

**Hopewell Valley Community Stewardship Plan
Friends of Hopewell Valley Open Space**

**Appendix 3.
Arno and Pogorzelski Preserves**

Acreage: 14.33 (Arno 5.71 acres, Pogorzelski 8.62 acres)

Block and Lot: Multiple. B14, L9.022 (Arno); B14, L6 & L7 (Pogorzelski)

Ownership: FoHVOS (100%)

Year(s) Purchased: 2001 (Arno); 2004 (Pogorzelski)

Location & Access: Preserve access is a narrow pedestrian easement. There is no safe location to park. Road is narrow. Nearest street address: 306 Hopewell-Amwell Road, Hopewell, NJ, 08525.

Structures: None

Additional property information is summarized in Appendix W. The following Preserve maps are provided at the end of this document:

- Map 1 2007 Aerial Photography
- Map 2 1930 Aerial Photography
- Map 3 Topography
- Map 4 Bedrock Geology
- Map 5 Soils
- Map 6 Land Cover Types (2007)
- Map 7 Protected Lands
- Map 8 Deer Management
- Map 9 Invasive Plant Cover (Relative Infestation Severity)

Website Description: Arno and Pogorzelski Preserves feature a forest canopy of primarily mature oak, ash, and American beech trees. The habitat represents an upland forest community of the Sourland Mountain region.

BROAD PROPERTY DESCRIPTION

The Arno and Pogorzelski Preserves (see Map 1) are located to the north of Hopewell Borough in the foothills of the Sourland Mountain region. The topography (see Map 3) slopes southward, from 120 to 80 feet above sea level.

Based upon analysis of NJDEP's 2007 Land Use/Land Cover dataset, the preserve contains one broad plant community upland deciduous forest (> 50% canopy). Land Use/Land Cover is summarized in Appendix X and illustrated in Map 6.

The preserve canopy layer is primarily American beech and oak species. The understory layers are denuded by deer browse leaving only invasive species such as jetbead, Japanese honeysuckle and Japanese stiltgrass scattered throughout the preserve.

The preserve has one type of bedrock geology--the Stockton formation. See Map 4.

The preserve has two soil types (see Map 5) with Lansdale loam, 0 to 12 percent slopes, very stony, being the most common type. Lansdale sandy loam, 2 to 6 percent slopes occurs along the access corridor. The preserve's soils are described in Appendix Y.

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CONSERVATION VALUES

Forest and Woodland Communities: The Preserve is connected to the Sourland Mountain's 18,000 forested acres. The forest patch size found on the Preserve and surrounding area create important nesting habitat for migratory species. No forest interior dwelling birds have been observed (access limits site visits). The lack of a woodland shrub layer reduces the chance of nesting and successful breeding.

Based on Natural Heritage data, ENSP data, Landscape Project, 1930s forest presence/absence et al. the Preserve has the highest weighted Ecological Value at >75%. See Appendix A for a description of ranking factors.

Old forest: Based upon analysis of 1930 aerial photography, the preserve is part of a 12 acre block that has been forested since at least the 1930s. This is reflected in the presence of a mature canopy and lack of dense invasive species cover. The canopy suggests a once rich community of native plants, however, no significant herb or shrub layer remain at the preserve. See Map 2.

Early Successional Communities:

Shrublands: None.

Meadows/Grasslands: None.

Waterbodies: None.

Rare Species:

Rare Plants: None documented on the Preserve. Natural Heritage grid data shows no species.

Rare Animals: The Landscape Project has identified the Preserve as Habitat for State Endangered species. See Appendix L for a list of species.

THREATS

Deer: White-tailed deer have suppressed much of the native community, leaving only canopy trees.

Invasive species: In 2008 staff began walk-through surveys for emerging invasive species on all preserves. Mapping documented each species and its population size. Black jetbead was found on the preserve. A population >100 of jetbead was found in the northwest corner of the preserve and on the adjacent private parcel owned by Phillip Collins. All stems were eradicated on the preserve. See www.njisst.org for the current status of emerging invasive species at the Preserve.

In 2011 staff completed surveys for invasive plant species on all preserves (see Map 9). Mapping documented each species found and its population size (See Table 1 below). The five species with the highest infestation scores include: Japanese Honeysuckle, Multiflora Rose, Japanese Stiltgrass, Japanese Barberry, and Wineberry.

Widespread invasive species will pose a threat only in canopy gaps where the native species are unable to avoid significant deer browse.

Other: N/A

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STRATEGIES and ACTIONS

Forest and Woodland Habitat Stewardship: Because of the Preserve's high Ecological Value, the stewardship efforts at the Preserve are high priority. The overarching goals at the Preserve are to protect the forest habitat. The forest offers an opportunity to restore the rich native plant communities that were once present. A deer enclosure should be considered for a portion of the Preserve.

In addition, biannual surveys for and eradication of emerging invasive species should continue. The jetbead population should be monitored, any re-sprouts or seedlings should be treated regularly. Contacting neighbors will be essential to effective control. Several letters have been sent to Phillip Collins regarding the jetbead infestation, but we have received no reply. We will seek contact with Mr. Collins through other surrounding neighbors.

No action is recommended for widespread invasive species. Reduced deer density will allow the native plant communities to recover and compete with the widespread invasive species.

Early Successional Habitat Stewardship: N/A

Deer Management: The preserve is enrolled in the DMP. Bow and gun hunting is allowed at the Preserve (within appropriate safety zones). The current hunters also hunt on an adjacent private property, which provides easy access to the Preserve.

The 450' safety zone allows hunting in only the northwestern portion of the preserve. However, the 150' safety zone for bow hunting allows for hunting in nearly all portions of the preserve. See Map 8 for delineations of the 150' and 450' safety zones and hunting status.

Rare Species Management: N/A

Neighboring Lands: Large blocks of land under conservation easement are located near the Preserve, including FoHVOS easements (Preston, Davis, Wilson, Byers). See Map 7.

Waterbodies Management: N/A

Undesirable Activities Management: N/A

Scientific Research Assessment: The Preserve is available for scientific research. Access is limited because parking is difficult.

Recreational Opportunities Assessment: Access difficulties preclude recreational access. Currently, there are no opportunities to connect to a regional trail system—none yet exist.

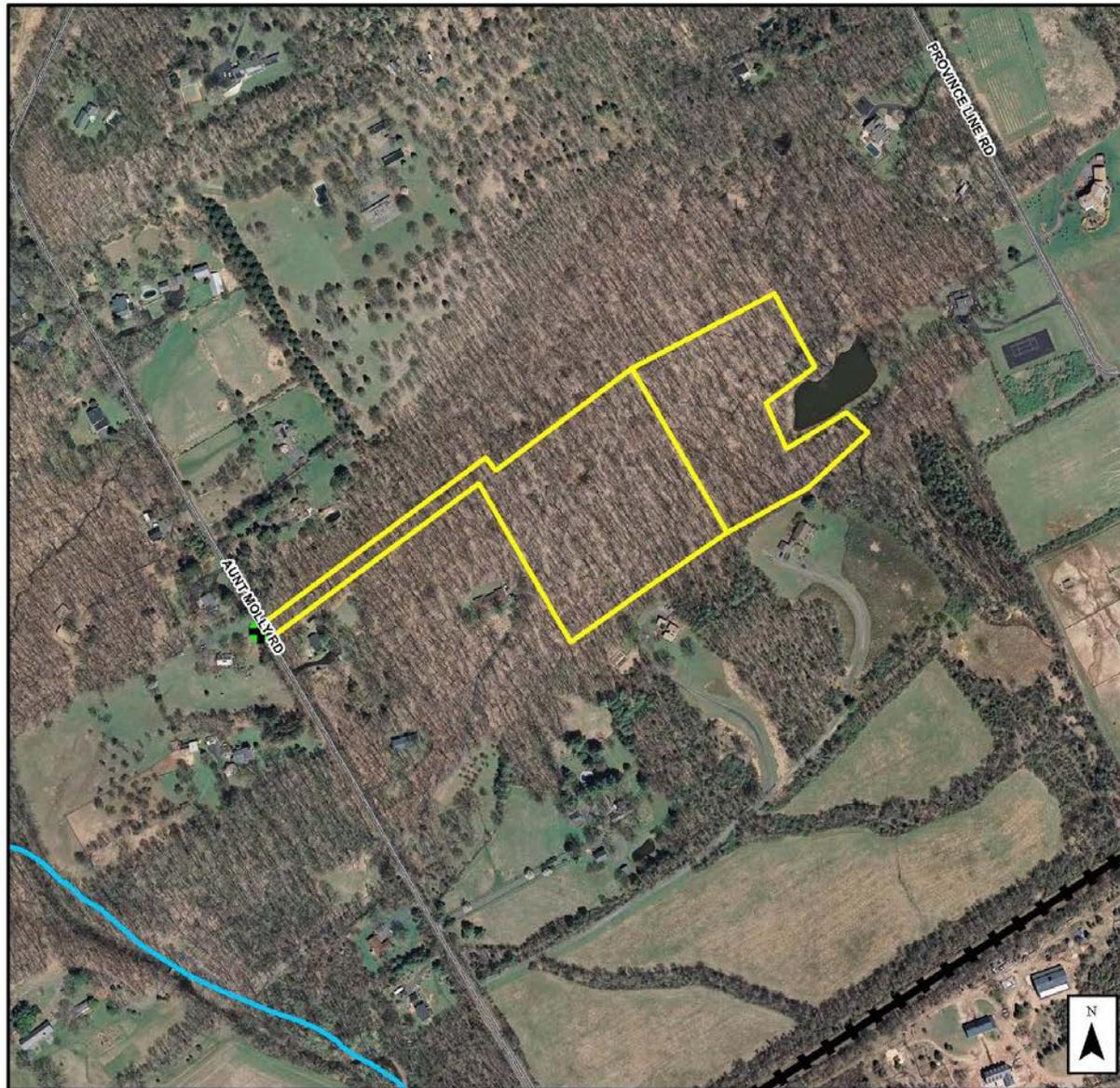
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Table 1. Invasive Plants – Species Abundance and Treatment Recommendations

Scientific Name	Common Name	Infestation Index Score ¹	Total Acres Present	Percent of Preserve Area Present	Treatment Recommendation	LOE Estimate (Hours)	Acreage by Percent Ground Cover Categories						
							Category 0: 0%	Category: Trace	Category 1: 1-10%	Category 2: 10-25%	Category 3: 25-50%	Category 4: 50-75%	Category 5: 75-100%
<i>Acer palmatum</i>	Japanese Maple	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Acer platanoides</i>	Norway Maple	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.00	0.0	0.00	0.0
<i>Ailanthus altissima</i>	Tree-of-Heaven	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Alliaria petiolata</i>	Garlic Mustard	2.6	1.1	7.3	None		13.26	0.0	0.03	0.5	0.6	0.0	0.0
<i>Artemisia vulgaris</i>	Common Mugwort	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Arthraxon hispidus</i>	Small Carpgrass	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Berberis thunbergii</i>	Japanese Barberry	10.7	12.5	87.1	None		1.85	2.0	10.3	0.2	0.0	0.0	0.0
<i>Cardamine impatiens</i>	Narrow-leaved Bittercress	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Catalpa bignonioides</i>	Northern Catalpa	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Celastrus orbiculatus</i>	Asiatic Bittersweet	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.00	0.0	0.0
<i>Centurea sp.</i>	Knapsweed sp.	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Cirsium arvense</i>	Canada Thistle	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Dipsacus sylvestris</i>	Teasel	0.0	0.0	0.0	N/A		14.31	0.0	0.00	0.0	0.0	0.0	0.0
<i>Eleagnus umbellata</i>	Autumn Olive	0.0	1.3	9.4	None		12.97	1.3	0.0	0.0	0.0	0.0	0.0
<i>Euonymus alata</i>	Winged Burning Bush	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.00
<i>Iris pseudoacris</i>	Yellow Iris	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lespedeza cuneata</i>	Chinese Bushclover	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Ligustrum obtusifolium</i>	Border Privet	0.0	0.0	0.0	N/A		14.31	0.0	0.00	0.0	0.0	0.0	0.0
<i>Lonicera japonica</i>	Japanese Honeysuckle	18.3	14.0	97.8	None		0.31	0.0	10.0	3.6	0.4	0.0	0.0
<i>Lonicera maackii</i>	Amur Honeysuckle	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lonicera morrowii</i>	Morrow's Honeysuckle	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.00	0.0	0.0
<i>Lysimachia nummularia</i>	Moneywort	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Lythrum salicaria</i>	Purple Loosestrife	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Malus toringo</i>	Toringo Crabapple	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Microstegium vimineum</i>	Japanese Stiltgrass	12.8	11.7	81.6	None		2.63	0.0	11.4	0.03	0.0	0.0	0.3
N/A	Non-native, cool season grass	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Phalaris arundinacea</i>	Reed Canary Grass	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Phragmites australis</i>	Common Reed	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Polygonum cuspidatum</i>	Japanese Knotweed	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Polygonum perforiatum</i>	Mile-a-Minute	0.0	0.0	0.2	None - Check for biocontrol agent		14.28	0.03	0.0	0.0	0.0	0.0	0.0
<i>Pyrus calleryana</i>	Callery Pear	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Ranunculus ficaria</i>	Lesser Celandine	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Robinia pseudoacacia</i>	Black Locust	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Rosa multiflora</i>	Multiflora Rose	14.1	12.6	87.8	None		1.75	0.0	11.6	0.5	0.3	0.0	0.1
<i>Rubus phoeniculus</i>	Wineberry	7.1	3.6	25.2	None		10.70	0.0	0.2	3.4	0.0	0.0	0.03
<i>Securigera varia</i>	Crown vetch	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Viburnum dilatatum</i>	Linden Viburnum	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Viburnum sieboldii</i>	Siebold's Viburnum	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
<i>Wisteria floribunda</i>	Japanese Wisteria	0.0	0.0	0.0	N/A		14.31	0.0	0.0	0.0	0.0	0.0	0.0
Total LOE						0							

¹ The Infestation Index Score combines the extent of acreage infested and the intensity of the infestation. It was derived by multiplying the cover class number by the number of acres within each cover class.

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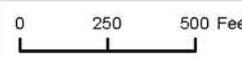


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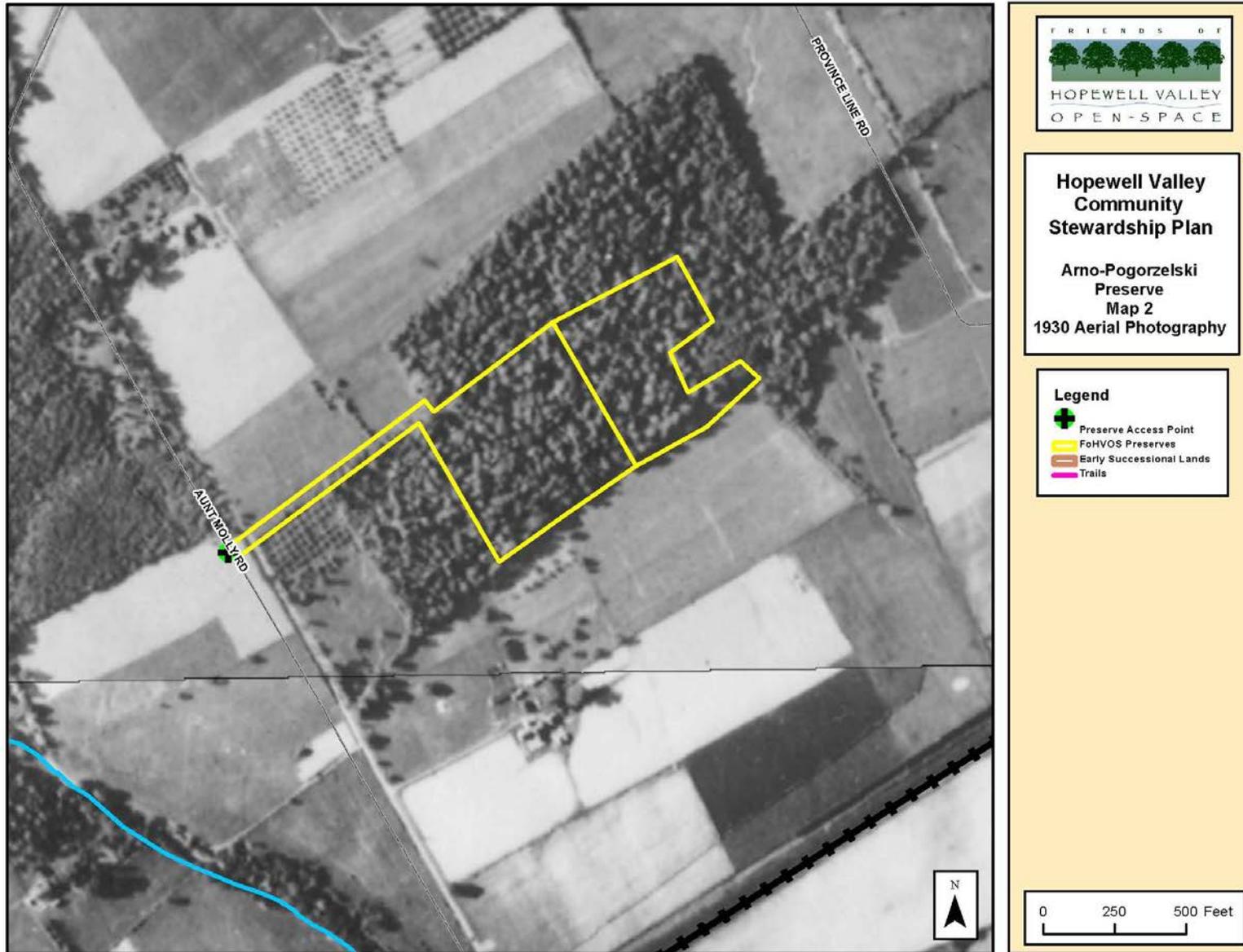
Arno-Pogorzelski
Preserve
Map 1
2007 Aerial Photography

Legend

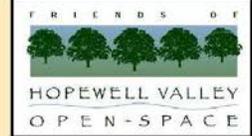
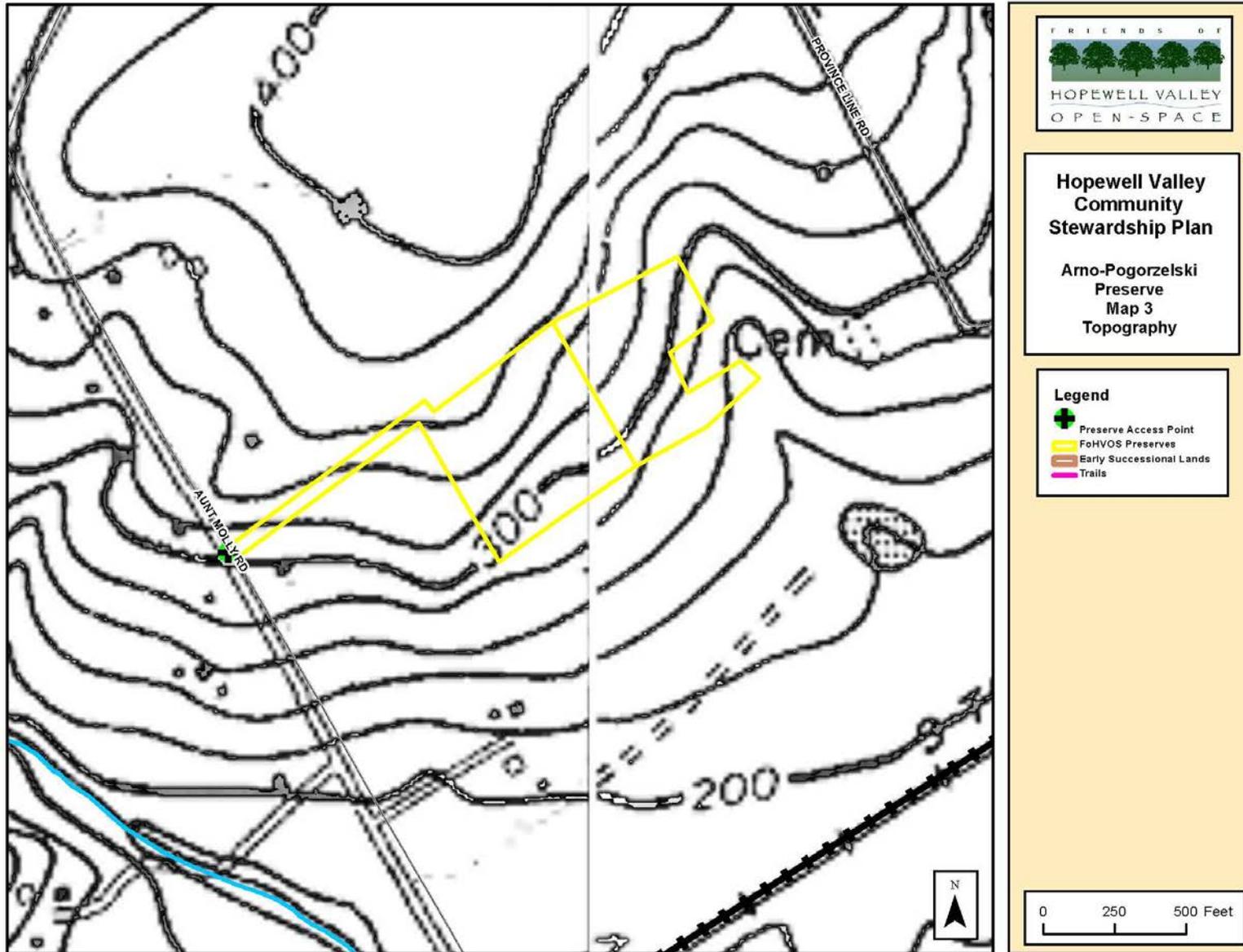
- Preserve Access Point (Green cross symbol)
- FoHVOS Preserves (Yellow outline symbol)
- Early Successional Lands (Brown outline symbol)
- Trails (Pink line symbol)



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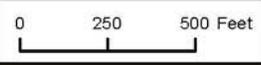
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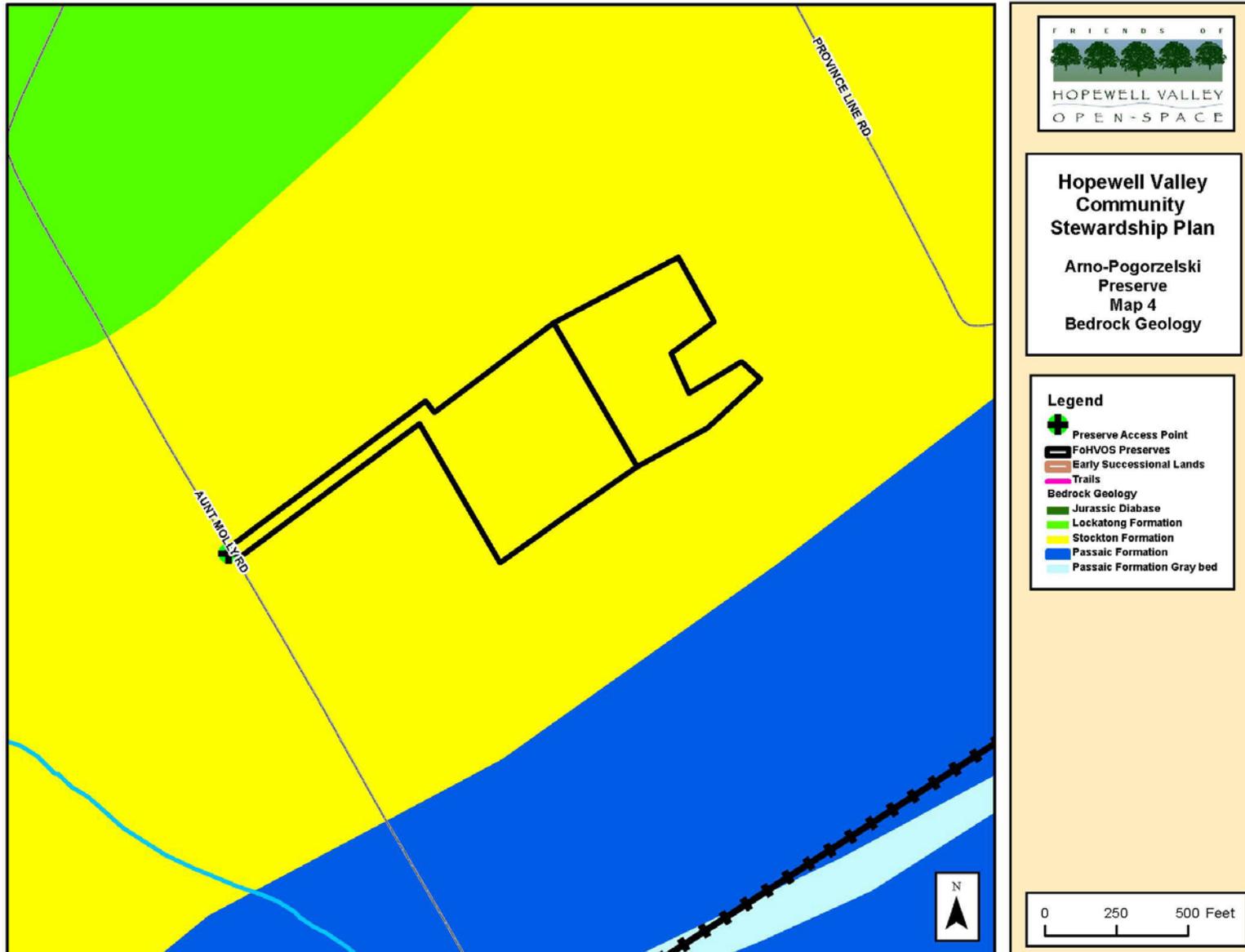
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**Arno-Pogorzelski
Preserve
Map 3
Topography**

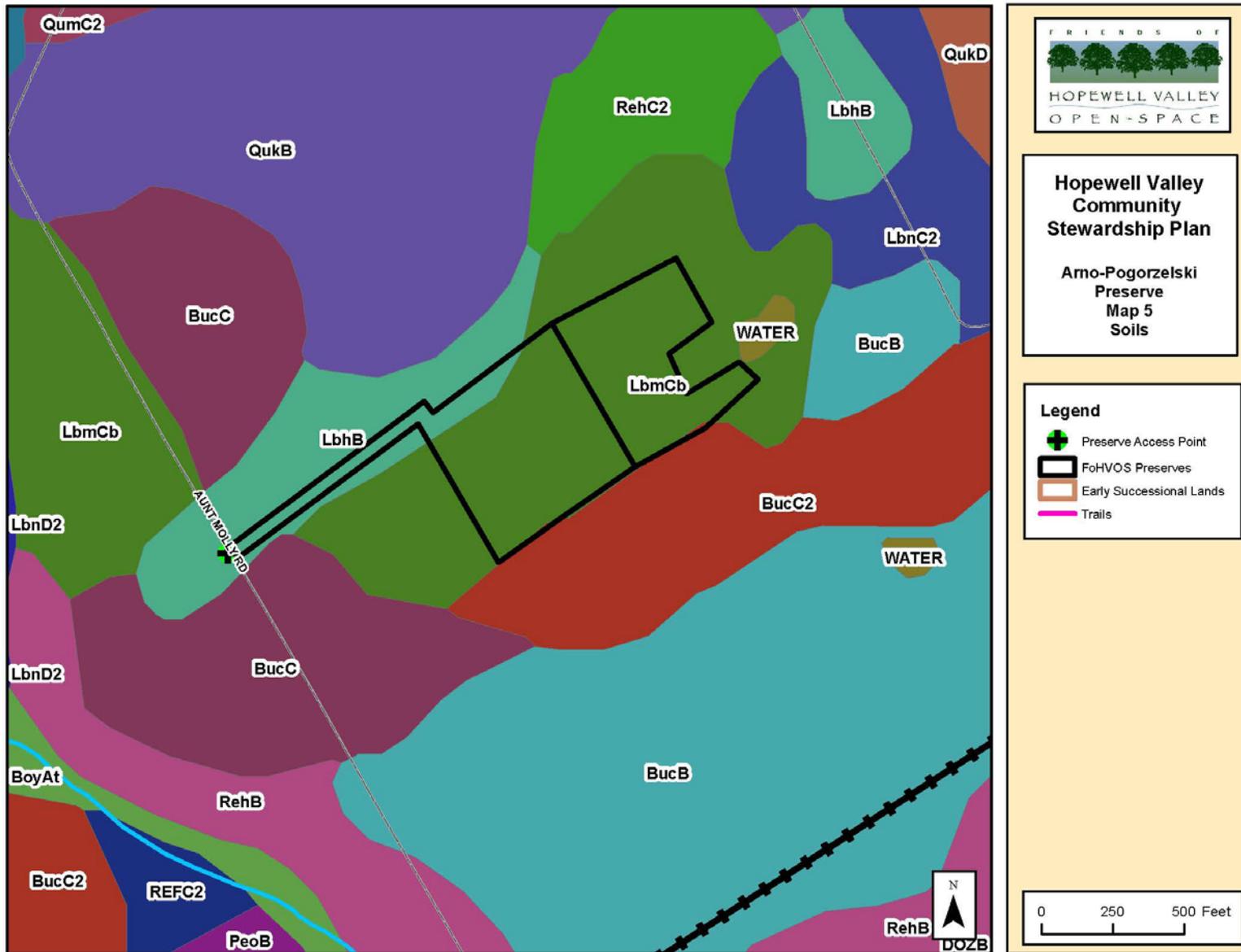
- Legend**
- Preserve Access Point
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 - Trails



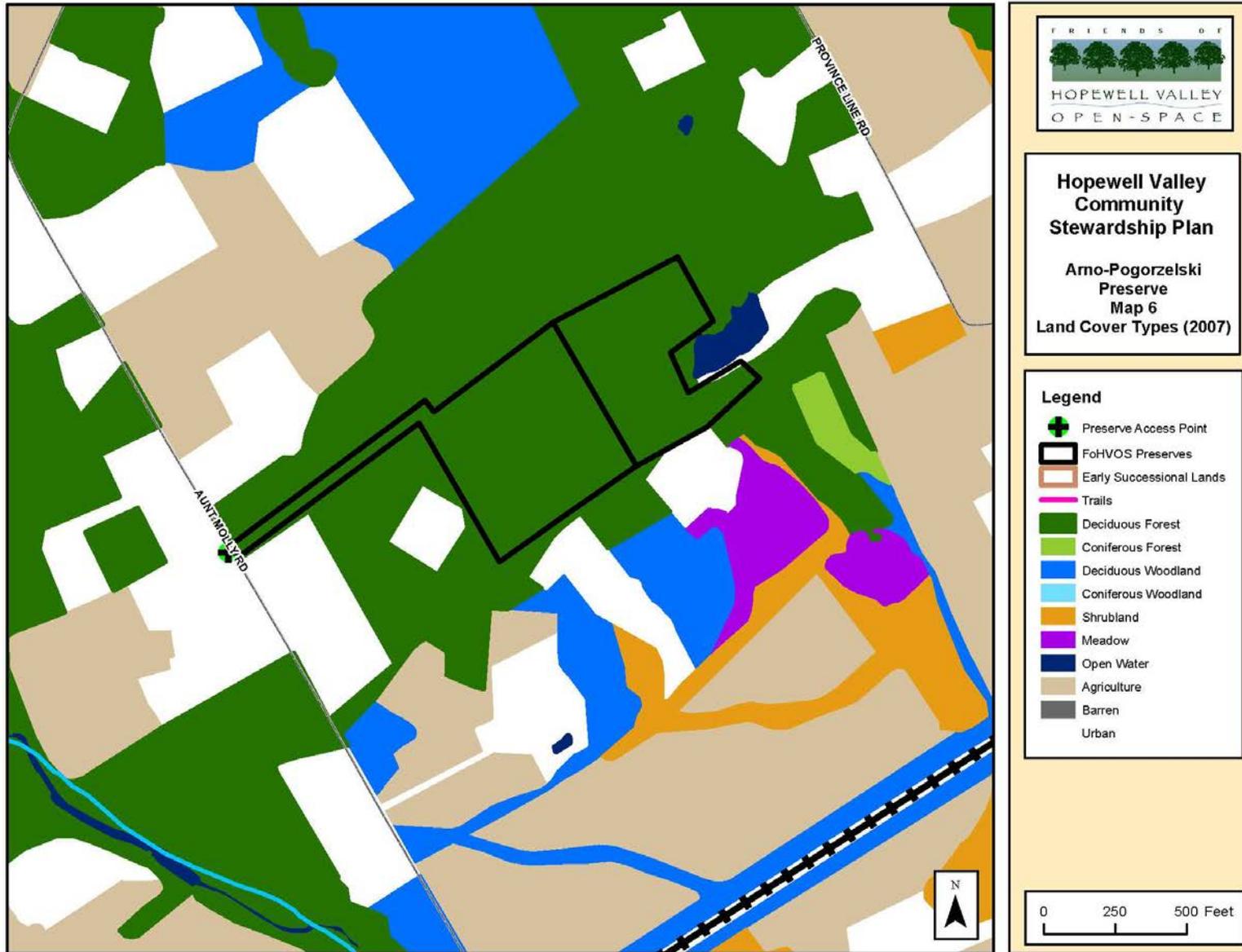
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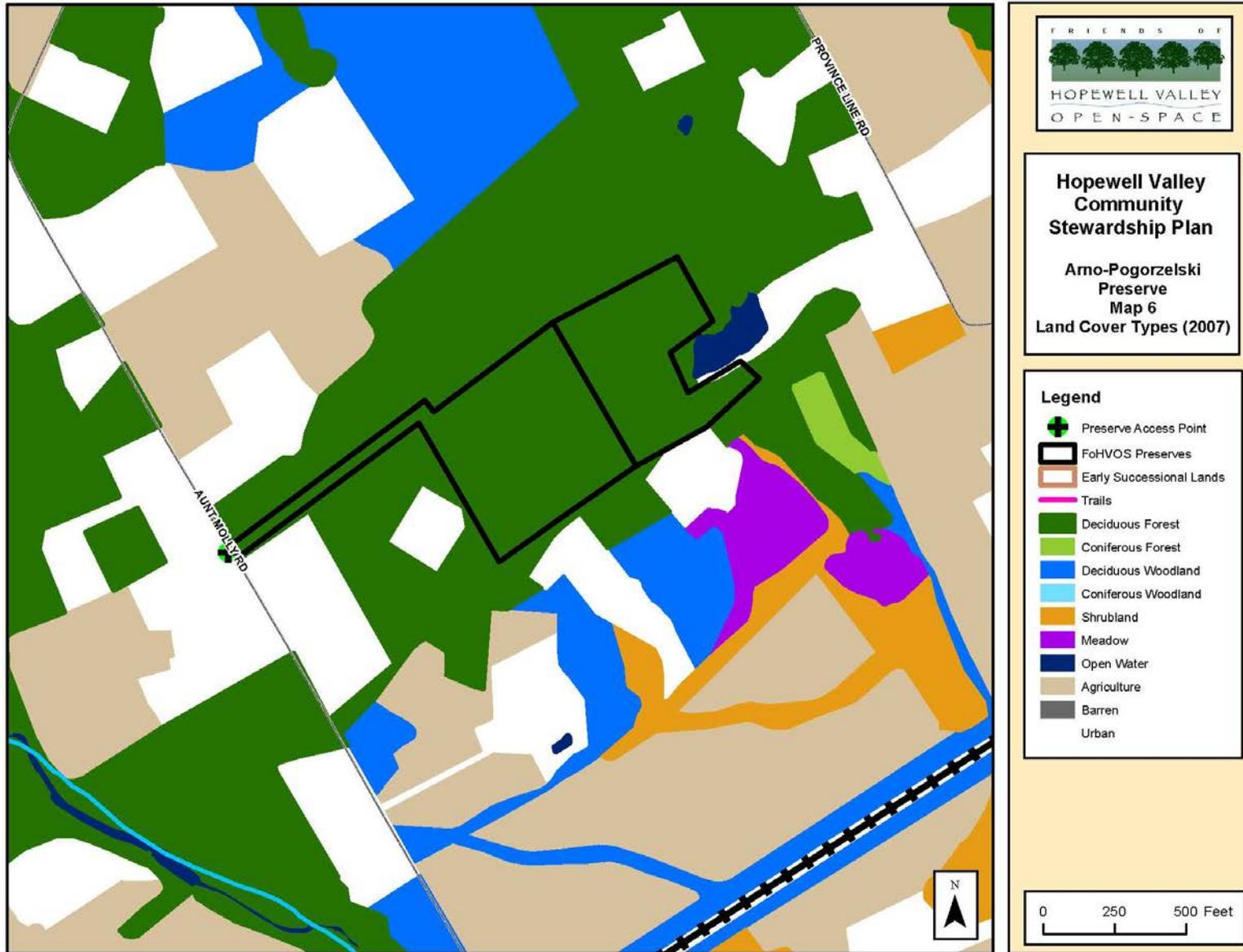
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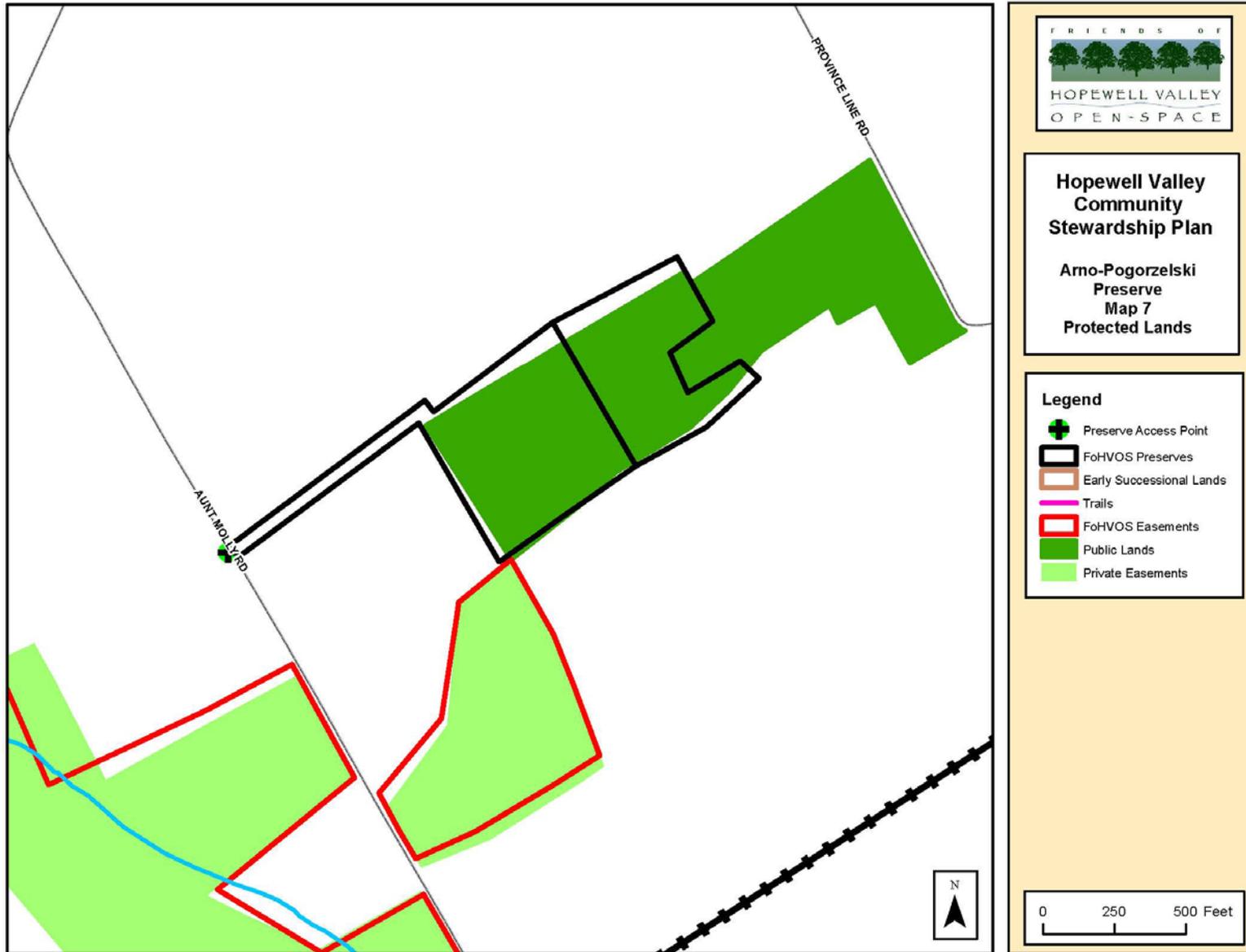
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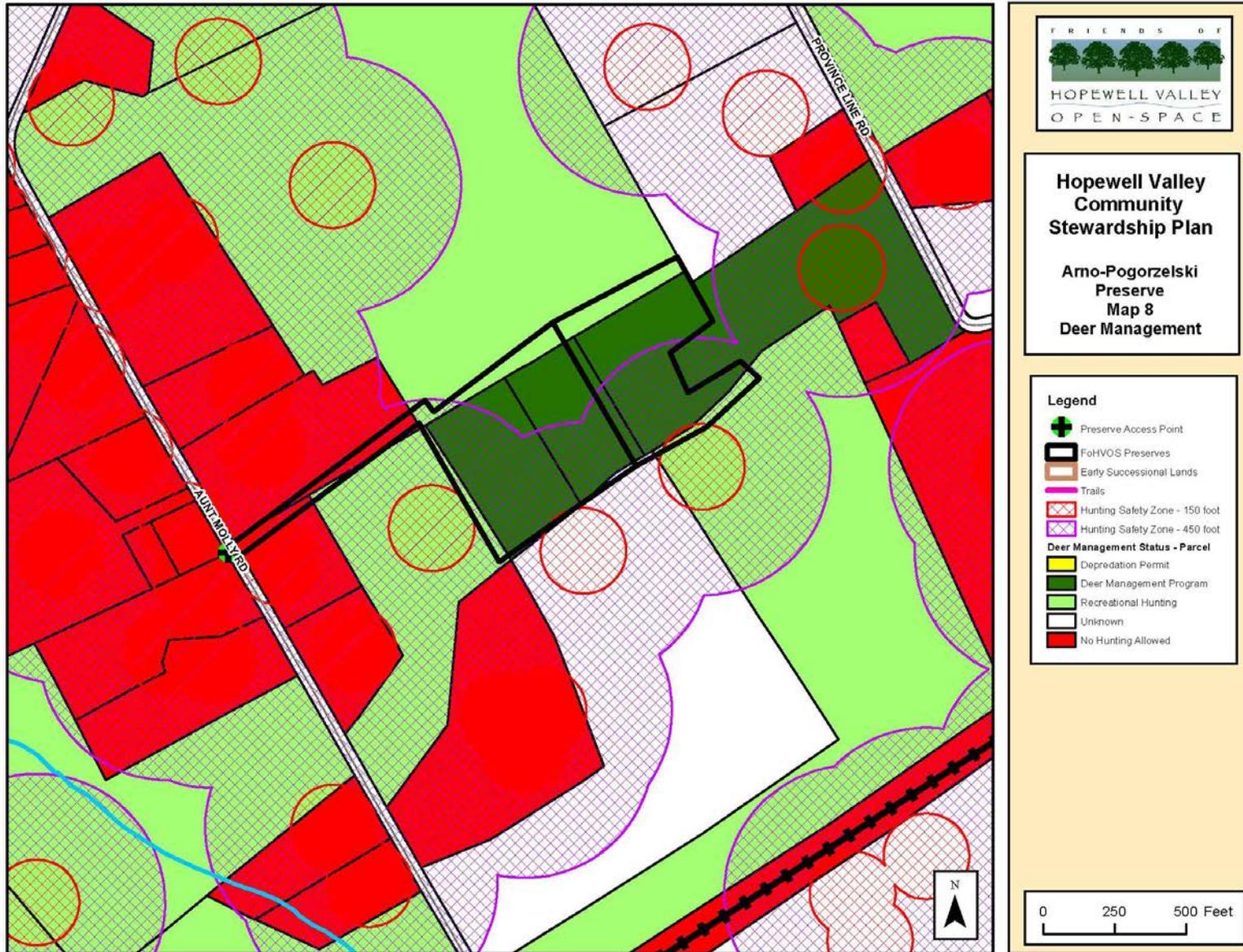
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