
Planted Acres: 1.84
Total IA Credit: 2.77
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Site is doing well and was clearly well maintained for many years. Trees could benefit from shelter as they are now fully established. Part of site could be used as riparian buffer planting
Maintenance Requested: Yes
Maintenance Comments: Homeowner has expressed interest in county maintenance to remove tree shelters and stakes. Invasive removal with brush hog needed throughout site
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 75 150
 ft
 1 inch = 150 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe A3
Site ID: HA25APY00005
1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Stephen Graefe Property, Site A3, HA25APY000005



Photo 2: Overview photo facing west.



Photo 4: Overview photo facing southwest.



BMP Type: Forest Planting
Total Trees: 290
Trees per Acre: 120
Planted Acres: 2.42
Total IA Credit: 2.66
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Site is in fair condition overall, with low survival sporadically and patches of heavy invasives. Steep slopes across the site. Many infill opportunities. High deer activity.
Maintenance Requested: Yes
Maintenance Comments: Use hand tools and herbicide for bittersweet, multiflora rose, and autumn olive. Regular shelter and planting pit maintenance.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- Plot Point
- Photo Point

0 100 200
 1 inch = 200 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe B
Site ID: HA24APY000017
1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

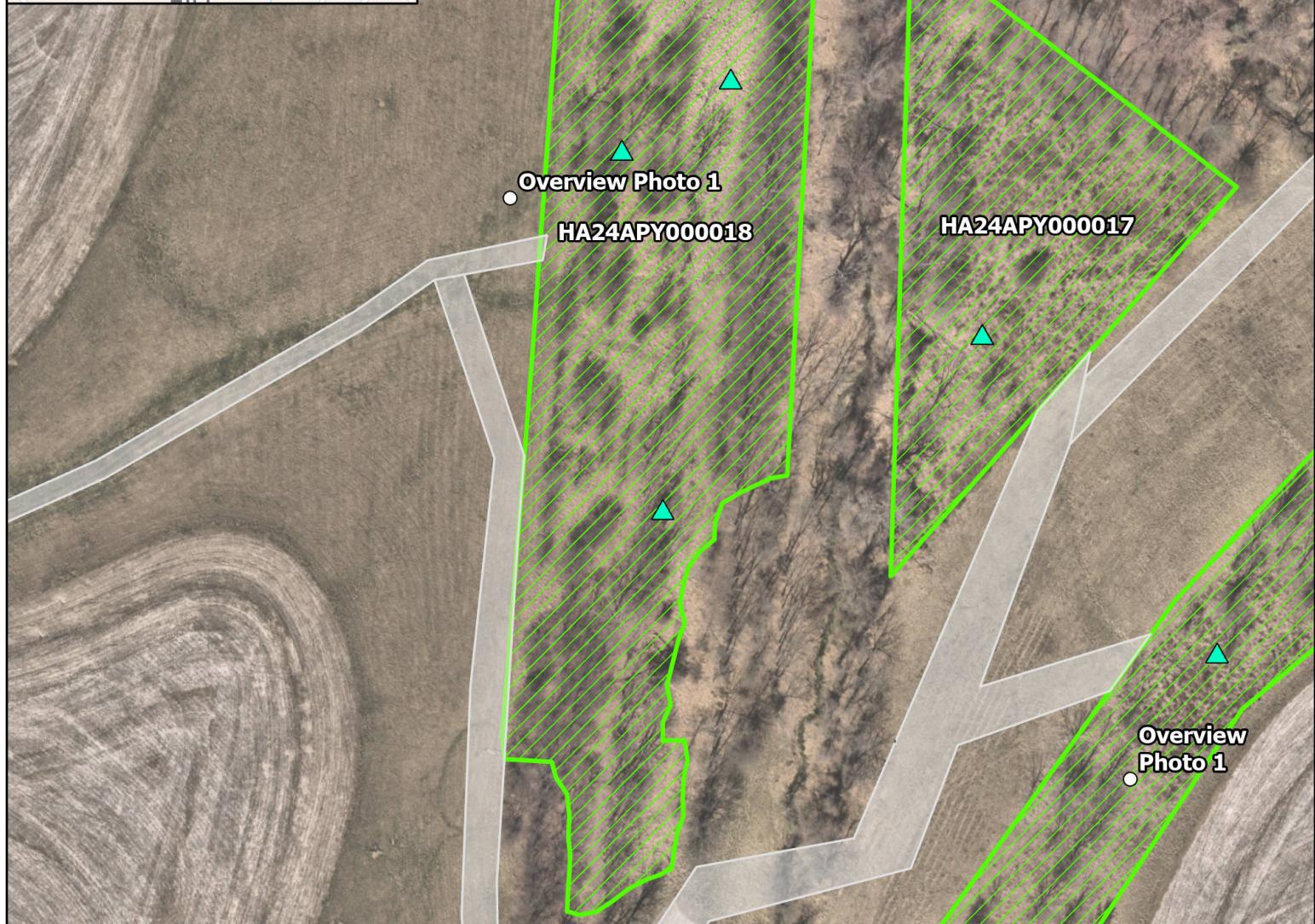
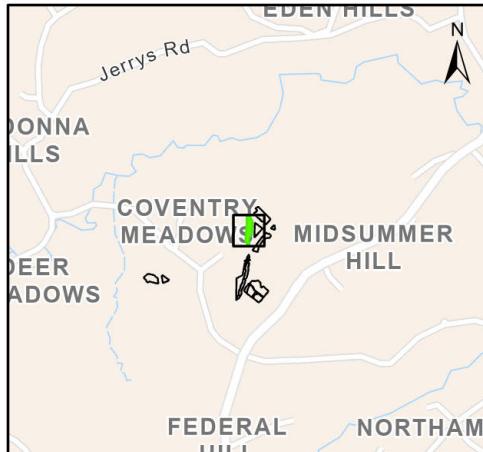
Stephen Graefe Property, Site B, HA24APY000017



Photo 1: Overview photo facing north.



Photo 8: Overview photo facing south.



BMP Type: Forest Planting
Total Trees: 273
Trees per Acre: 120
Planted Acres: 2.28
Total IA Credit: 2.50
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Site is in good condition overall, but experiences low survival in many areas. Part of the site is infill between older plantings, many of which died. Adjacent to intermittent stream, may experience saturation after rain events, site is relatively flat.
Maintenance Requested: Yes
Maintenance Comments: Hand tools and herbicide for bittersweet and multiflora rose, shelter and planting pit maintenance, could replant gaps where trees died. Recommend replanting with floodplain species if additional planting is desired.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe C
Site ID: HA24APY000018
1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

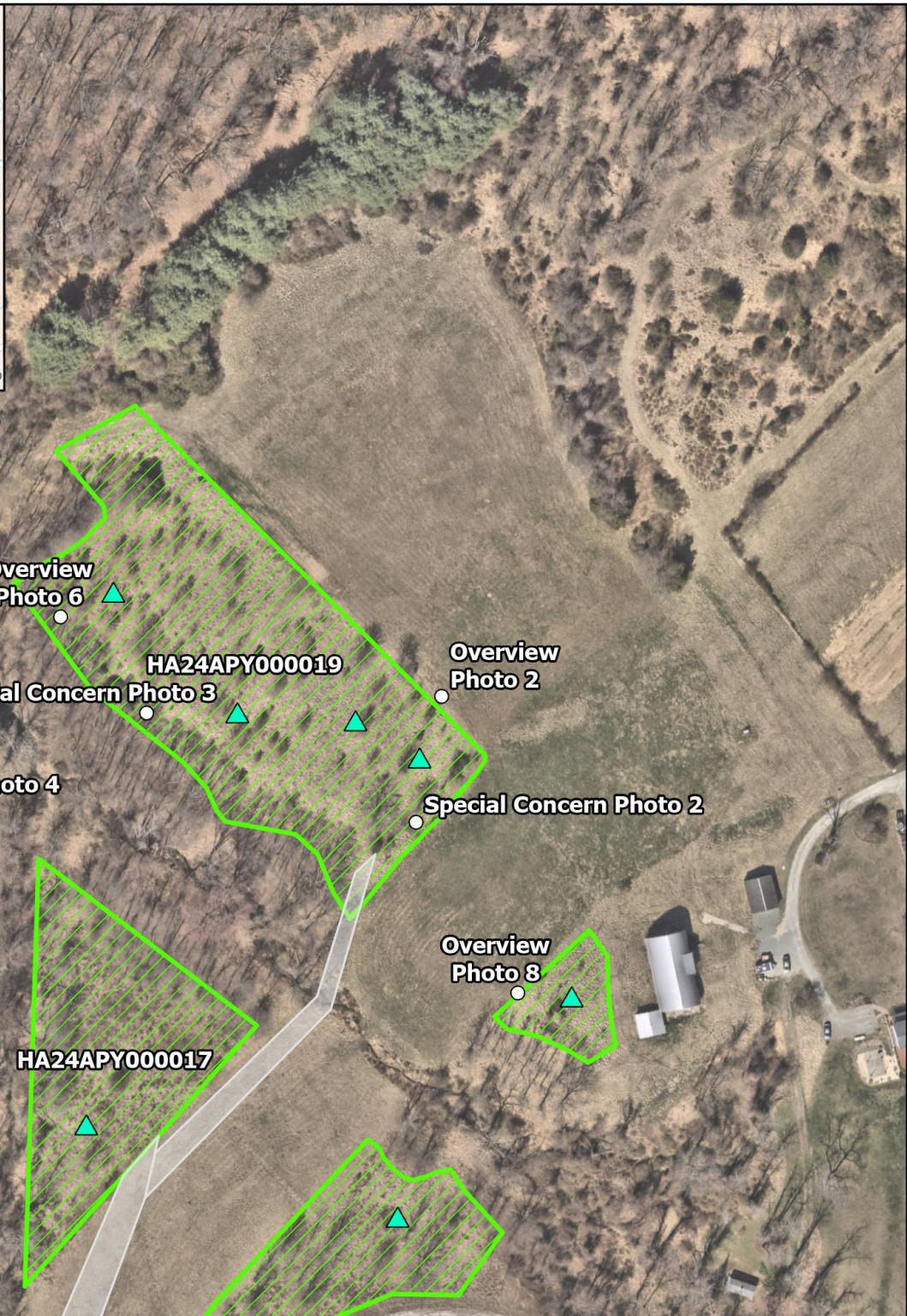
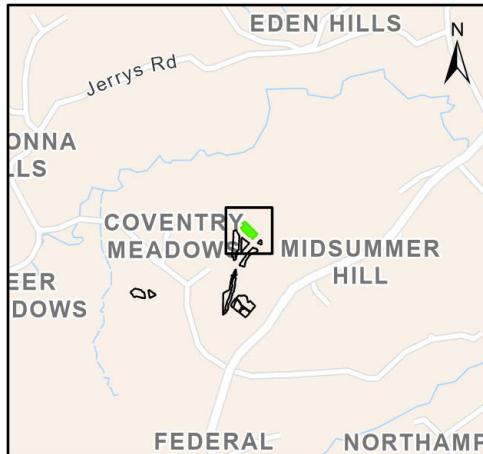
Stephen Graefe Property, Site C, HA24APY000018



Photo 1: Overview photo facing south.



Photo 4: Overview photo facing south.



BMP Type: Forest Planting
Total Trees: 319
Trees per Acre: 160
Planted Acres: 2.00
Total IA Credit: 2.20
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged

General Comments: Site is generally in good condition and is establishing. Trees average 1-2" DBH and 8-12' tall. Low density in some areas; gaps exist where trees died (could infill). Site is bushhogged semi-regularly. High deer and groundhog activity.

Maintenance Requested: Yes

Maintenance Comments: Planting pit maintenance, herbicide for large multiflora rose thickets.

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 75 150
 1 inch = 150 feet



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Stephen Graefe D
Site ID: HA24APY000019
 1954 Mount Horeb Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Stephen Graefe Property, Site D, HA24APY000019



Photo 2: Overview photo facing southwest.



Photo 6: Overview photo facing east.

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

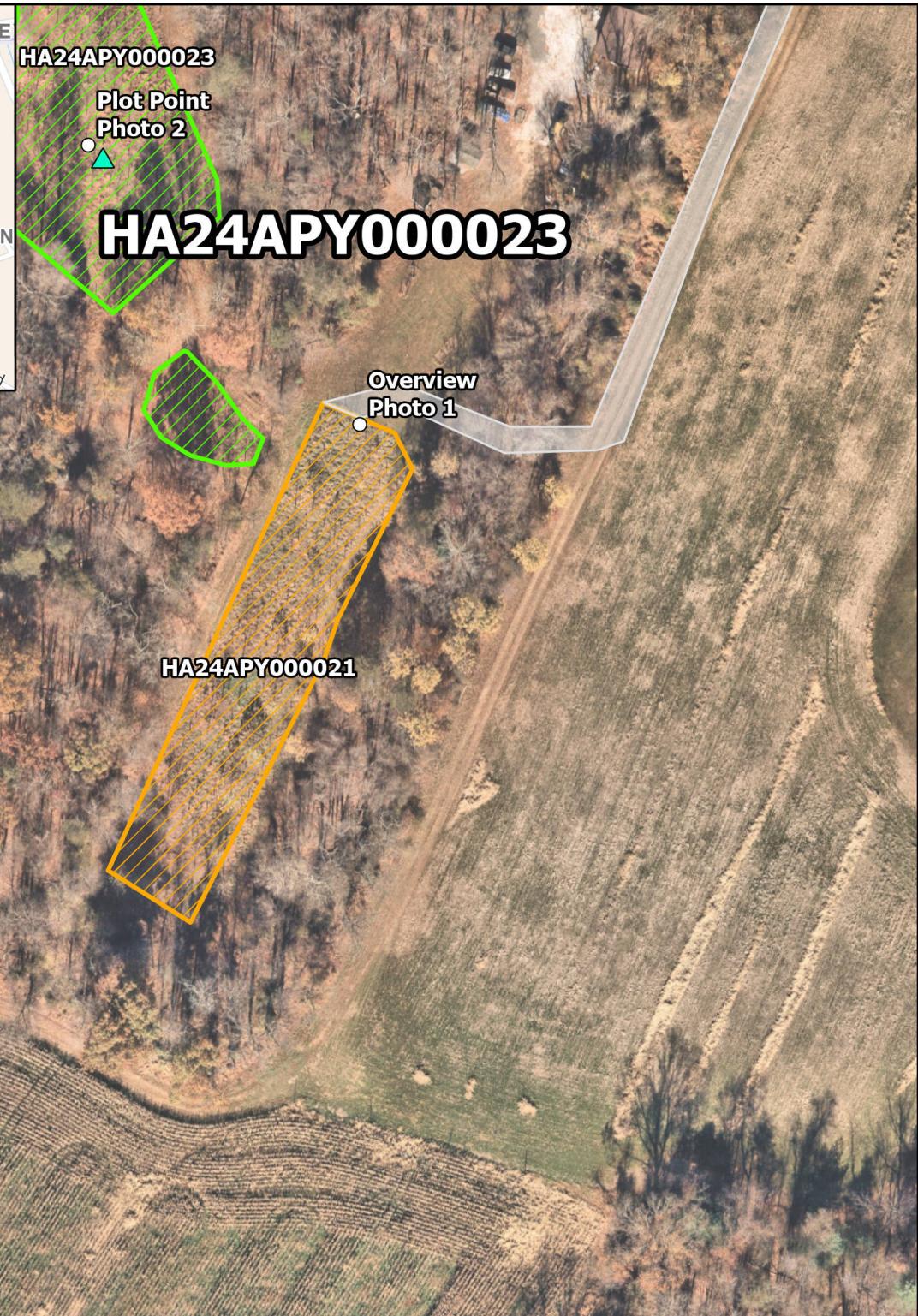
Stephen Graefe Property, Site D, HA24APY000019



Special Concern Photo 2: Deer buck rub.



Special Concern Photo 3: Groundhog hole.



BMP Type: Urban Tree Canopy
Total Trees: 176
Trees per Acre: 383
Planted Acres: 0.46
Total IA Credit: 0.49
Site Condition: Functioning
Inspection Method: Total Site Count
Understory: Unmanaged
General Comments: Site is well maintained and in good condition, minor invasive removal needed
Maintenance Requested: Yes
Maintenance Comments: Removal of shelters needed, removal of invasive vines and mowing of herbaceous layer
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet

Alliance for the Chesapeake Bay
Spring 2025 Planting Inspections

Steve Tracy A
Site ID: HA24APY000021
Long Corner Rd

August 2025

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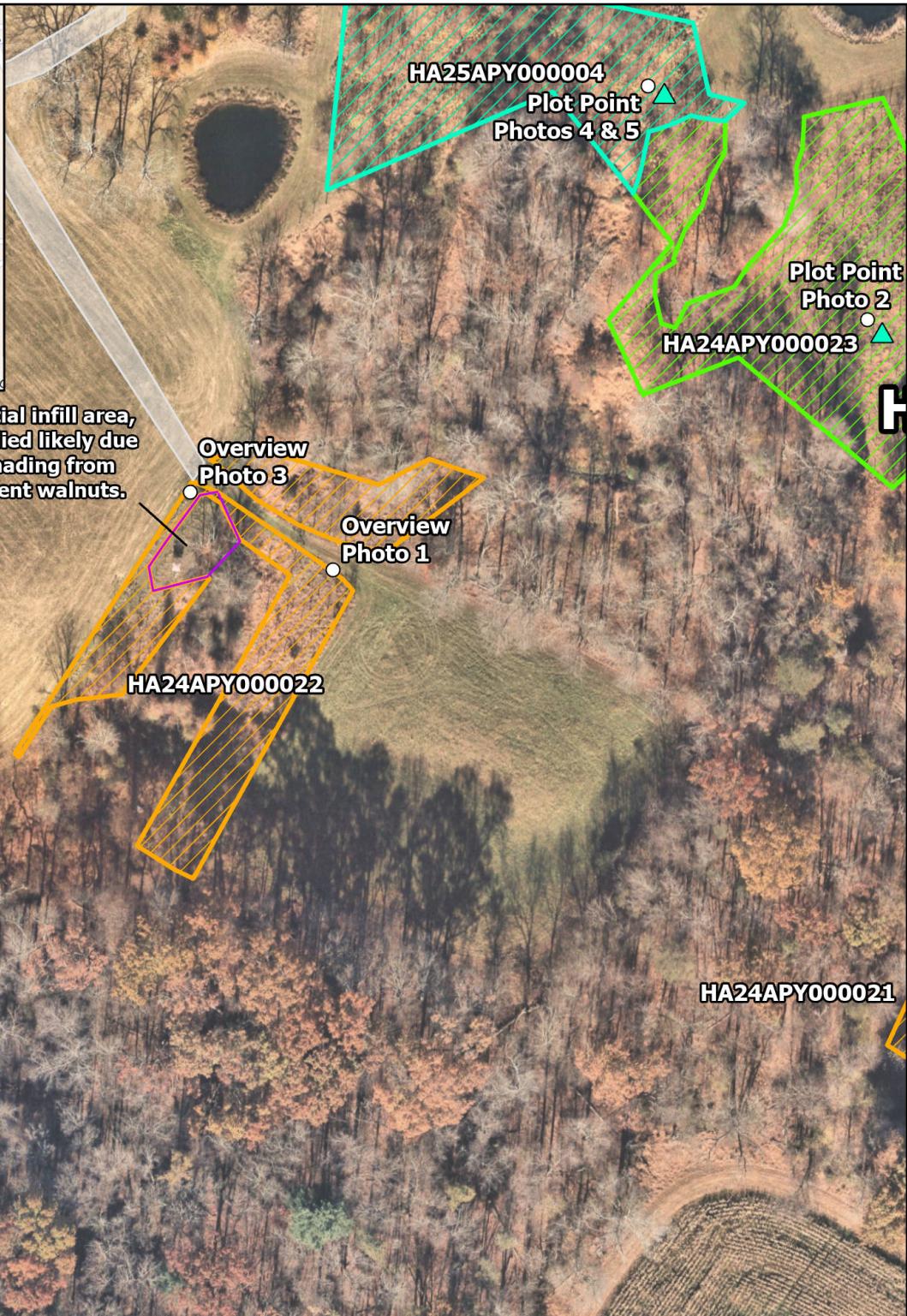
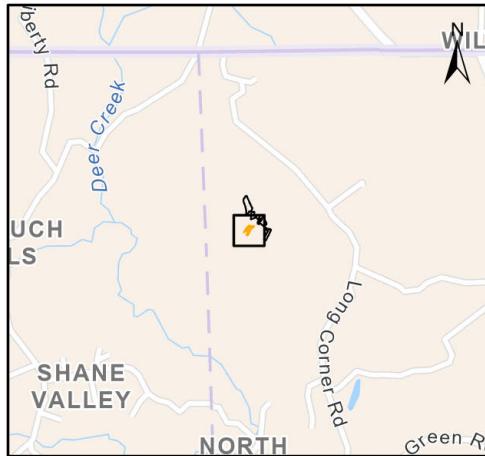


Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

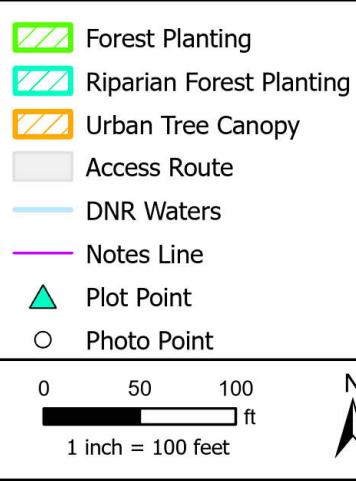
Steve Tracy Property, Site A, HA24APY000021



Photo 1: Overview photo facing south.



<p>BMP Type: Urban Tree Canopy Total Trees: 106 Trees per Acre: 258 Planted Acres: 0.41 Total IA Credit: 0.30 Site Condition: Functioning Inspection Method: Total Site Count Understory: Unmanaged General Comments: Site is well maintained and in good condition overall. Maintenance Requested: Yes Maintenance Comments: Shelter removal and minor invasive vine removal, herbaceous layer would benefit from mowing Owner Type: Homeowner</p>



Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Steve Tracy B
 Site ID: HA24APY000022
 Long Corner Rd

August 2025

Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

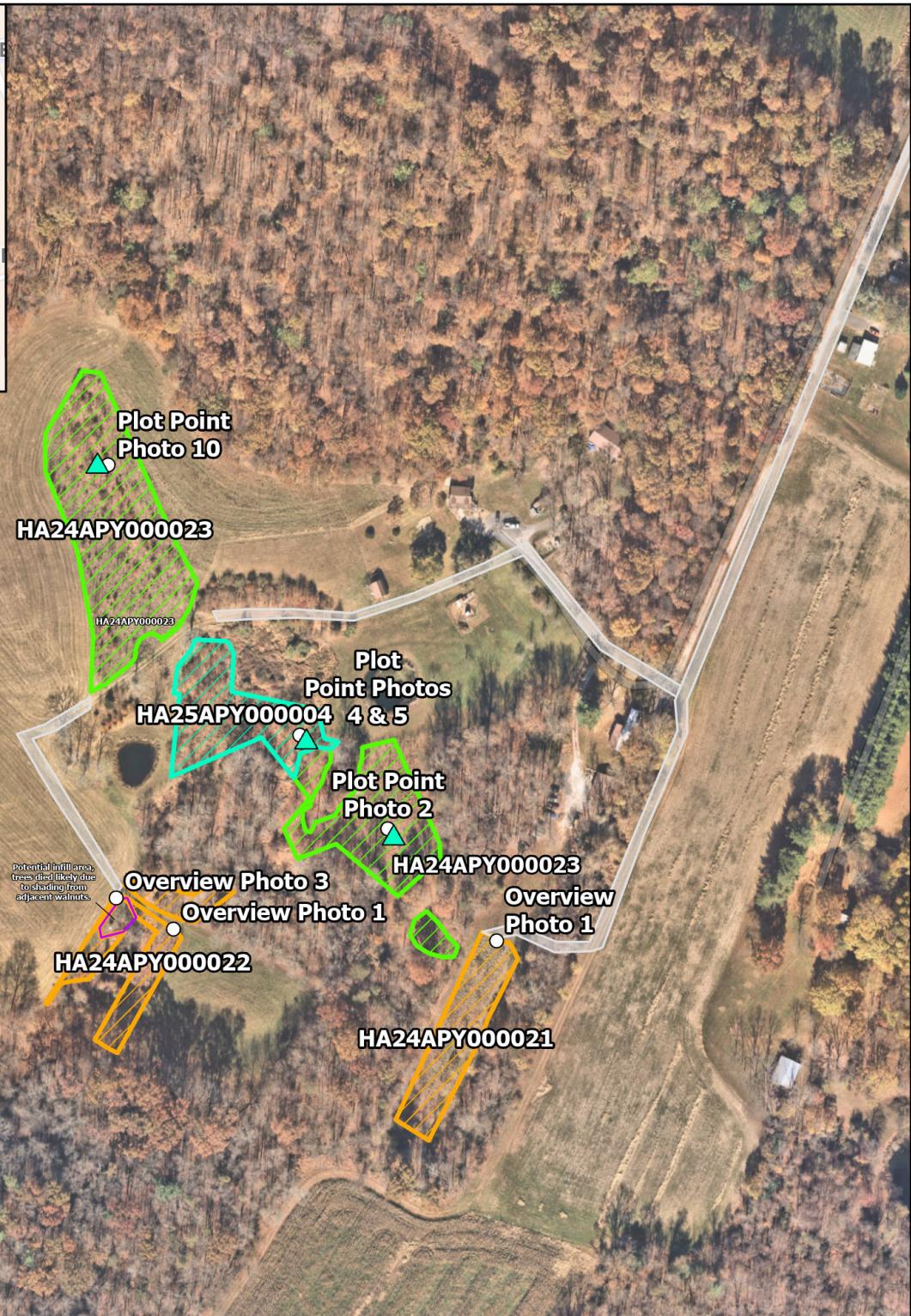
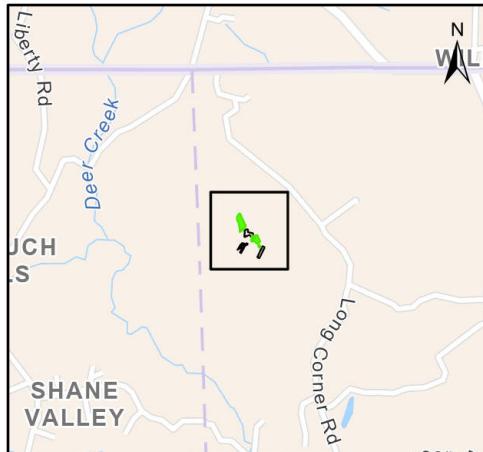
Steve Tracy Property, Site B, HA24APY000022



Photo 1: Overview photo facing south.



Photo 3: Overview photo facing west.



BMP Type: Forest Planting
Total Trees: 740
Trees per Acre: 360
Planted Acres: 2.06
Total IA Credit: 2.26
Site Condition: Functioning
Inspection Method: 0.1 Acre Plots
Understory: Unmanaged
General Comments: Overall good condition and well maintained. Trees surviving well. Portion of site was split out and used for riparian buffer planting (Steve Tracy D).
Maintenance Requested: Yes
Maintenance Comments: Shelter removal needed and minor herbaceous clearing using manual removal of multiflora rose
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 125 250
 1 inch = 250 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Steve Tracy C
 Site ID: HA24APY000023
 Long Corner Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

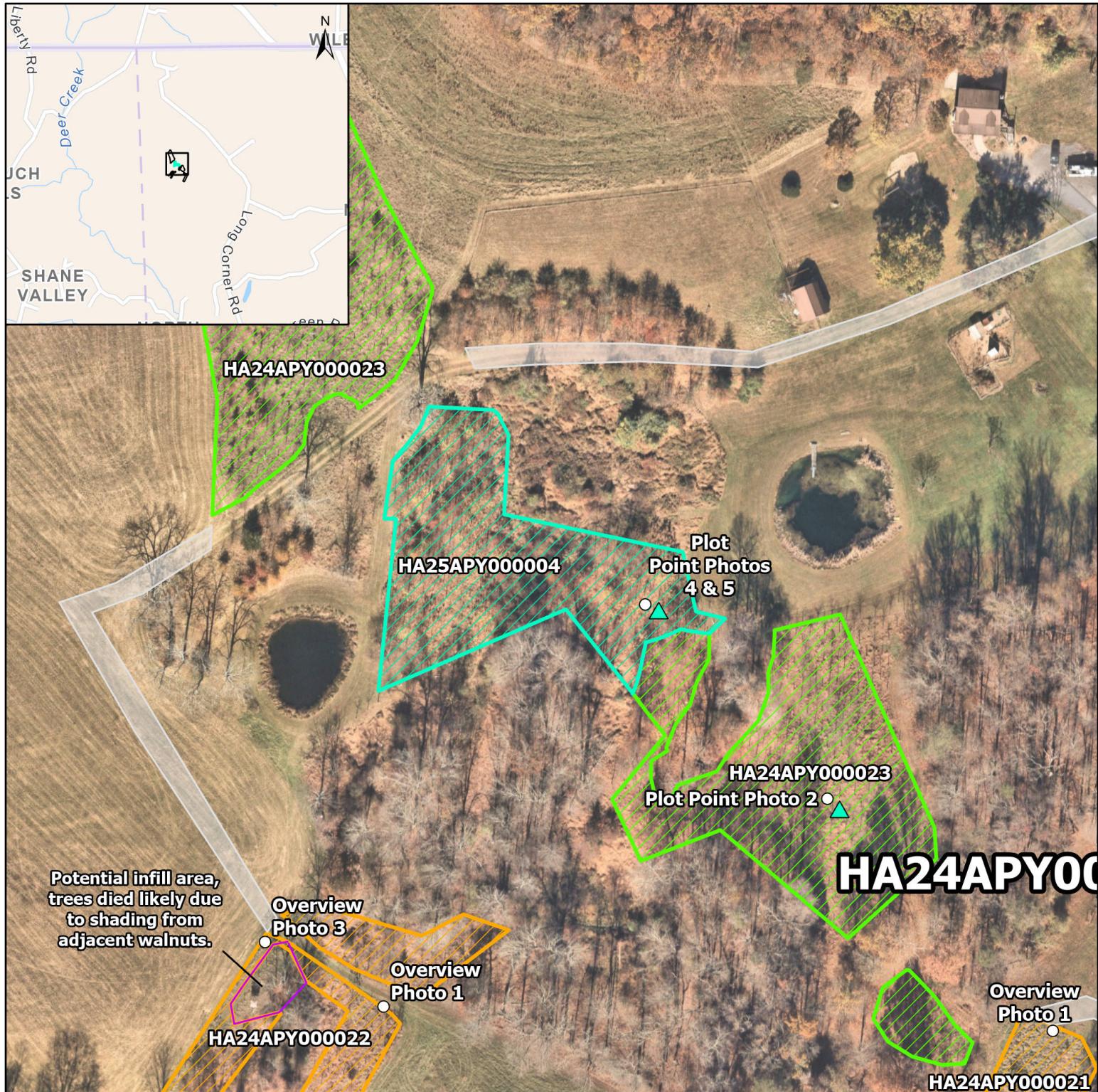
Steve Tracy Property, Site C, HA24APY000023



Plot Photo 2: Overview photo facing north.



Plot Point Photo 10: Overview photo facing south.



BMP Type: Riparian Forest Planting
Total Trees: 214

Trees per Acre: 360

Planted Acres: 0.59

Total IA Credit: 0.89

Site Condition: Functioning

Inspection Method: 0.1 Acre Plots

Understory: Unmanaged

General Comments: Overall good condition and well maintained. Trees surviving well. Site was originally included in Steven Tracy C, but was split out to be used for riparian buffer planting.

Maintenance Requested: Yes

Maintenance Comments: Shelter removal needed and minor herbaceous clearing using manual removal of multiflora rose

Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet

**Alliance for the Chesapeake Bay
 Spring 2025 Planting Inspections**

Steve Tracy D
Site ID: HA25APY000004
Long Corner Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

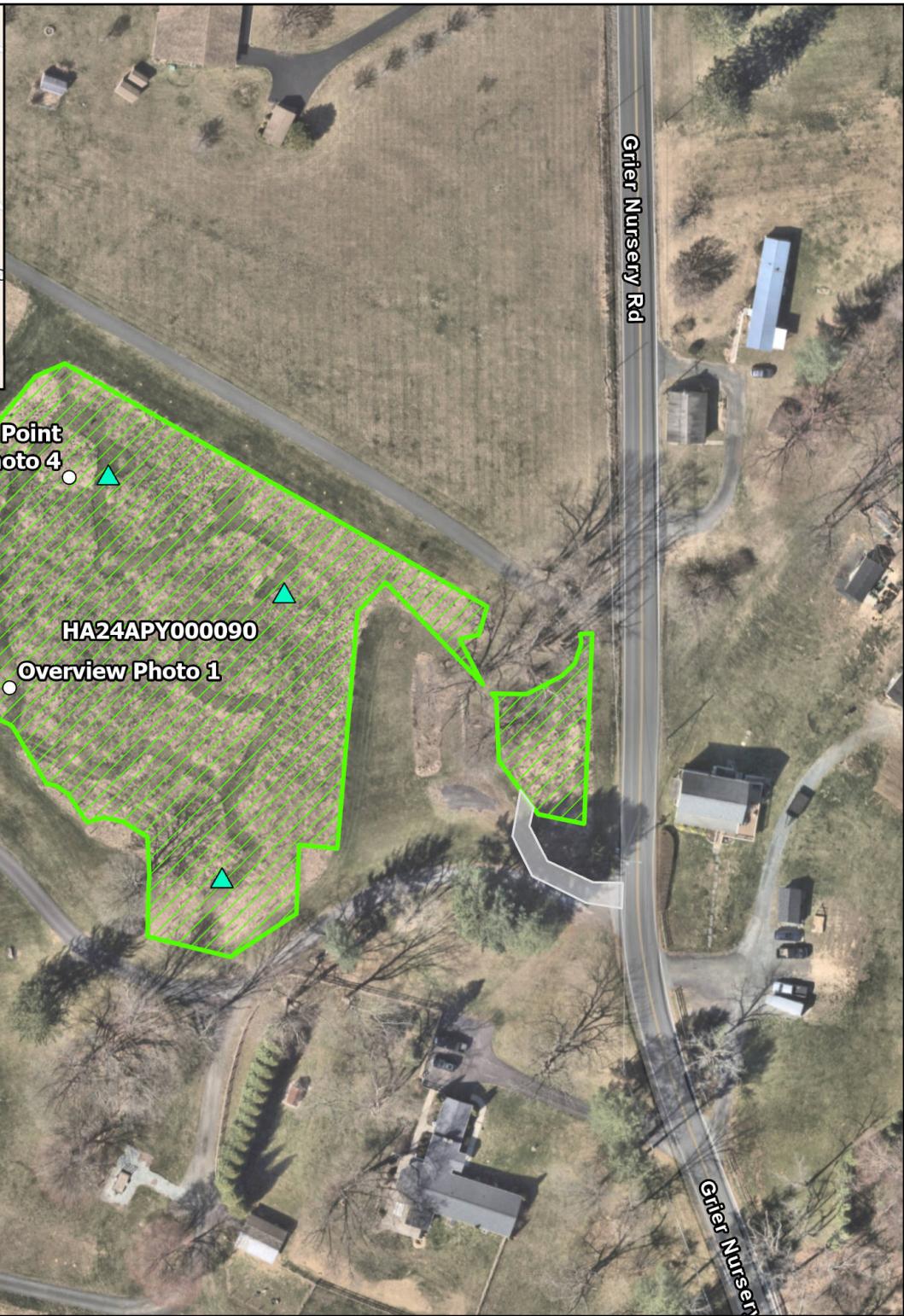
Steve Tracy Property, Site D, HA25APY000004



Plot Point Photo 4: Interior of site.



Plot Point Photo 5: Overview photo facing northeast.



BMP Type: Forest Planting
Total Trees: 409
Trees per Acre: 260
Planted Acres: 1.57
Total IA Credit: 1.73
Site Condition: Functioning
Inspection Method: 0.05 Acre Plots
Understory: Unmanaged
General Comments: Site is in good condition, and well maintained. Owner expressed interest in county assistance with shelter removal.
Maintenance Requested: Yes
Maintenance Comments: Shelters and stakes can be removed from trees, minor manual removal of multiflora rose and bittersweet as well as herbicide treatment.
Owner Type: Homeowner

- Forest Planting
- Riparian Forest Planting
- Urban Tree Canopy
- Access Route
- DNR Waters
- Notes Line
- ▲ Plot Point
- Photo Point

0 50 100
 1 inch = 100 feet

Alliance for the Chesapeake Bay Spring 2025 Planting Inspections

Zack Schmitt

Site ID: HA24APY000090

3616 Grier Nursery Rd

August 2025

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Harford County Spring 2025 Alliance for the Chesapeake Bay Tree Planting Site Inspection Memo
Photo Log

Zack Schmitt, HA24APY000090



Photo 1: Overview photo facing east.



Plot Point Photo 4: Interior of site facing west.

Appendix B – Plot Point Table

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000006	Charles Dougherty A	Plot 1	0.1 ac	20	200	5	30	20	Trees average 0.5-4" DBH and 5-12' tall. Species include American plum, American chestnut. Invasive species include garlic pennycress, Bradford pear, wineberry, white mulberry.
HA24APY000006	Charles Dougherty A	Plot 2	0.1 ac	23	230	2	50	20	Trees average 2-8" DBH and 12-20' tall. Species include black locust, tulip poplar, and black gum. Invasive species include garlic pennycress, multiflora rose, wineberry, white mulberry.
HA24APY000006	Charles Dougherty A	Plot 3	0.1 ac	26	260	20	60	40	Trees average 2-4" DBH and 10-14' tall. Species include tulip poplar, American sycamore, musclewood, redbud, persimmon, red osier dogwood, American chestnut. Invasive species include wineberry, multiflora rose, Japanese stiltgrass, garlic pennycress. Goldenrod also present.
AVERAGE				23	230	9	47	27	
HA24APY000007	Charles Dougherty B	Plot 1	0.05 ac	21	420	40	0	15	Trees average 2-6" DBH and 12-25' tall. Species include river birch, eastern red cedar, American plum, box elder, persimmon. Invasive species include wineberry, multiflora rose, thistle sp.
HA24APY000007	Charles Dougherty B	Plot 2	0.05 ac	13	260	10	85	35	Trees average 2-4" DBH and 10-12' tall. Species include American plum, black cherry, pin oak, eastern red cedar, river birch. Invasive species include Japanese stiltgrass, multiflora rose, wineberry.
HA24APY000007	Charles Dougherty B	Plot 3	0.05 ac	9	180	0	85	3	Trees average 2-4" DBH and 10-14' tall. Species include American plum, river birch, black cherry, white oak, persimmon, eastern red cedar, red osier dogwood. Invasive species include Japanese stiltgrass, multiflora rose.
HA24APY000007	Charles Dougherty B*	Plot 4	0.05 ac	25	500	10	0	5	Trees average 1-3" DBH and 6-12' tall. Species include black locust, swamp white oak, white oak, red maple, crabapple. Invasive species include multiflora rose.
HA24APY000007	Charles Dougherty B	Plot 5	0.05 ac	27	540	10	15	50	Trees average 2-4" and 12-14' tall. Species include American plum, pin oak, river birch, redbud, sycamore, eastern red cedar, sweet gum, American holly. Invasive species include Japanese stiltgrass, paulownia, multiflora rose. Sycamore & sweetgum regeneration included in total count.
AVERAGE				19	380	14	37	22	
HA24APY000008	Charles Dougherty C	Plot 1	0.05 ac	15	300	98	0	10	Extremely high regeneration of tulip poplar and green ash, and some sycamore regeneration. Planted species include eastern red cedar, mixed oaks, River birch, redbud and plum.
HA24APY000008	Charles Dougherty C	Plot 2	0.05 ac	15	300	95	0	0	Trees average 1-2" DBH and 8-15' tall. Species include mixed oaks, river birch, plum. Extremely high regeneration of green ash, tulip poplar.
HA24APY000008	Charles Dougherty C	Plot 3	0.05 ac	11	220	95	0	0	Trees average 0.5-1" DBH and 6-8' tall. Species include mixed oaks, river birch and plum. Extremely high amounts of green ash regeneration in between planted trees, lower levels of tulip poplar regeneration also present, planted trees overall in good condition.
HA24APY000008	Charles Dougherty C	Plot 4	0.05 ac	14	280	90	0	0	Trees average 0.5-1" DBH and 6-8' tall. Species include mixed oaks, American plum, river birch. Extremely high amounts of green regeneration including green ash, sycamore and tulip poplar.
AVERAGE				14	275	95	0	3	
HA24APY000009	Charles Dougherty D	Plot 1	0.05 ac	182	3640	80	40	30	Trees average 1-2" DBH and 12-16' tall. Species include tulip poplar, green ash, box elder, river birch, chestnut oak, white oak, American sycamore. Invasive species include Japanese stiltgrass, multiflora rose. Regeneration includes American holly, green ash, tulip poplar, and box elder.

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000009	Charles Dougherty D	Plot 2	0.05 ac	58	1160	30	35	40	Trees average 1-2" DBH and 6-10' tall. Species include eastern red cedar, tulip poplar, green ash, American holly, white pine, black locust, southern arrowwood. Invasive species include multiflora rose, Japanese stiltgrass, english ivy. Regeneration includes eastern red cedar, Virginia pine, poplar, ash.
HA24APY000009	Charles Dougherty D	Plot 3	0.05 ac	55	1100	40	20	15	Trees average 1-2" DBH and 7-10' tall. Species include eastern red cedar, Virginia pine, white pine, tulip poplar, green ash, American holly. Invasive species include japanese honeysuckle, multiflora rose, Japanese stiltgrass. Regeneration includes Virginia pine, cedar, poplar ash. No shelters present.
HA24APY000009	Charles Dougherty D	Plot 4	0.05 ac	112	2240	90	5	15	Trees average 1-2" DBH and 8-10' tall. Species include eastern red cedar, tulip poplar, green ash, American holly. Invasive species include oriental bittersweet, Japanese stiltgrass, multiflora rose. Regeneration includes green ash, poplar, eastern red cedar, Virginia pine, American holly.
HA24APY000009	Charles Dougherty D	Plot 5	0.05 ac	107	2140	75	35	3	Trees average 1-2" DBH and 6-10' tall. Species include eastern red cedar, river birch, tulip poplar, American plum, black cherry, swamp white oak, green ash. Invasive species include multiflora rose, Japanese stiltgrass. Very high ash and poplar regeneration.
AVERAGE				103	2056	63	27	21	
HA24APY000010	Charles Dougherty E	Plot 1	0.1 ac	28	280	20	85	15	Trees average 1-3" DBH and 8-12' tall. Species include tulip poplar, sawtooth oak, sweetgum, swamp white oak, eastern red cedar, persimmon. Invasive species include Japanese stiltgrass, multiflora rose, Japanese honeysuckle. Regeneration of sweetgum and tulip poplar present.
HA24APY000010	Charles Dougherty E	Plot 2	0.1 ac	37	370	30	75	20	Trees average 2-4" DBH and 10-12' tall. Tree species include sawtooth oak, tulip poplar, black cherry, sweetgum, persimmon, swamp white oak. Invasive species include Japanese honeysuckle Japanese stiltgrass, multiflora rose. Native regeneration of poplar, persimmon and sweetgum present.
HA24APY000010	Charles Dougherty E	Plot 3	0.1 ac	15	150	5	85	10	Trees average 1-3" DBH and 8-10' tall. Tree species include eastern red cedar, sawtooth oak, swamp white oak, black cherry. Invasive species include Japanese stiltgrass, multiflora rose, Japanese honeysuckle, and Bradford pear. Regeneration of cedar, poplar, sweetgum present.
HA24APY000010	Charles Dougherty E	Plot 4	0.1 ac	25	250	10	75	30	Trees average 2-6 DBH and 12-16' tall. Tree species include swamp white oak, sawtooth oak, American plum, persimmon, tulip poplar. Invasive species include Japanese stiltgrass, Japanese honeysuckle, multiflora rose, wineberry, Bradford pear. Sawtooth oak deliberately planted.
AVERAGE				26	263	16	80	19	
HA24APY000042	Christopher and Suzanne Golley A	Plot 1	0.05 ac	8	160	0	0	10	Trees average 0.5" DBH and 6-8' tall. Species include mixed oaks.
HA24APY000042	Christopher and Suzanne Golley A	Plot 2	0.05 ac	13	260	0	0	15	Trees average tree 0.5-1" DBH and 6-8' tall. Species include mixed oaks. Invasive species include multiflora rose growing up adjacent to tree shelters.
HA24APY000042	Christopher and Suzanne Golley A	Plot 3	0.05 ac	2	40	0	0	20	High mortality rate, Japanese honeysuckle growing up many shelters, few living trees.
HA24APY000042	Christopher and Suzanne Golley A	Plot 4	0.05 ac	10	200	0	0	15	Trees average 0.5" DBH and 6-7' tall. Species include mixed oaks. Multiple dead trees.
AVERAGE				8	165	0	0	15	
HA24APY000101	Harford Friends School	Plo 1	0.05 ac	11	220	0	0	2	Trees average less than 0.5" DBH and 5-6' tall. Tree species include sycamore, American plum, and white oak. Plantings still young, some mortality noted within plot.
HA24APY000101	Harford Friends School	Plo 2	0.05 ac	4	80	2	0	0	Tree species alive include sycamore and red maple. High mortality due to wind throw and insect damage.

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000101	Harford Friends School	Plo 3	0.05 ac	7	140	0	2	5	Trees average 3-4' tall. Tree species alive include white oak and red maple. Invasive species present include beefsteak. High mortality.
AVERAGE				7	147	1	1	2	
HA24APY00013	Jason Turner	Plot 1	0.05 ac	15	300	2	0	0	Trees average 3-5" DBH and 20-35' tall. Species include river birch, sycamore and redbud. Well maintained.
HA24APY00013	Jason Turner	Plot 2	0.05 ac	12	240	5	0	0	Trees average 2-3" DBH and 15-20' tall. Species include red maple, birch, and redbud regeneration. Well maintained, clear understory.
HA24APY00013	Jason Turner	Plot 3	0.05 ac	13	260	0	0	2	Trees average 0.5-2" DBH and 8-12' tall. Species include redbuds, red maple, river birch. Invasive species include multiflora rose. Well maintained.
AVERAGE				13	267	2	0	1	
HA25APY00006	Jim Garrison A	Plot 1	0.1 ac	21	210	1	10	2	Trees average 0.5-4" DBH and 6-20' tall. Tree species include tulip poplar, pin oak, black locust, American plum, American elm. Invasive species include garlic mustard, shepherd's purse & beefsteak.
HA25APY00006	Jim Garrison A	Plot 2	0.1 ac	19	190	5	45	0	Trees average 0.5-4" DBH and 6-20' tall. Tree species include redbud, black locust, black walnut, American plum, northern red oak. Invasive species include shepherd's purse & garlic mustard.
HA25APY00006	Jim Garrison A	Plot 3	0.1 ac	23	230	0	15	2	Trees average 1" DBH and 6-12' height. Tree species include blackhaw, pin oak, American plum, red maple, persimmon. Invasives include shepherd's purse.
HA25APY00006	Jim Garrison A	Plot 4	0.1 ac	24	240	0	5	5	Trees average 1-5" DBH and 6-20' tall. Tree species include tulip poplar, black locust, red maple, white oak, blackhaw. Invasive species include oriental bittersweet and beefsteak. Some deer browse at top of tubes.
AVERAGE				22	218	2	19	2	
HA24APY00015	Matthew C. Rothwell	Plot 1	0.05 ac	13	260	0	50	35	Trees average 2-4" DBH and 9-12' tall. Species include white oak, river birch, American plum, pin oak. Invasive species include multiflora rose, bittersweet, Japanese honeysuckle. Bittersweet in multiple tree shelters.
HA24APY00015	Matthew C. Rothwell	Plot 2	0.05 ac	15	300	0	20	15	Trees average 2-6" DBH and 12-20' tall. Species include river birch, swamp white oak, persimmon. Invasive species include multiflora rose, violet, Japanese stiltgrass bittersweet in some shelters.
HA24APY00015	Matthew C. Rothwell	Plot 3	0.05 ac	18	360	0	55	40	Trees average 2-4" DBH and 12-20' tall. Species include American sycamore, river birch, persimmon, swamp white oak. Invasive species include multiflora rose, Japanese stiltgrass, bittersweet.
AVERAGE				15	307	0	42	30	
HA24APY00091	Michael and Elizabeth Faro	Plot 1	0.05 ac	10	200	0	5	5	Trees average 1" DBH and 6-12' tall. Tree species include American plum, river birch, Northern red oak, hazelnut, redbud, red maple. Invasive species include multiflora rose, oriental bittersweet, garlic mustard.
HA24APY00091	Michael and Elizabeth Faro	Plot 2	0.05 ac	7	140	0	5	5	Trees average 1" DBH and 6-12' tall. Tree species include red oak, American plum, white oak, black locust, river birch. Invasive species include garlic mustard and oriental bittersweet.
HA24APY00091	Michael and Elizabeth Faro	Plot 3	0.05 ac	7	140	0	0	0	Trees average 1-3" DBH and 6-12' tall. Tree species include hazelnut, redbud, white oak, red oak, tulip popular, black locust.
AVERAGE				8	160	0	3	3	
HA24APY00080	Peter Jay B	Plot 1	0.05 ac	8	160	0	5	5	Trees average 6' tall. Tree species include redbud, sycamore, hackberry, southern arrowwood, red osier dogwood. Invasive species include beefsteak, ground ivy, and multiflora rose.
HA24APY00080	Peter Jay B	Plot 2	0.05 ac	8	160	0	5	10	Trees average 6-8' tall. Tree species include redbud, sycamore, hackberry, willow oak, and red osier dogwood. Invasive species include beefsteak, ground ivy, multiflora rose.

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000080	Peter Jay B	Plot 3	0.05 ac	9	180	0	5	10	Trees average 6-10' tall. Tree species include redbud, sycamore, red osier dogwood, hackberry. Invasive species include Multiflora rose, beefsteak. High mortality.
HA24APY000080	Peter Jay B	Plot 4	0.05 ac	4	80	0	25	30	Trees average 5-10' tall. Tree species include redbud, southern arrowwood, hackberry. Invasive species include garlic mustard, ground ivy, beefsteak, multiflora rose, wine berry, privet. Some existing mature black walnut trees and spicebush in understory within plot.
HA24APY000080	Peter Jay B	Plot 5	0.05 ac	4	80	0	40	20	Trees average 6' tall. Tree species include sycamore, southern arrowwood. Invasive species include Japanese stiltgrass, ground ivy, beefsteak, multiflora rose, and Chinese privet. Existing mature trees in plot are tulip poplar and black walnut.
HA24APY000080	Peter Jay B	Plot 6	0.05 ac	6	120	0	90	10	Trees average 4-6' tall. Tree species include sycamore, willow oak, red osier dogwood. Invasive species include Japanese stiltgrass, ground ivy, multiflora rose. Plot sits low in landscape with wetter conditions.
AVERAGE				7	130	0	28	14	
HA24APY000081	Peter Jay C	Plot 1	0.1 ac	27	270	0	0	15	Trees average 1" DBH and 5-8' tall. Some trees are 2" DBH and 10-12' tall. Invasive species include Japanese honeysuckle, Chinese privet and multiflora rose.
HA24APY000081	Peter Jay C	Plot 2	0.1 ac	21	210	0	0	15	Trees average 1" DBH and 5-8' tall. Some trees are 2" DBH and 12' tall. Tree species include redbud, tulip poplar, pin oak.
HA24APY000081	Peter Jay C	Plot 3	0.1 ac	23	230	0	0	10	Trees average 1" DBH and 5-8' tall. Some trees are 2" DBH and 10-12' tall. Invasive species include Japanese honeysuckle, Chinese privet and multiflora rose.
HA24APY000081	Peter Jay C	Plot 4	0.1 ac	15	150	0	0	15	Trees average 1" DBH and 6-8' tall. Tree species include white oaks. Invasive species include multiflora rose & Japanese honeysuckle.
HA24APY000081	Peter Jay C	Plot 5	0.1 ac	18	180	0	0	15	Trees average 6' tall, some are up to 12' tall. Tree species include redbud, tulip poplar, black locust, upland oaks. All are establishing well. Invasive species include Japanese honeysuckle, multiflora rose.
HA24APY000081	Peter Jay C	Plot 6	0.1 ac	17	170	0	0	15	Trees average 1-4" DBH and 6-20' tall. Tree species include pin and white oak, black locust. Invasive species include Japanese honeysuckle & multiflora rose.
HA24APY000081	Peter Jay C	Plot 7	0.1 ac	18	180	0	0	15	Trees average 1-4" DBH and 6-20' tall. Tree species include black locust, white oak & red oak. Invasive species include Japanese honeysuckle & multiflora rose.
HA24APY000081	Peter Jay C	Plot 8	0.1 ac	24	240	0	0	15	Trees average 1" DBH and 5-8' tall. Invasive species include Japanese honeysuckle and multiflora rose.
AVERAGE				20	204	0	0	14	
HA24APY000082	Peter Jay D	Plot 1	0.05 ac	9	180	15	10	2	Trees average 1" DBH and 6-12' tall. Tree species include river birch, redbud, serviceberry, sycamore, red maple. Regeneration of green ash and tulip poplar present.
HA24APY000082	Peter Jay D	Plot 2	0.05 ac	8	160	10	15	0	Trees average 1-2" DBH and 6-12' tall. Species include river birch, sycamore, cottonwood, persimmon, & pin oak. Invasive species include Japanese stiltgrass. Regeneration of green ash & eastern red cedar present.
HA24APY000082	Peter Jay D	Plot 3	0.05 ac	12	240	10	15	0	Trees average 1-2" DBH and 6-12' tall. Species include river birch, sycamore, pin oak. Invasive species include Japanese stiltgrass. Regeneration of green ash present.
HA24APY000082	Peter Jay D	Plot 4	0.05 ac	10	200	10	15	2	Trees average 1-2" DBH and 6-12' tall. Species include persimmon, pin oak, American plum, red maple. Invasive species include Japanese stiltgrass & oriental bittersweet. Regeneration of green ash present.
AVERAGE				10	195	11	14	1	

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000094	Peter Jay E	Plot 1	0.1 ac	28	280	0	0	10	Trees average 1" DBH and 5-8' tall. Tree species include red osier dogwood, American plum, chestnut oak, pin oak, tulip poplar. Invasive species include multiflora rose and Japanese honeysuckle.
HA24APY000094	Peter Jay E	Plot 2	0.1 ac	26	260	0	0	20	Trees average 0.5-1" DBH and 5-8' tall. Tree species include tulip poplar, black locust, red osier dogwood, chestnut oak, redbud and American plum.
HA24APY000094	Peter Jay E	Plot 3	0.1 ac	31	310	2	0	25	Trees average 1" DBH and 5-8' tall (some 10'). Tree species include red osier dogwood, tulip poplar, redbud, hackberry, American plum, chestnut oak, black locust. Invasive species include multiflora rose and oriental bittersweet.
HA24APY000094	Peter Jay E	Plot 4	0.1 ac	22	220	0	0	10	Trees average 1" DBH and 5-7' tall with a few 10' tall. Tree species include black locust, persimmon, plum, red osier dogwood, sycamore. Invasive species include multiflora rose and oriental bittersweet.
HA24APY000094	Peter Jay E	Plot 5	0.1 ac	34	340	2	0	25	Trees average 0.5-1" DBH and 6-12' tall. Tree species include white oak, black locust, red maple, tulip poplar, redbud. Invasive species include multiflora rose.
HA24APY000094	Peter Jay E	Plot 6	0.1 ac	31	310	0	0	8	Trees average 1" DBH and 6-12' tall. Tree species include redbud, white oak, sycamore, American plum.
HA24APY000094	Peter Jay E	Plot 7	0.1 ac	44	440	0	0	10	Trees average 0.5-1" DBH and 6-12' tall. Tree species include red osier dogwood, red maple, white oak, tulip poplar, American plum.
AVERAGE				31	309	1	0	15	
HA24APY000095	Peter Jay F	Plot 1	0.05 ac	29	580	0	0	15	Trees average 1" DBH and 6-10' tall. Tree species include red maple and mixed oaks. Numerous trees bent/broken due to wind damage. Needs shelter repair/maintenance.
HA24APY000095	Peter Jay F	Plot 2	0.05 ac	13	260	0	0	20	Tree species include persimmon, mixed oaks, and red maple. Invasive species include Japanese honeysuckle, bittersweet, and multiflora rose. Shelter maintenance needed.
HA24APY000095	Peter Jay F	Plot 3	0.05 ac	21	420	0	0	10	Tree species include mixed oaks, black locust, and tulip poplar. Invasive species include Japanese honeysuckle and multiflora rose.
HA24APY000095	Peter Jay F	Plot 4	0.05 ac	16	320	0	5	0	Tree species include river birch, redbuds, sycamore, pawpaw, hazelnut. Invasive species include beefsteak.
AVERAGE				20	395	0	1	11	
HA24APY000089	Ron Fisher	Plot 1	0.05 ac	12	240	0	0	0	Trees average 1-5" DBH and 6-10' tall. Species include black locust, northern red oak, red maple, tulip poplar, hackberry, white oak. Well maintained.
HA24APY000089	Ron Fisher	Plot 2	0.05 ac	11	220	0	0	2	Trees average 1-2.5" DBH and 15-18' tall. Species include black locusts, tulip poplar, sycamore, northern red oak. Black locusts doing very well. All other species 1-1.5" DBH and 4-7' tall
HA24APY000089	Ron Fisher	Plot 3	0.05 ac	13	260	0	0	0	Black locusts, black cherry, and tulip poplar average 1.5-2" DBH and 12-15' tall. Other species include black walnut, tulip poplar, black locusts, white oak, northern red oak, black cherry and average 1-1.5" DBH and 6-8' tall.
HA24APY000089	Ron Fisher	Plot 4	0.05 ac	7	140	0	0	3	Trees average 1-1.5" DBH and 6-8' tall. Species include red maple, American plum, northern red oak. Well maintained.
AVERAGE				11	215	0	0	1	
HA24APY000017	Stephen Graefe B	Plot 1	0.05 ac	11	220	0	35	75	Trees average 1-2" DBH and 10-15" tall. Tree species include persimmon, river birch, sawtooth oak. Invasive species include garlic pennycress, japanese Japanese stiltgrass, honeysuckle, multiflora rose, oriental bittersweet. No trees in about half of the plot.
HA24APY000017	Stephen Graefe B	Plot 2	0.05 ac	5	100	0	0	60	Trees average 1" DBH and 5-8' tall. Tree species include redbud, black walnut, white oak. Invasive species include multiflora rose, Japanese honeysuckle, oriental bittersweet. Low density plot, many trees died.
HA24APY000017	Stephen Graefe B	Plot 3	0.05 ac	3	60	0	5	80	Trees average 1-2" DBH and 10-20' tall. Tree species include white oak and flowering dogwood. Invasive species include multiflora rose, autumn olive, oriental bittersweet, Japanese stiltgrass.

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA24APY000017	Stephen Graefe B	Plot 4	0.05 ac	7	140	0	80	40	Trees average 2-3" DBH and 10-20' tall. Tree species include redbud, tulip popular, persimmon, white oak. Invasive species include Japanese stiltgrass, autumn olive, multiflora rose, oriental bittersweet.
HA24APY000017	Stephen Graefe B	Plot 5	0.05 ac	8	160	0	10	15	Trees average 1" DBH and 5-10' tall. Tree species include chestnut oak, sawtooth oak. Invasive species include garlic pennycress, oriental bittersweet, and multiflora rose. One large mass of bittersweet and multiflora rose within plot.
AVERAGE				7	136	0	26	54	
HA24APY000018	Stephen Graefe C	Plot 1	0.05 ac	6	120	0	60	20	Trees average 1-3" DBH and 10-20' tall. Tree species include American plum, river birch, redbud. Invasive species include garlic pennycrest, Japanese stiltgrass, multiflora rose, oriental bittersweet, wineberry.
HA24APY000018	Stephen Graefe C	Plot 2	0.05 ac	11	120	3	3	10	Trees average 0.5-1" DBH and 5-10' tall. Tree species include river birch, persimmon, sawtooth oak, American plum, willow oak. Persimmon regeneration is present. Invasive species include multiflora rose and Japanese stiltgrass.
HA24APY000018	Stephen Graefe C	Plot 3	0.05 ac	4	80	0	70	10	Trees average 1-2" DBH and 5-12' tall. Tree species include river birch and white oak. Invasive species include multiflora rose and Japanese stiltgrass. Plot falls in a depression area, rush present but no wetland. Past saturation is a possible mortality cause.
HA24APY000018	Stephen Graefe C	Plot 4	0.05 ac	7	140	3	10	15	Trees average 1" DBH and 8-12' tall. Tree species include persimmon, river birch, chestnut oak. Persimmon regeneration present. Invasive species include multiflora rose, Japanese stiltgrass, oriental bittersweet.
HA24APY000018	Stephen Graefe C	Plot 5	0.05 ac	4	80	5	30	20	Trees average 1" DBH and 6-15' tall. Tree species include river birch and persimmon. Invasive species include multiflora rose, Japanese stiltgrass, oriental bittersweet. Persimmon regeneration present. Plot falls within infill area between older plantings.
AVERAGE				6	108	2	35	15	
HA24APY000019	Stephen Graefe D	Plot 1	0.05 ac	11	220	0	0	10	Trees average 1-3" DBH and 8-20' tall. Tree species include sawtooth oak and white oak. Invasive species include multiflora rose.
HA24APY000019	Stephen Graefe D	Plot 2	0.05 ac	6	120	0	2	30	Trees average 1-2" DBH and 10' tall. Tree species include chestnut oak and eastern red cedar. Invasive species include multiflora rose, garlic pennycress, and oriental bittersweet. Dogbane in understory.
HA24APY000019	Stephen Graefe D	Plot 3	0.05 ac	6	120	0	2	5	Trees average 1-2" DBH (some larger) and 8-12' tall. Tree species include sawtooth oak, chestnut oak, tulip poplar, and sassafras. Invasive species include multiflora rose and garlic pennycress. Dogbane present in understory. Plot has multiple gaps where trees died.
HA24APY000019	Stephen Graefe D	Plot 4	0.05 ac	10	200	0	0	20	Trees average 1-3" DBH and 8-15' tall. Tree species include sawtooth oak, tulip popular, and white oak. Invasive species include oriental bittersweet and multiflora rose.
AVERAGE				8	165	0	1	16	
HA25APY00003	Stephen Graefe A1	Plot 1	0.1 ac	14	140	0	0	5	Trees average 2-3" DBH and 15-25' tall. Tree species include sawtooth oak, redbuds, river birch. Invasive species include multiflora rose.
HA25APY00003	Stephen Graefe A1	Plot 3	0.1 ac	23	230	0	0	10	Tree species include black locust, mixed oaks. Locusts average 3-4" DBH, 30' tall. Mixed oaks average 1-2" DBH, 15-20' tall. Invasive species include multiflora & bittersweet.
HA25APY00003	Stephen Graefe A1	Plot 4	0.1 ac	13	130	8	0	30	Tree species include mixed oaks, black locust. Locusts are doing well and average 3-4" DBH and 35-40' tall. Mixed oaks average DBH 1-2" and 10-15' tall. Invasive species include multiflora rose throughout site.
HA25APY00003	Stephen Graefe A1	Plot 9	0.1 ac	16	160	2	0	20	Trees average 3-6" DBH and 15-25' tall. Tree species include redbud and river birch. Invasive species include multiflora rose & bittersweet.

Site ID	Site Name	Plot ID	Plot Size	Total Tree Count	Trees per Acre	Percentage of Native regeneration	Percentage of Invasive Herbaceous	Percentage of Invasive Woody Veg	Plot Comments
HA25APY000003	Stephen Graefe A1	Plot 5	0.1 ac	24	240	1	0	30	Trees average 1-6" DBH and 10-30' tall. Tree species include sawtooth oaks, redbuds, white oak, black locust. Invasive species includes multiflora rose, beefsteak, bittersweet.
	AVERAGE			18	180	2	0	19	
HA25APY000005	Stephen Graefe A3	Plot 1	0.1 ac	22	220	0	0	15	Tree species include redbud, river birch, mixed oaks, average 1-2" DBH and 15' tall. Invasive species include multiflora & bittersweet. Average height of oaks & redbuds 1-2" DBH and 15' tall. Birches average 3" DBH & 25' tall.
HA25APY000005	Stephen Graefe A3	Plot 2	0.1 ac	18	180	0	0	0	Tree species include redbud and river birch. River birches average 2-3" DBH, 25-30' tall. redbuds average 1-3" DBH, 15-25' tall.
HA25APY000005	Stephen Graefe A3	Plot 3	0.1 ac	23	230	1	0	2	Tree species include redbuds, mixed oaks, birches and average 1-2" DBH and 10-15' tall. Other species present include sawtooth oaks and birches, and average 3" DBH & 25-30' tall.
HA25APY000005	Stephen Graefe A3	Plot 4	0.1 ac	19	190	5	0	15	Tree species include river birch, sawtooth oak, redbud. Sawtooth oaks average 3" DBH & 30' tall. Birches average 2.5-3" DBH & 20-25' tall. Invasive species include multiflora rose, growing around trees. Regeneration of cedar saplings present and one autumn olive planted in plot.
	AVERAGE			21	205	2	0	8	
HA24APY000023	Steve Tracy C**	Plot 1	0.1 ac	40	400	0	0	8	Tree species include sycamore, river birch, American plum, and mixed oaks. All species are doing well. Sycamores and birches average 4-5" DBH & 25-30' tall, oaks and plum average 1.5-2" DBH & 12-15' tall.
HA24APY000023	Steve Tracy C	Plot 2	0.1 ac	37	370	0	0	5	Trees average 1-2" DBH and 6-20' tall. Tree species include mixed oaks, black locust, crabapple. Well maintained. The black locusts are generally taller and oaks generally smaller.
HA24APY000023	Steve Tracy C	Plot 3	0.1 ac	30	300	0	0	5	Tree species include birches, sycamores, mixed oaks, persimmon, redbud, American plum. Birches and locusts average 3-5" DBH and 20-30' tall. All other species average 1-2.5" DBH and 15-20' tall.
	AVERAGE			36	357	0	0	6	
HA24APY000090	Zack Schmitt	Plot 1	0.05 ac	15	300	2	5	0	Trees average 1-2" DBH and 6-10' tall. Tree species include river birch, sweet cherry red osier dogwood, white oak. Birches & dogwoods growing faster than other species.
HA24APY000090	Zack Schmitt	Plot 2	0.05 ac	14	280	5	0	5	Trees average 1" DBH and 6-7' tall. Tree species include red osier dogwood, sweetgum, river birch, mixed oaks, sweet cherry. Multiflora rose growing in some tree shelters. Trees are in good condition.
HA24APY000090	Zack Schmitt	Plot 3	0.05 ac	12	240	2	5	10	Trees average 1.5-2" DBH and 6-8' tall. Tree species doing well include mixed oaks, sweet cherry, and sweet gum. Invasive species include oriental bittersweet & multiflora rose. Higher mortality noted here than other plots due to invasive species & edge competition.
	AVERAGE			14	273	3	3	5	

*This site was split during post-processing of field data. Plot data was extrapolated and used for sites Charles Dougherty B (HA24APY000007) and Charles Dougherty F (HA25APY000001)

**This site was split during post-processing of field data. Plot data was extrapolated and used for sites Steve Tracy C (HA24APY000023) and Steve Tracy D (HA25APY000004)



Harford County 2025 Stream Verification Inspections

2025 Inspection Notes and Comments:

1. Post-implementation Inspections of the 10 projects listed below were completed in October and November, 2025.
 - a. Foster Branch at Dembytown
 - b. Bear Cabin Branch
 - c. Ring Factory
 - d. Woodbridge
 - e. Bynum at St. Andrew
 - f. Annie Playground
 - g. Willoughby Beach
 - h. Barrington
 - i. Emmord
 - j. Tributary to Plumtree at Wakefield Manor
2. The inspections were performed in general accordance with the *Urban Stormwater Work Group's (USWG) Recommended Methods to Verify Stream Restoration Practices Built for Pollutant Crediting in the Chesapeake Bay Watershed* (Burch, et. al. 2019) and the *County's Stream Restoration Inspection Protocol Technical Memorandum* (EA 2020).
3. The following conditions were evaluated at each site, and an observation point was added to the map when a condition was observed.
 - a. General Condition
 - b. Lateral Stability
 - c. Vertical Stability
 - d. Vegetation Deficiency
 - e. Structure Instability
 - f. Property/Structure/Utility Damage
 - g. Invasive Encroachment
 - h. Channel Obstruction
 - i. Riparian Vegetation Zone Encroachment
 - j. Visual Water Quality Impairment
 - k. Other
4. Other than general condition, which were generally recorded at the upstream, downstream, and middle of each project, condition observations were only recorded to document an observation of notable instability or concern.
5. If no notable issuers condition was not observed (e.g., functioning) it is not displayed on the map and indicates no concerns were noted.



Harford County 2025 Stream Verification Inspections

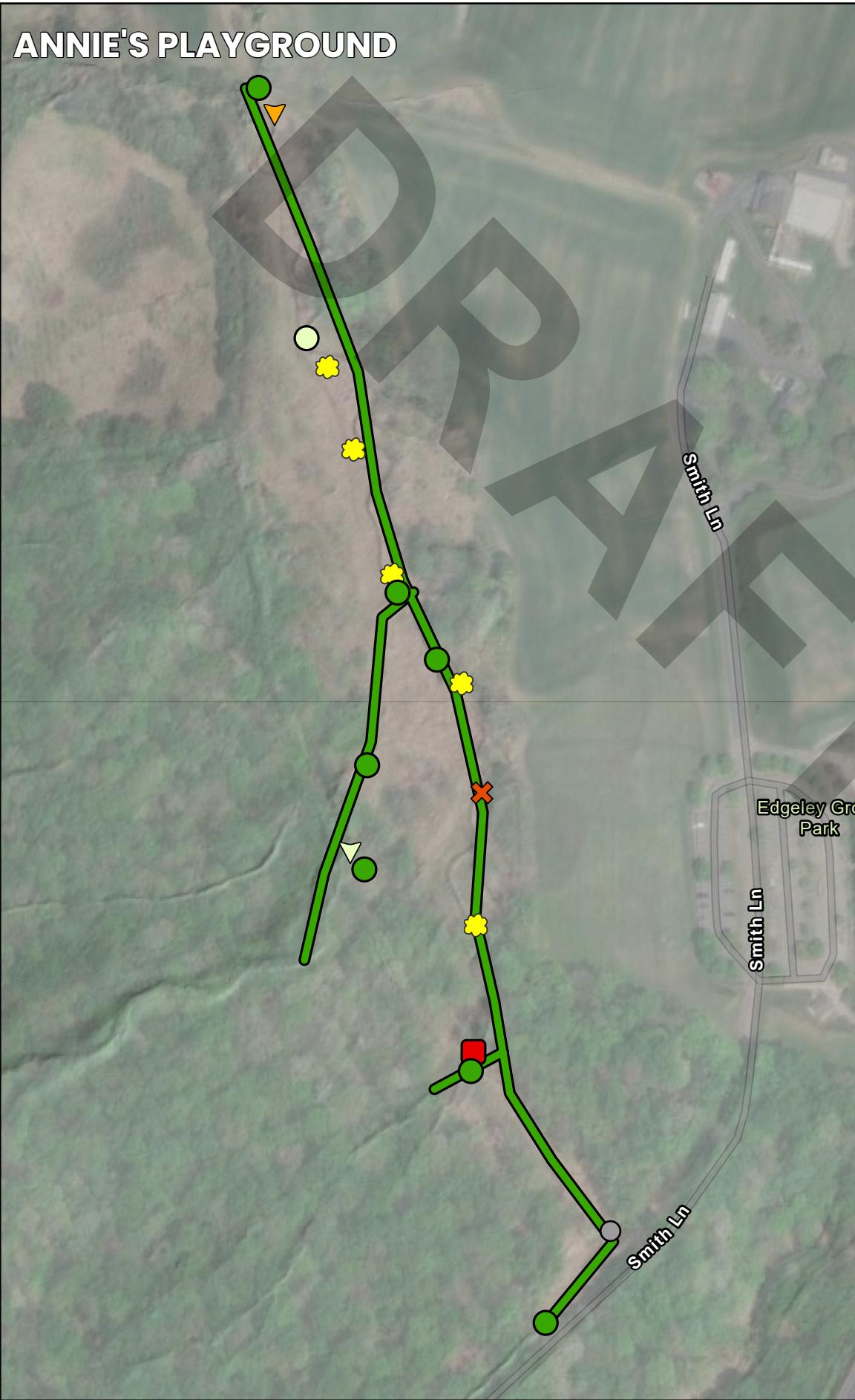
6. No sites had specific concerns with Vegetation Deficiency, Property/Structure/Utility Damage, or Visual Water Quality Impairments.
7. The restoration project inspection status (Pass/Fail) and summary of stability and vegetation notes are embedded within the stream linework itself. Overall site status categories was determined based on the percentage of the reach showing signs of instability using the thresholds identified in the USWG Recommendations (Burch, et. al. 2019):
 - a. Pass - <20% of reach
 - b. Action needed - 20-40% of reach
 - c. Fail - >40% of reach
8. Each point includes a Severity field and a Maintenance Recommendation field.
 - a. Severity is a subjective rating of the issue in relation to the restoration function (Functioning (no issue), Minor Compromise, Moderate Compromise, and Major Compromise).
 - b. Maintenance Recommendation is a rating on whether the issue should be addressed considering the overall stream function, effort, and anticipated future conditions.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

ANNIE'S PLAYGROUND



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light green circle)
- MODERATE COMPROMISE (Yellow circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- MODERATE COMPROMISE (Yellow inverted triangle)
- MAJOR COMPROMISE (Red inverted triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Light green circle)
- MODERATE COMPROMISE (Yellow circle)
- MAJOR COMPROMISE (Red circle)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Dark red square)
- CHANNEL OBSTRUCTION (Red X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 400 600 ft



Harford County 2025 Stream Verification Inspections

Project Name	Annie's Playground
GIS ID	HA20ALN000001
Restoration Project Inspection Status	Pass
Inspection Date	10/24/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall reach is stable with minor and isolated spots of erosion.
 - ~25 ft total erosion (<1% of total length)
 - Minor erosion is present and usually located near structures but typically the erosion is checked in by subsequent structure.
- One (1) structure failure was noted but currently is not impacting stream stability.
- Overall riparian plantings appeared to be successfully establishing, but there are patches with fewer live trees. Some of the larger trees should have shelters or staking removed.
- Low to no flow was observed in the reach during inspection, but the presence of water in pools and flow increased at the downstream end.
- Multiple isolated patches of *Phragmites* were observed, and Japanese hops (*Humulus japonicus*) and multiflora rose (*Rosa multiflora*) were also present. Japanese stiltgrass (*Micostegium vimineum*) is dominant along banks.

Maintenance Considerations:

- Targeted invasive species treatment may be considered to prevent further spread of *Phragmites*.
- Tree plantings appear to have mixed success. Consider replacement or inspection of plantings.
- Remove tree shelters and staking that is no longer needed.
- Monitor structure failures but no action needed at this time.



Harford County 2025 Stream Verification Inspections

Representative Photographs:



Upstream conditions. Stable with vegetation in channel.



General stream conditions.



Tributary conditions.



Scour on left bank of log vane. Flow undercutting log; rotting. Stream is stable.



Example of phragmites patch. About 5 similar patches scattered across project.



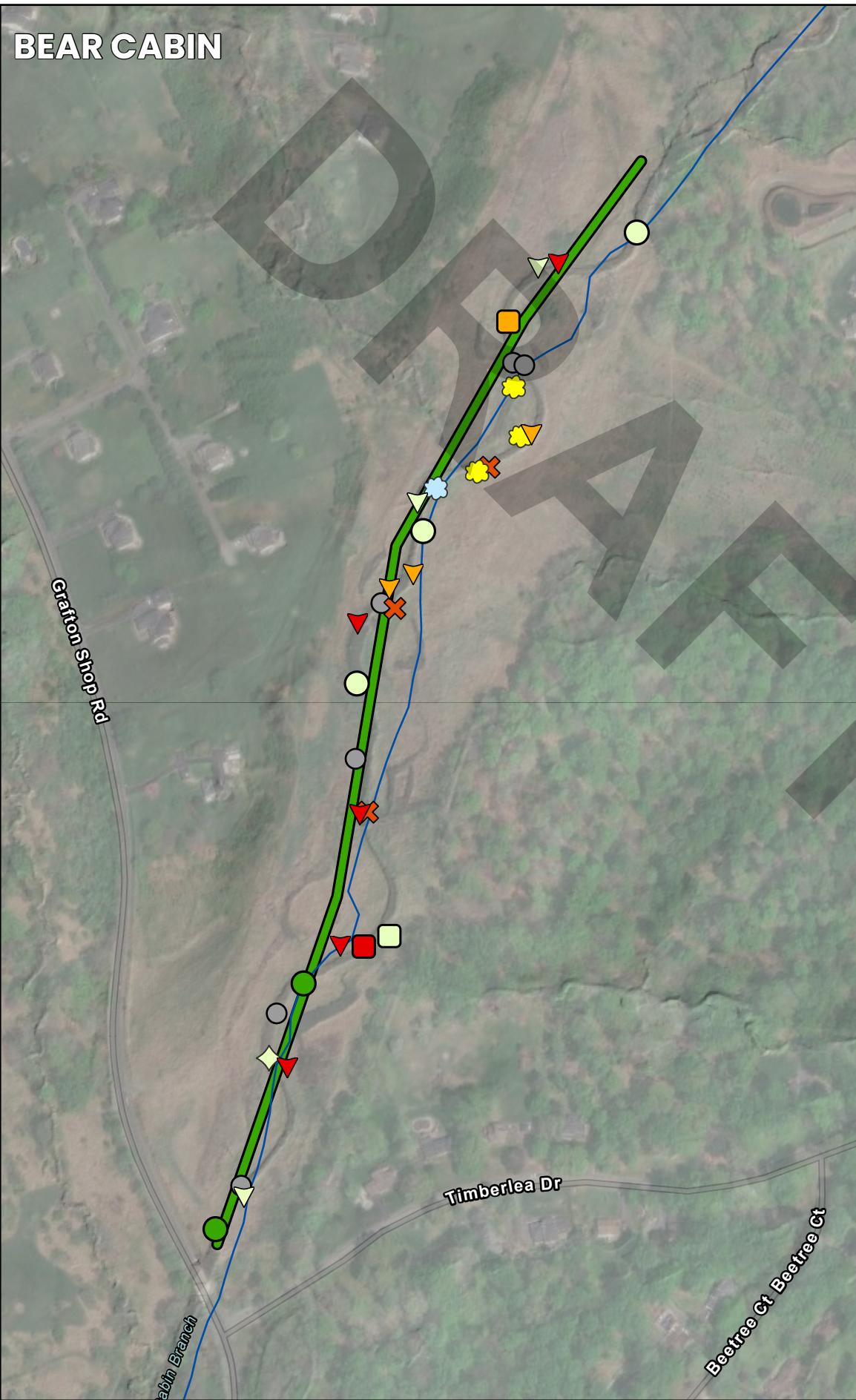
Downstream reach conditions.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

BEAR CABIN



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light yellow circle)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red triangle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow square)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue cloud)
- ENCROACHMENT (Yellow circle)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Red square)
- CHANNEL OBSTRUCTION (Red X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 400 600 800 ft



Harford County 2025 Stream Verification Inspections

Project Name	Bear Cabin
GIS ID	HA18ALN000002
Restoration Project Inspection Status	Pass
Inspection Date	10/24/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall reach is stable, but isolated areas of concern were observed throughout restoration.
 - ~680 ft of moderate to severe erosion (9.3%)
- Flow paths leading into the downstream oxbows are developing in the former channel alignment. Currently these areas are well vegetated but should be monitored and may benefit from reinforcement with live stakes to prevent unwanted hydraulic connections to oxbow ponds.
- Some bends have high vertical banks with no protection.
- Beaver activity (at least 3 active dams) in middle of restoration has caused change in erosion and flow patterns; currently stable while the beavers are active but may be problematic if the beaver abandon the dams.
- Floodplain is well vegetated, but woody plant establishment is low along the entire project; however live stake/bioengineering installations (predominately willow species) were successful.
- Established groundcover is dominated by Japanese stiltgrass (*Microstegium vimineum*) and Reed canary grass (*Phalaris arundinacea*).

Maintenance Considerations:

- Willow live stakes could help protect areas of concern, particularly by downstream oxbows. Successful live stakes were observed in many locations.
- Localized bank protection may be considered for severely eroded areas to prevent further degradation.



Harford County 2025 Stream Verification Inspections

- Continue to monitor beaver dams and other areas of concern.
- Consider additional tree plantings in floodplain. Wire cages are recommended for beaver/deer protection.

Representative Photographs:



Upstream conditions; some evidence of minor channel enlargement, sparse woody establishment



Example of upstream deposition and erosion at bend



Erosion into old channel alignment; risk of alternative flow path to oxbow



Mid-stream conditions; area of good willow establishment



Harford County 2025 Stream Verification Inspections



Messy conditions due to upstream beaver dams



Downstream-most beaver dam. Two more immediately upstream.



Suspected blown out log structure; causing erosion on left bank



Severe erosion on outside meander



Bank erosion and collapse near oxbow

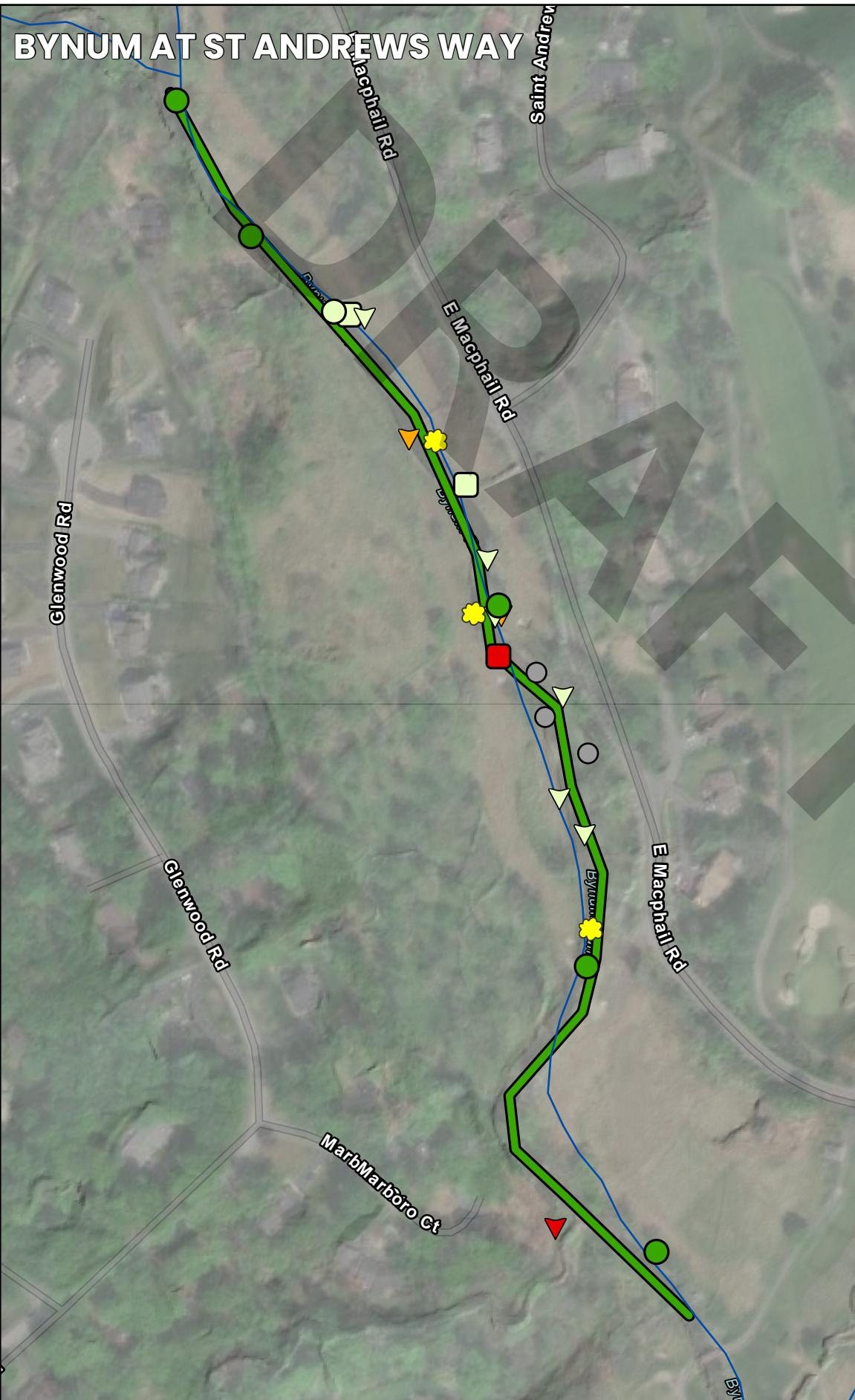


General downstream conditions



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light yellow circle)
- Moderate Compromise (Yellow triangle)
- MAJOR COMPROMISE (Red square)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- Moderate Compromise (Yellow triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Light yellow square)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue cloud)
- INVASIVE ENCROACHMENT (Yellow star)
- PROPERTY STRUCTURE UTILITY DAMAGE (Red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 400 600 ft



Harford County 2025 Stream Verification Inspections

Project Name	Bynum at St Andrews Way
GIS ID	HA19ALN000001
Restoration Project Inspection Status	Pass
Inspection Date	10/24/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall mainstem is stable and functioning with limited erosion.
 - Approximately 660 ft of total erosion (10.7%) of the stream including tributaries; 260 ft or 4.2% on the mainstem.
 - The upstream right bank is significantly eroded but was not part of the restoration.
- Tributary 4 on the downstream left bank is eroded and not meeting performance criteria.
- Other tributaries appeared stable and functioning.
- Minor spots of erosion were observed along unprotected banks (generally 1-2 ft tall bare banks), which is common for streams of this size.
- Structures were stable overall; however, some had signs of historic flanking or failure that have since naturalized and healed over.
- The project is well vegetated with successful tree plantings.
- Japanese stiltgrass (*Microstegium vimineum*) dominated the riparian corridor but is intermixed with native plants. Small, localized patches of *Phragmites australis* were also observed.

Maintenance Considerations:

- Planted trees are reaching maturity and can be released from tree supports and cages.



Harford County 2025 Stream Verification Inspections

- Consider removal or stabilization of Tributary 4 (downstream-most tributary on the left bank for credit calculations. Currently, not passing.
- Treatment of isolated phragmites stands may be considered.
- Monitor erosional areas and structure failures.

Representative Photographs:



From the upstream end looking downstream; reach is stable; right bank is eroded but was not restored.



Example of typical erosion; minor erosion about 1-2 feet high obscured by overhanging vegetation. Monitor.



Representative stream conditions and structure example.



Boulder protection has fallen into stream and bank is eroding at the bend. Near the middle of the restored reach.



Harford County 2025 Stream Verification Inspections



Deep pool under log structure. Currently stable but monitor for possible undercutting.



Typical downstream conditions. Stable and well vegetated.



Tributary 4 - severe erosion on left bank near end of restoration. Banks are severely eroded.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

EMMORD



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES)
- MINOR COMPROMISE
- Moderate Compromise
- MAJOR COMPROMISE

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE
- Moderate Compromise
- MAJOR COMPROMISE

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE
- Moderate Compromise
- MAJOR COMPROMISE

STREAM RATING

- PASS (<20% OF REACH FAILING)
- ACTION NEEDED (20-40% OF REACH FAILING)
- FAIL (>40% OF REACH FAILING)

OTHER FEATURES

- VEGETATION DEFICIENCY
- RIPARIAN VEGETATION ZONE
- ENCROACHMENT
- INVASIVE ENCROACHMENT
- PROPERTY STRUCTURE UTILITY DAMAGE
- CHANNEL OBSTRUCTION
- VISUAL WATER QUALITY IMPAIRMENT
- OTHER CONDITION



0 200 400 ft



Harford County 2025 Stream Verification Inspections

Project Name	Emmord
GIS ID	HA21ALN000001
Restoration Project Inspection Status	Pass
Inspection Date	10/27/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall reach is vertically stable with minimal areas of minor erosion.
 - ~60 ft total erosion (3% of reach)
- At upstream confluence, there is an incised channel with high, unprotected banks but is checked by the downstream riffle.
- A bare walking trail exists alongside part of the stream, limiting the riparian zone.
- Some areas exhibit signs of exposed toe stakes and minor channel enlargement, but overall reach is currently functioning.
- Well forested riparian corridor with invasives present but typical of restored streams.

Maintenance Considerations:

- Monitor areas of concern but no action needed at this time.



Harford County 2025 Stream Verification Inspections

Representative Photographs:



From upstream reach, looking downstream.



Outfall conditions. No issues.



Eroded bank near upstream confluence.



Minor erosion and possible stream enlargement. Monitor, but no issue.



Harford County 2025 Stream Verification Inspections



Typical stream conditions from middle of restoration.



End of restoration. Stable to last riffle. Incised channel outside of restored area.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

FOSTER BRANCH AT DEMBYTOWN



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light green circle)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red square)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow square)
- Moderate Compromise (Yellow square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle with cross)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)

0 200 400 600 ft



Harford County 2025 Stream Verification Inspections

Project Name	Foster Branch at Dembytown
GIS ID	HA17ALN000001
Restoration Project Inspection Status	Pass
Inspection Date	10/27/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall reach is stable with lengths of very minor erosion
 - 400 ft total erosion (~9.6% of total length)
 - Despite the presence of a high percentage of erosion, the majority of the observed erosion is minor in nature.
- Some signs of channel enlargement and channel migration, although stream banks are reinforced with well-established roots and naturalizing.
- Minimal invasive encroachment was observed the forested riparian corridor.
- Riparian zone on upstream side of Dembytown Rd is limited in width due to mowing, likely by neighboring homeowner.

Maintenance Considerations:

- Continued monitoring of areas of concern but no remedial action needed at this time.



Harford County 2025 Stream Verification Inspections

Representative Photographs:



Start of restoration.



Example of channel meander and widening, erosion of right bank on left of picture.



Example mid-stream conditions, minor widening and erosion.



Flanking around riffle structure and subsequent erosion.



Harford County 2025 Stream Verification Inspections



General upstream conditions.



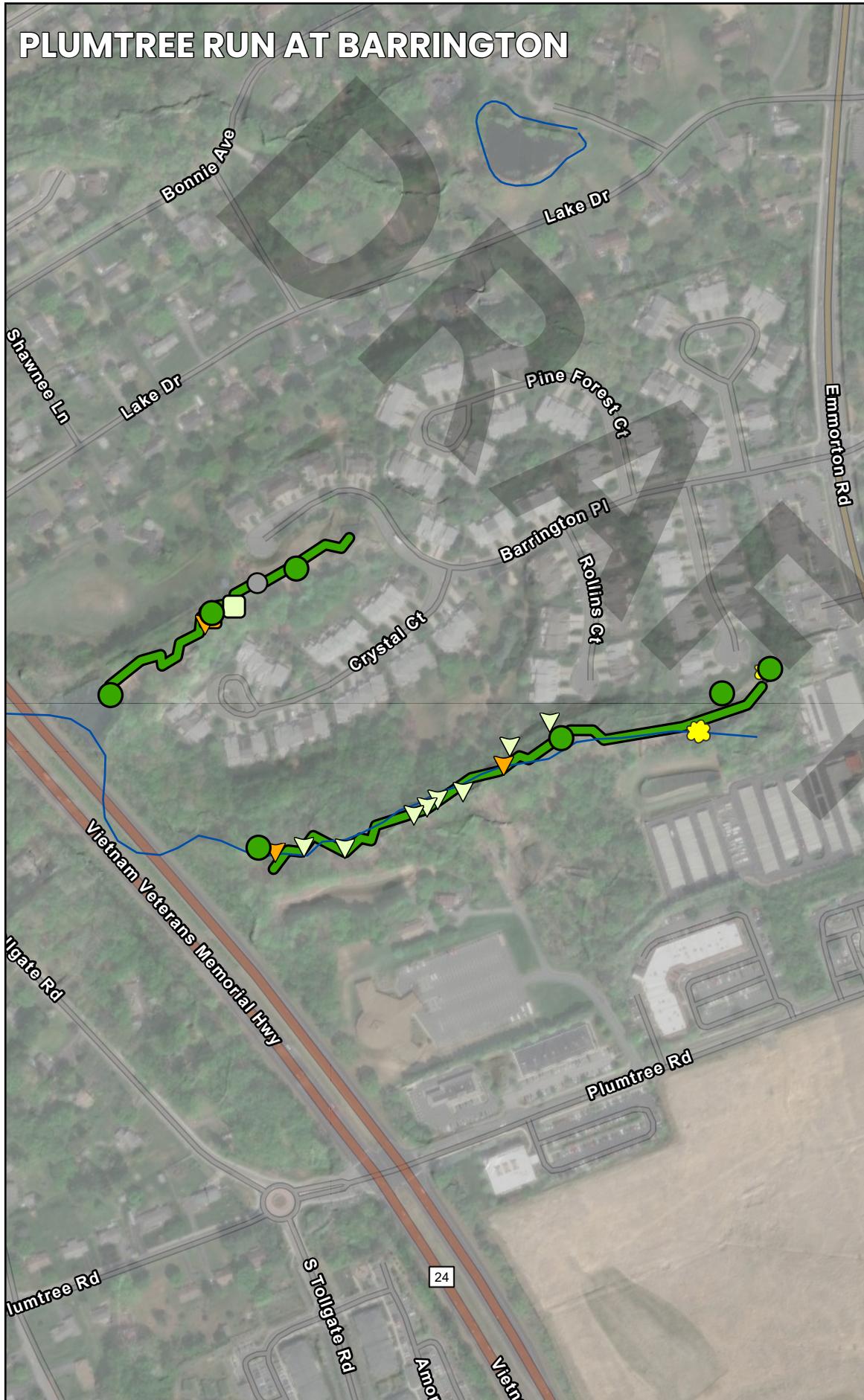
Mowing in riparian zone in upstream segment.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

PLUMTREE RUN AT BARRINGTON



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light yellow circle)
- Moderate Compromise (Orange circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- Moderate Compromise (Orange triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Light yellow square)
- Moderate Compromise (Orange square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue cloud)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 400 600 800 1,000 ft



Harford County 2025 Stream Verification Inspections

Project Name	Plumtree Run at Barrington
GIS ID	HA20ALN000004
Restoration Project Inspection Status	Pass
Inspection Date	11/6/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall, the northern and southern reaches are stable with some non-armored areas expressing signs of scour.
 - ~319 feet total erosion (6.3%)
 - Majority of erosion was found in downstream section of southern reach—generally on outside bends.
- Northern reach (shorter reach) is heavily armored and stable.
- Northern reach was recently mowed, but plantings appear healthy.
- Southern reach (longer reach) is less maintained.
- Downstream half of southern reach exhibited regular areas of minor erosion (1-3 ft high) but was well vegetated; this began after a noticeable shift in stream character from step pool structures to riffle-pool structures.
- Invasives are common but consistent with the surrounding forest.

Maintenance Considerations:

- One area on the northern reach was eroding due to a deposit of the in-stream cobble material, forcing the water to the bank. Redistribution of this cobble could reduce stress on this bank and prevent further erosion.
- Monitor areas of erosion on southern downstream reach



Harford County 2025 Stream Verification Inspections

Representative Photographs:



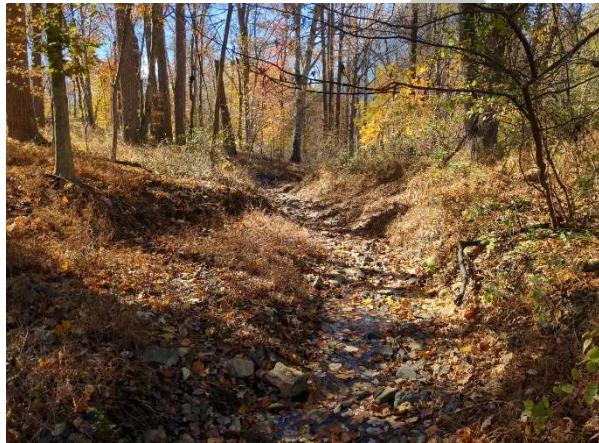
Typical step pool structures on northern reach. Maintained vegetation along banks.



Erosion on left bank (middle of northern stream) due to deposition of cobble instream. Material can be redistributed to prevent continued scour.



Outfall channel on southern stream is stable.



Looking downstream from transitional area on the southern reach. The stream character shifts from armored step-pools to riffle structures with minimal protection.



Harford County 2025 Stream Verification Inspections



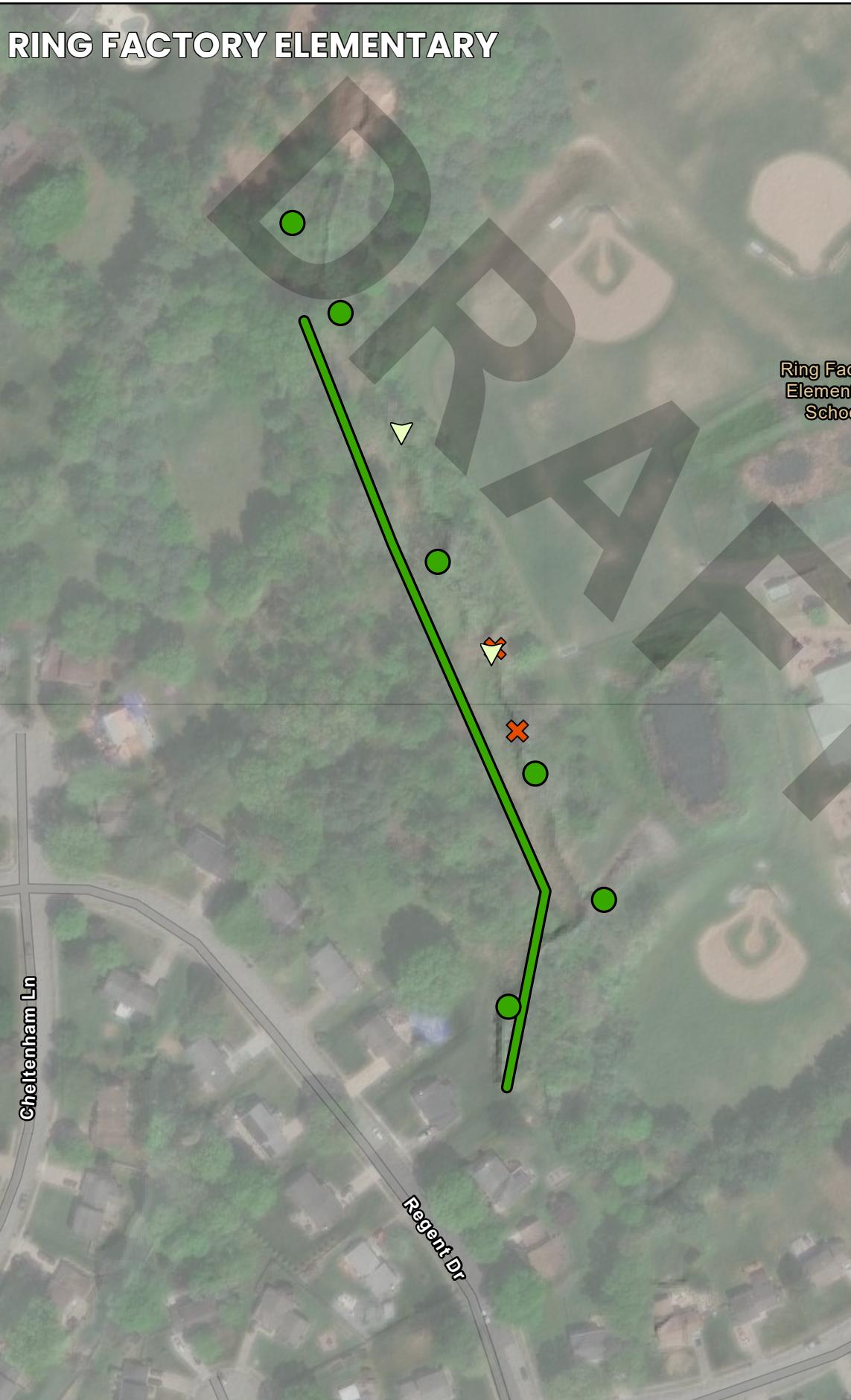
Example of typical erosion seen in the southern, downstream section. Vertical scour common at the bends but generally well-vegetated.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

RING FACTORY ELEMENTARY



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Yellow circle)
- Moderate Compromise (Orange circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- Moderate Compromise (Orange triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow square)
- Moderate Compromise (Orange square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Dark red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 400 ft



Harford County 2025 Stream Verification Inspections

Project Name	Ring Factory Elementary
GIS ID	HA18ALN000003
Restoration Project Inspection Status	Pass
Inspection Date	11/6/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall reach is stable with minor areas of low erosion.
 - 65 feet total erosion (~3%)
 - Majority of stream is armored with no signs of structural failure
- Step pool structures connecting stormwater pond to stream are stable and functioning. The fields adjacent to the structures are mowed and maintained.
- No flow in the stream during time of inspection.
- Vegetative establishment including volunteer woody species is good.
- Invasive vegetation is common and dense along the stream channel and surrounding woodland.
- Two informal stream crossings were observed along the stream. One is a stone trail crossing. The second is a makeshift bridge of woody debris and wooden pallets. In low flow events, it is not a problem but may obstruct flow in higher events.

Maintenance Considerations:

- Invasive treatment could be considered but should encompass the surrounding forest to increase the likelihood of success.
- The nature of stream crossings could be coordinated with the school to see if they can be formalized in a manner that is aligned with the goals of the restoration.



Harford County 2025 Stream Verification Inspections

Additional Photographs:



Example of general stream conditions.



Step pools leading from pond to stream; stable.



Makeshift bridge/pileup



Downstream conditions. Woody growth in channel and banks.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

TRIBUTARY TO PLUMTREE RUN AT WAKEFIELD



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Yellow circle)
- MODERATE COMPROMISE (Orange circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- MODERATE COMPROMISE (Orange triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow square)
- MODERATE COMPROMISE (Orange square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Dark red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Orange drop)
- OTHER CONDITION (Grey circle)



0 200 ft



Harford County 2025 Stream Verification Inspections

Project Name	Tributary to Plumtree Run at Wakefield Manor
GIS ID	HA20ALN000002
Restoration Project Inspection Status	Pass
Inspection Date	11/6/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- No stability concerns were noted.
- Live stakes were successful and well established.
- Some patchy vegetative areas were observed but expected to improve over time.
- Evidence of mowing around riparian zone was noted, although signage indicates it occurs once a year.
- Site appears to be well maintained.

Maintenance Considerations:

- None at this time.



Harford County 2025 Stream Verification Inspections

Representative Photographs:



Photo 1: Upstream limits



Photo 2: Live Stake establishment.



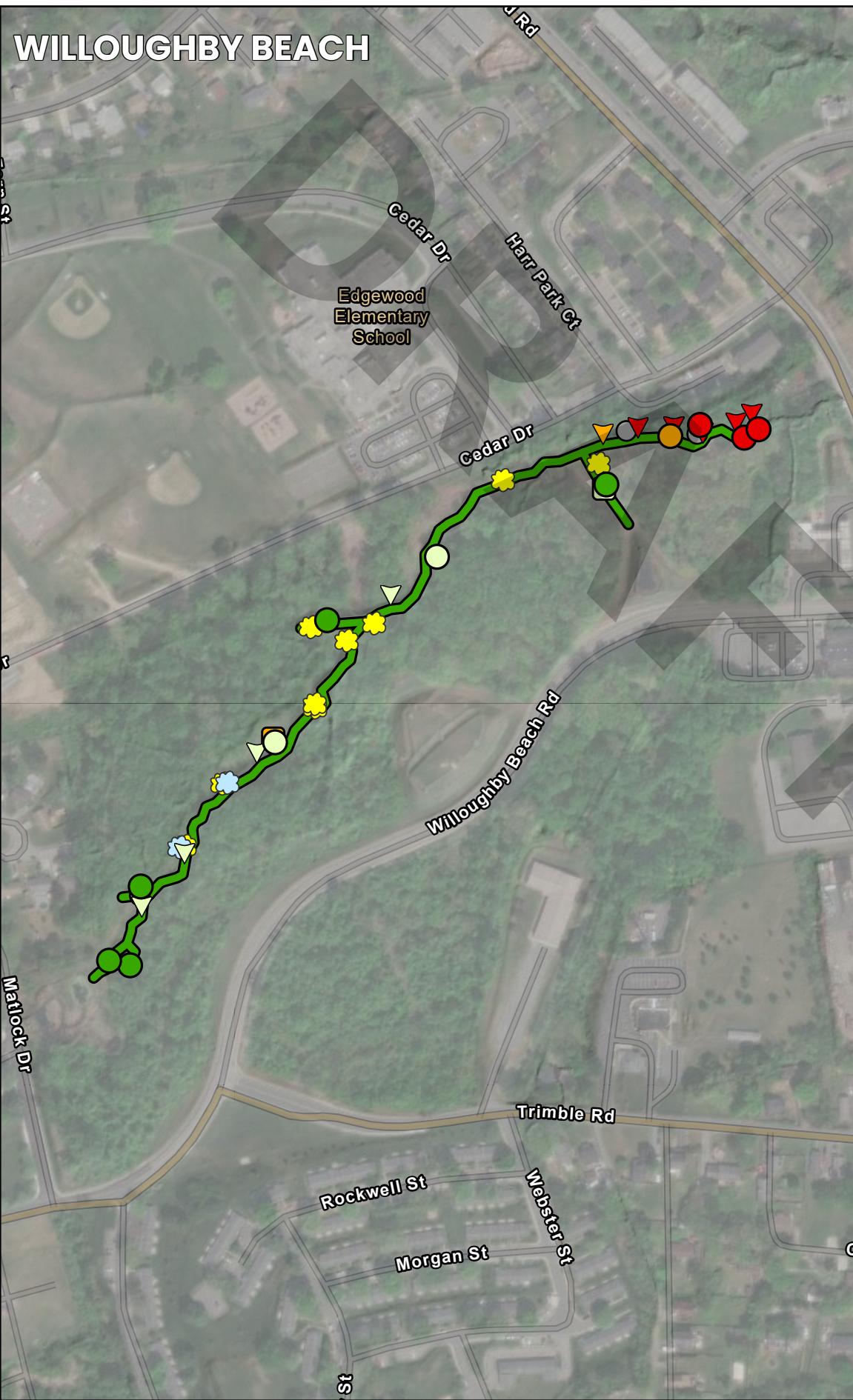
Photo 3: Downstream limits.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

WILLOUGHBY BEACH



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light yellow circle)
- MODERATE COMPROMISE (Orange circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- MODERATE COMPROMISE (Orange triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Light yellow square)
- MODERATE COMPROMISE (Orange square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle)
- INVASIVE ENCROACHMENT (Yellow circle)
- PROPERTY STRUCTURE UTILITY DAMAGE (Red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Red drop)
- OTHER CONDITION (Grey circle)



0 200 400 600 800 ft



Harford County 2025 Stream Verification Inspections

Project Name	Willoughby Beach
GIS ID	HA20ALN000003
Restoration Project Inspection Status	Pass
Inspection Date	10/27/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Overall stable and passing, but significant deterioration was noted on the downstream end.
 - Total erosion ~450 ft (9.2%)
 - Pockets of minor erosion were observed throughout, but the last 200 ft of stream are failing and eroding despite indication of grading on as-built.
 - Erosion begins roughly after the aerial sewer crossing.
- Bank supporting structures such as woody toes or coir fiber logs are decomposing or rotting and minor erosion was observed in these locations; however, root protection from vegetation is reinforcing banks.
- Heavy colonization of black willow and sweetgum was observed along the stream.
- Increased invasive species presence was observed downstream of the construction clearing.
 - *Phragmites australis* and Japanese knotweed (*Reynoutria japonica*) are prevalent, especially in the wetland terraces.
 - Multiflora rose (*Rosa multiflora*) and Japanese honeysuckle (*Lonicera japonica*) also common, especially on left bank near step pools
- Outfall channels are stable with no immediate concerns.



Harford County 2025 Stream Verification Inspections

- An unknown, broken pipe was observed in the downstream end in the stream channel.

Maintenance Considerations:

- Monitor development of the construction area and potential impacts on stream and riparian health.
- Consider removal of 200 ft of downstream from credit considerations due to failing conditions.
- Investigate broken pipe on downstream end; appears to be an abandoned sewer pipeline.
- Repair work of the downstream end could be considered but would likely require significant intervention and damage to surrounding forest.
- Invasive species are prevalent throughout the stream and are likely difficult to extirpate; isolated patches of *Phragmites* and knotweed in wetland areas may be controllable by targeted treatments.

Representative Photographs:



Upstream conditions below the stormwater pond; thick woody establishment



Riparian clearing and construction for proposed road; monitor for impacts after construction is complete



Harford County 2025 Stream Verification Inspections



Example of rotting woody toe and bank slumping; bank is well vegetated by volunteers.



Wetland terrace with open canopy and associated *Phragmites* patches.



Step pool and outfall on left bank are stable but heavily invaded by NNI.



Right bank outfall channel is generally stable with minor erosion; some phragmites observed along banks.



Beginning of erosion and scour near exposed aerial sewer crossing. Mostly on the right bank ~1-3 ft high.



Example of severe erosion and slumping along right bank typical of the end of the restoration. An unknown broken pipe is observed in pieces along the reach.



Harford County 2025 Stream Verification Inspections



Example of downstream conditions. Failing banks 3-4 ft high.



Another photo of downstream conditions with broken pipe in the foreground.



STREAM INSPECTIONS, 2025

HARFORD COUNTY, MARYLAND

WOODBRIDGE



LEGEND

GENERAL CONDITION

- FUNCTIONING (NO/MINIMAL ISSUES) (Green circle)
- MINOR COMPROMISE (Light yellow circle)
- MODERATE COMPROMISE (Orange circle)
- MAJOR COMPROMISE (Red circle)

LATERAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow triangle)
- MODERATE COMPROMISE (Orange triangle)
- MAJOR COMPROMISE (Red triangle)

VERTICAL STABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow diamond)

STRUCTURE INSTABILITY

SEVERITY OF ISSUE

- MINOR COMPROMISE (Yellow square)
- MODERATE COMPROMISE (Orange square)
- MAJOR COMPROMISE (Red square)

STREAM RATING

- PASS (<20% OF REACH FAILING) (Green line)
- ACTION NEEDED (20-40% OF REACH FAILING) (Yellow line)
- FAIL (>40% OF REACH FAILING) (Red line)

OTHER FEATURES

- VEGETATION DEFICIENCY (Orange circle)
- RIPARIAN VEGETATION ZONE (Light blue circle)
- ENCROACHMENT (Light blue circle with a cross)
- INVASIVE ENCROACHMENT (Yellow circle with a cross)
- PROPERTY STRUCTURE UTILITY DAMAGE (Dark red square)
- CHANNEL OBSTRUCTION (Orange X)
- VISUAL WATER QUALITY IMPAIRMENT (Red drop)
- OTHER CONDITION (Grey circle)



0 200 400 ft



Harford County 2025 Stream Verification Inspections

Project Name	Woodbridge
GIS ID	HA15ALN000001
Restoration Project Inspection Status	Pass
Inspection Date	10/27/2025
Investigators	M. Trumbauer & A. Vong

Inspection Notes:

General Condition:

- Upstream conditions are stable, but downstream conditions show significant degradation.
 - Total erosion is about 345 ft (14% of total length)
 - Worst of erosion is between downstream driveway and footbridge.
- Upstream conditions are narrow and heavily vegetated with minor areas of erosion.
- Riparian zones were generally narrow throughout due to encroachment of mowing and private property. Encroachments appear to be well established and may represent the pre-restoration conditions.
- Downstream restoration, below the private driveway, has degraded over time despite evidence of previous localized repair work. This reach is not functioning.
- Limited woody vegetation establishment in downstream section.

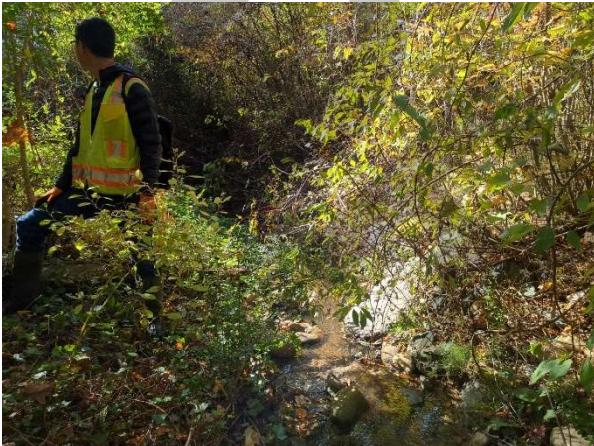
Maintenance Considerations:

- Consider removal of reach downstream of private driveway from credit considerations.
- Repair work in downstream section can be considered but would require significant effort.



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Representative Photographs:



Example of upstream conditions; narrow stream dense with vegetation.



Midstream conditions; heavy invasive presence.



Example of mowing and clearing close to the stream.



Example of downstream conditions; despite grading on the right bank, it is currently raw and eroding.



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Conditions at the lower end of the reach downstream of footbridge; appears unrestored but is more stable; evidence of repair work and riprap in the distance.



Failed structure at end of restoration but reinforced by new cross vane from past repairs.