

Management Plan
Woodland Preserve
June 2010



LEGACY LAND CONSERVANCY



Management Plan for the Woodland Preserve

Webster Township, Washtenaw County, Michigan

Prepared by Elizabeth Durfee

June 2010

This document contains a description of the preserve, management objectives, and management actions. Management actions are broken down into short term (0-3 years), mid term (3-8 years), and long term goals (8 years or more), as well as immediate and annual needs.

Thank you to Dana Wright and the Legacy Land Conservancy Staff for their assistance with the preparation of this document.

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INTRODUCTION

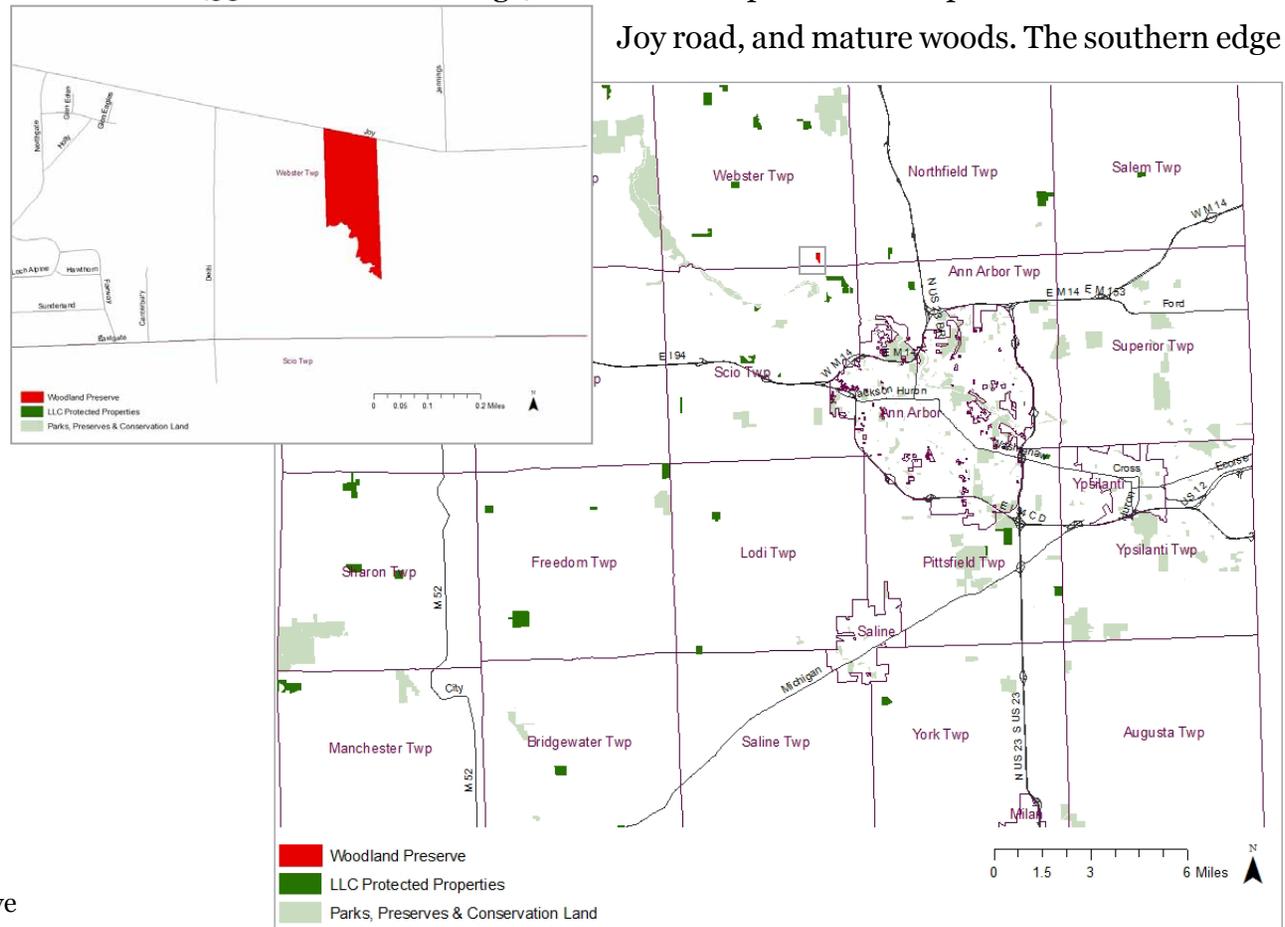
Legacy Land Conservancy Preserves

Legacy Land Conservancy (Legacy) seeks to preserve land that varies in location and represents a variety of functions and ecosystem types. The specific characteristics of the property and availability of assets and resources, such as funding or a Preserve Adopter, also influence the selection of properties to preserve.

General Property Description

Woodland Preserve is a 13.52 acre parcel located off Joy Road, four miles northwest of Ann Arbor, in Section 35 of Webster Township in Washtenaw County, Michigan. The parcel is located on the south side of Joy Road, approximately 0.13 miles west of Jennings Road and 0.2 miles east of North Delhi Road.

The Preserve is bounded to the south by a tributary to Honey Creek and is irregular in shape. Joy Road, a county gravel road, forms the northern boundary of the Preserve (532.22 feet of frontage). The northern portion of the parcel consists of an old field along the north side of consists of a stream corridor. Rough property boundaries are indicated by an old fence in the southeast portion of the Preserve, a vehicle path adjacent to the eastern border of the wooded area, and orange-painted stakes along the western boundary.



Map 1 Location of Woodland Preserve

Land Use History

Historic land cover consisted of hickory oak forest to the north and mixed hardwood swamp to the south (Appendix C). Much of this area was likely farmed in the recent past.

Acquisition

The property was donated by Rosemary S. Maddock on January 7, 2002.

Surrounding Uses

The Preserve is located in an agricultural-rural area. Adjacent land uses include: a rural residential lot with farm and woodland to the west; agricultural land to the north on the north side of Joy Road; agricultural land to the northeast; forest to the southeast (Map 2).

Connectivity

The Woodland Preserve is located approximately $\frac{3}{4}$ miles north of the Huron River and is located within the Ann Arbor Greenbelt.



Map 2 Aerial image of the Woodland Preserve and surrounding land use (data source: MI DTMB)

Classification and Purpose

The Woodland Preserve is classified as a limited-access and non-managed preserve. Pedestrian access is permitted; management of natural features and restoration are not permitted.

The purpose of this management plan is to provide a framework to guide management of Woodland Preserve. The plan provides current and future land managers, stewards, and the community at large with information about the Preserve to aid in ensuring long term protection.

The primary management objective for Woodland Preserve is to ensure that the property remains in its natural state. Per the donor’s request, the property may not be managed for invasive species or visitor use. The property may be used for research and may serve as a suitable site for observing succession and climate related change.

Preserve: Woodland

Location: Webster Township, Washtenaw County

<i>Assets/ Characteristics</i>	High Quality	Low Acquisition Costs	Low Stewardship Costs	Preserve Adopter Potential	Size			
<i>Function</i>	Teaching Tool/ Educational Opportunity	Research Potential	Urban Preserve	Proximity to other Protected Land	Community Use			
<i>Ecosystem</i>	Prairie	Woodland	River Corridor	Fen	Bog	Marsh	Farmland	Organic Farmland

SITE DESCRIPTION

Soils

Blount loam (BbB), 2 to 6 percent slopes:

- Poorly drained
- Nearly level soils formed in loamy textured glacial till
- High available water capacity
- Permeability is moderately low
- Accounts for approximately 48% of the Preserve, located in the north portion, old field

Brookston loam (Br), 0-2 percent slopes:

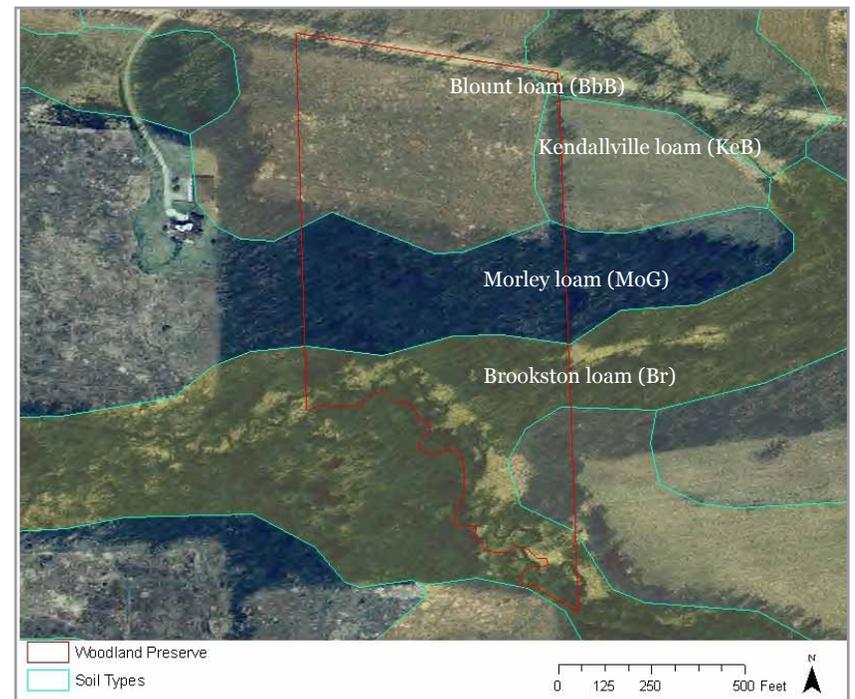
- Very poorly drained
- Formed in depressions on moraines and till plains
- High available water capacity
- Account for approximately 20 % of the Preserve, located at the southern border, creek corridor

Kendallville loam (KeB), 2 to 6 percent slopes:

- Well drained
- Formed on knolls on till plains and moraines
- High available water capacity
- Accounts for approximately 5% of the Preserve; located in the northeastern section of the field

Morley loam (MoG), 6 to 12 percent slopes:

- Well drained and moderately drained soils
- Formed in loamy textured glacial till
- Soils have a high available water capacity
- Permeability is moderately low to low
- Account for approximately 28% of the Preserve; located in the middle portion, wooded area (Map 6).



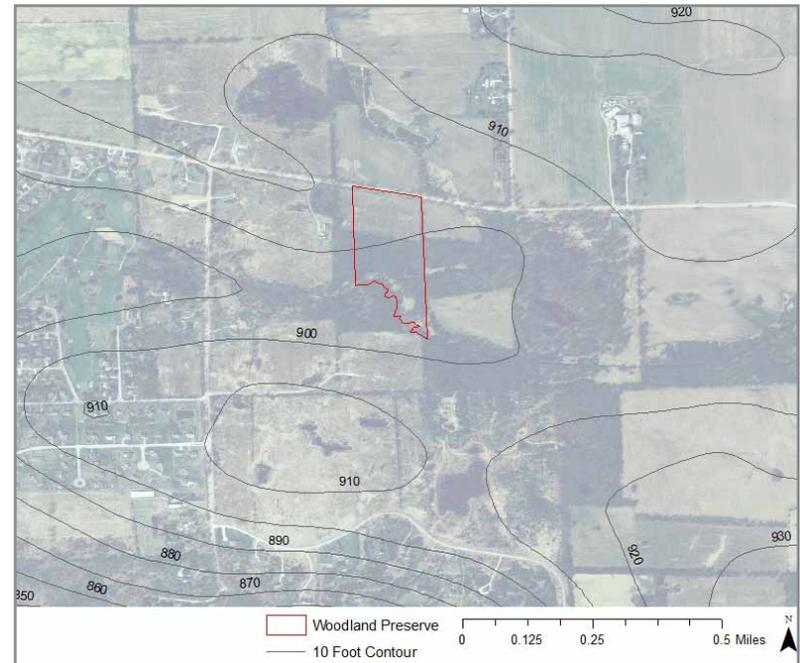
Map 3 Soils present in the Woodland Preserve (data sources: MI DTMB, NRCS)

Topography

Topography in the northern portion of the Woodland Preserve is level to gently rolling. The center of the parcel slopes down towards the creek. Elevation within the Preserve ranges from 900 - 910 feet above sea level (Map 4).

Hydrology

A small creek, approximately two to five feet wide and up to three feet deep, is located at the southern edge of the Preserve (Figure 1). Drainage appears adequate and water moves south to the creek. Low wetlands are present around the creek. The field contained small drainage ditches; the southeastern portion of the field was marshy in May 2010. A small tributary enters the site via a culvert under the vehicle path from the east and roughly bisects the eastern border of the forested area.



Map 4 Aerial image of the Woodland Preserve with contour lines (data sources: MI DNRE, MI DTMB)



Figure 1 View of creek at southern boundary of the Preserve, upstream (left) and downstream.

Ecology

1. Ecosystems

The site appears highly modified. Many of the original dominant tree species continue their presence in the forest; the structure and ground cover have been heavily altered by grazing pressure.

a) Old Field

The northern half of the Preserve is an old field comprised predominately of cool season grasses with a few scattered shrubs and small trees coming in (Figure 2). There are two small groups of 3-5 year old quaking aspens (Figure 3), scattered small-medium autumn olive, rose bushes, and a few small juniper. There is also one stand of stunted black ash straddling the northwest border of the property. Herbaceous plants include a variety of sedges, wild strawberry, agrimony, a variety of golden rod species, daisy, and Queen Anne’s lace. There is a border along the road composed of a mix of mature oak species, some ash, and a few large buckthorn.



Figure 2 View northwest from southeast corner of field



Figure 3 View of aspen from northeast corner of field

b) Oak-Hickory Forest

The west border of the property consists of second growth oak-hickory forest. Signs of past grazing by livestock, including an old fence, low herbaceous diversity and open soil, are evident. Grazing pressure from deer remains high. Several large diameter hickory, white oak, black oak, and bur oak remain within the stand, while most of the forest has been heavily cut, regeneration consists mostly of 4-8" diameter ash and basswood. The middle-story consists of a combination of grazing resistant shrubs and small trees, both native and exotic, including juniper, hawthorn, prickly ash, and common buckthorn. The understory is relatively open with a few patches of May apple and Jack-in-the-pulpit. Some garlic mustard, dame's rocket, buckthorn seedlings, and very little barberry are also present



Figure 4 View of northeast side of oak-hickory forest



Figure 5 View of western side of oak-hickory forest

(Figures 4 & 5).

c) Creek Corridor

The creek channel is populated with reed canary grass but also has a few species of goldenrod, a good amount of Joe-pye-weed, some skunk cabbage, and marsh marigold. The creek is two to five feet wide and up to approximately three feet deep. There are a few scattered openings along the central portion of the stream on the north side (Figure 6).



Figure 6 View east of creek corridor (top), north of the opening on the northern side of the creek (middle) and adjacent plant community.

2. Invasive Species

Invasive woody species including buckthorn, honeysuckle, and autumn olive, are present within the Preserve. Patches of dames rocket are present in the woodland, along the creek corridor, as well as along the field perimeters. Two patches of garlic mustard were seen on a May 2010 site visit in the east-central portion of the wetland.

MANAGEMENT OBJECTIVES

Overview of goals

The primary management goal is to maintain the Preserve only and perpetually as a nature preserve. No active management (trail installations, invasive species removal, restoration, etc.) is permitted. The site may be used to observe long term change without human disturbance.

Donor Intent

The donor requests that the property be used and perpetually maintained for the purpose of a nature preserve, limited to passive, quiet enjoyment of nature, and for the observation of natural succession of trees and plants in response to changes in the climate. The Preserve may lend itself as a good source for students, teachers, and interested individuals to observe the changes and succession of trees in a forest that has not been cut for at least 100 years and has had no cattle in it for at least 50 years. The Preserve presents a good opportunity for studies of tree and vegetation identification. The donor also comments that the age of the trees could be determined by carbon dating, climate history could be studied using tree-ring bores, and CO₂ absorbed by leaves could be studied.

Management Obligations

Legacy is required to monitor the Preserve annually and ensure that it remains undisturbed by humans.

Management Status

Because management for human use, invasive species, or native species is not permitted, little activity has occurred at this preserve. Photo monitoring points were determined 5/24/10.

IMPLEMENTATION

Management Units

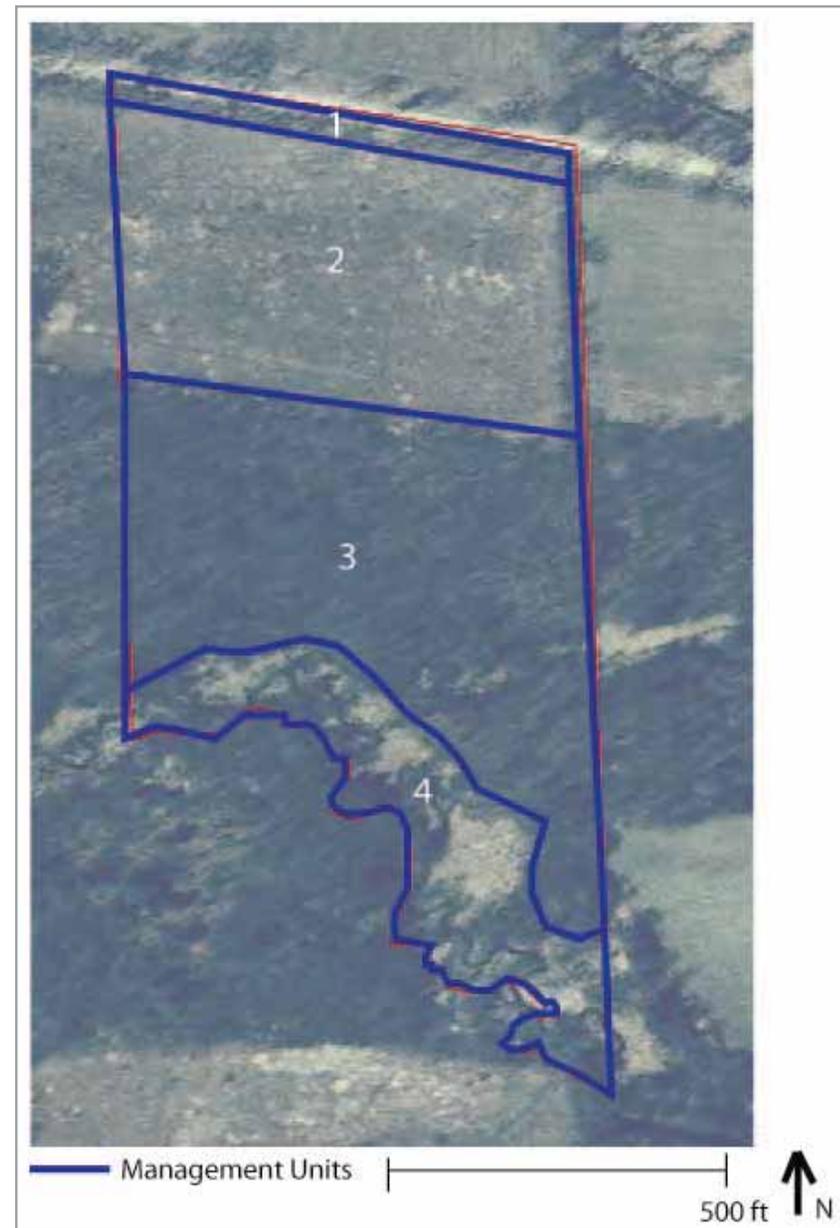
Active management of this land is not permitted; however, management units have been created to assist in long term monitoring of the Preserve (Map 5).

Unit 1: Old growth corridor along Joy Road

Unit 2: Old field with 2 aspen stands and hedgerows along west and east borders in the northern portion of the Preserve

Unit 3: Wooded area, comprised of areas with dense canopy and little understory in the north eastern portion as well as patches of garlic mustard

Unit 4: Creek corridor and open patch to the north of the stream



Map 5 Woodland Preserve management units (data source: MI DTMB)

Management Actions

1. Identify a Preserve Adopter to assist Legacy with monitoring the preserve

2. Conduct a detailed biological survey of plants. In order to identify all species present within an area it is necessary to conduct a survey at least 3 times, during different seasons. The time required to conduct a survey is variable by plant community, travel time, size and accessibility of size, and surveyor. An inventory of 10 acres would take approximately 2 hours, times 3 visits would amount to approximately 30-40 minutes/acre. The Woodland Preserve is just over 10 acres and would require a total of approximately 6 hours to survey, plus an additional 30% of time for office work. In total, a professional plant survey may require an investment of approximately 8 hours and \$480-\$800.

3. Install a sign for the Preserve along Joy Road.

Time Frame:	Immediately
Personnel Needed:	Staff
Time Frame:	Immediately
Personnel Needed:	Contract Professional
Estimated Cost:	\$480- \$800
Approximate Time:	8 Hours
	Greg Vaclavek,
	Native Plant Nursery LCC
	734-677-5860
	plants@nativeplant.com;
	David Mindell
	PlantWise
	734-665-7168
	Plantwise@aol.com
Time Frame:	Immediately
Personnel Needed:	Staff
Estimated Cost:	\$175
Approximate Time:	1-2 hours to install, plus time for designing

4. Collect GPS points to map out:

- a) Plant communities (1-2 hours)
- b) Rare species (1 hour)
- c) Management zones (1-2 hours)

5. Conduct annual photo monitoring.

6. Conduct annual site walks to check for rare species and trash and to monitor invasive species.

7. Investigate opportunities to utilize the Preserve for long term research. Identify organizations or individuals interested in conducting climate related research such as increased rate of biomass production, presence or absence of specific species, etc.

Time Frame: **Within 0-2 years**
Personnel Needed: **Staff or volunteer**
Estimated Cost: **\$50-\$200+ for GPS Unit**
Approximate Time: **3-5 Hours**
Resources: **<http://www.thegpsstore.com/Garmin-BirdsEye-Satellite-Imagery-Card-P2330.aspx>, <http://www.thegpsstore.com/Handheld-GPS-C2.aspx>**

Time Frame: **Annual**
Personnel Needed: **Staff or volunteer**
Approximate Time: **1 Hour**

Time Frame: **Annual**
Personnel Needed: **Staff or volunteer**
Approximate Time: **1-2 Hours**

Time Frame: **3-8 years plus**
Personnel Needed: **Staff, students or volunteer group**
Resources: **UM Professors such as Bob Grese, Don Zac George Kling, Dan Brown**

8. Monitor long term ecological change and succession. Monitor open marshy patch along the central, northern portion of the creek, succession in field, and changes in forest composition.

Time Frame:	8 years plus
Personnel Needed:	Staff or volunteer
Approximate Time:	1-2 Hours

9. Update management plan every 3-5 years or as necessary

Conclusion

The Woodland Preserve contains relatively high quality woodland, old growth hedgerows, old fields, and a stream corridor. While no active management of the Preserve is permitted, it is open to visitors and may be used for research purposes such as monitoring long term ecological change. The Preserve may also be used for educational walks. Management activities that should occur include photomonitoring, obtaining GPS points, observing changes in the stream location and corridor, and monitoring for trash.

APPENDIX A

Map and Directions



Directions:

To access Woodland Preserve take Huron River Drive from North Main Street in Ann Arbor for 5.1 miles. Turn right at North Delhi Road. Drive one mile then turn right on West Joy Road. Drive 0.2 miles and park on the side of the road.

Map 6 Aerial view of the Woodland Preserve

APPENDIX B

Legal Documentation

Legal description of this land (parcel tax identification number #03-35-400-025):

Parcel 2: Part of the Southeast $\frac{1}{4}$ of Section 35, T1S, R5E, Webster Township, Washtenaw County, Michigan, more particularly described as beginning at a point distant N 88006'33" E 333.17 feet along the South line of said Section 35 to the North $\frac{1}{4}$ corner of Section 2, T2S, R5E, Scio Township, Washtenaw County, Michigan; thence N 00050'00" E 2371.71 feet along the centerline of North Delhi Road; thence S 77058'25" E 1105.21 feet along the centerline of Joy Road from the South $\frac{1}{4}$ of said Section 35 and proceeding thence S 77058'35" E 523.22 feet along the centerline of Joy Road; thence S 00054'50" E 1375 feet, more or less; thence Westerly along the centerline of the Creek 921 feet, more or less; thence N 00050'00" W 1008 feet, more or less to the Point of Beginning (See Appendix A for legal sketch of the property).

A 16 foot wide non-exclusive easement along the route [Joy Road] was granted to MediaOne of Eastern Michigan, Inc. for the purpose of constructing, reconstructing,

maintaining, operating and/or removing an underground cable telecommunication line.

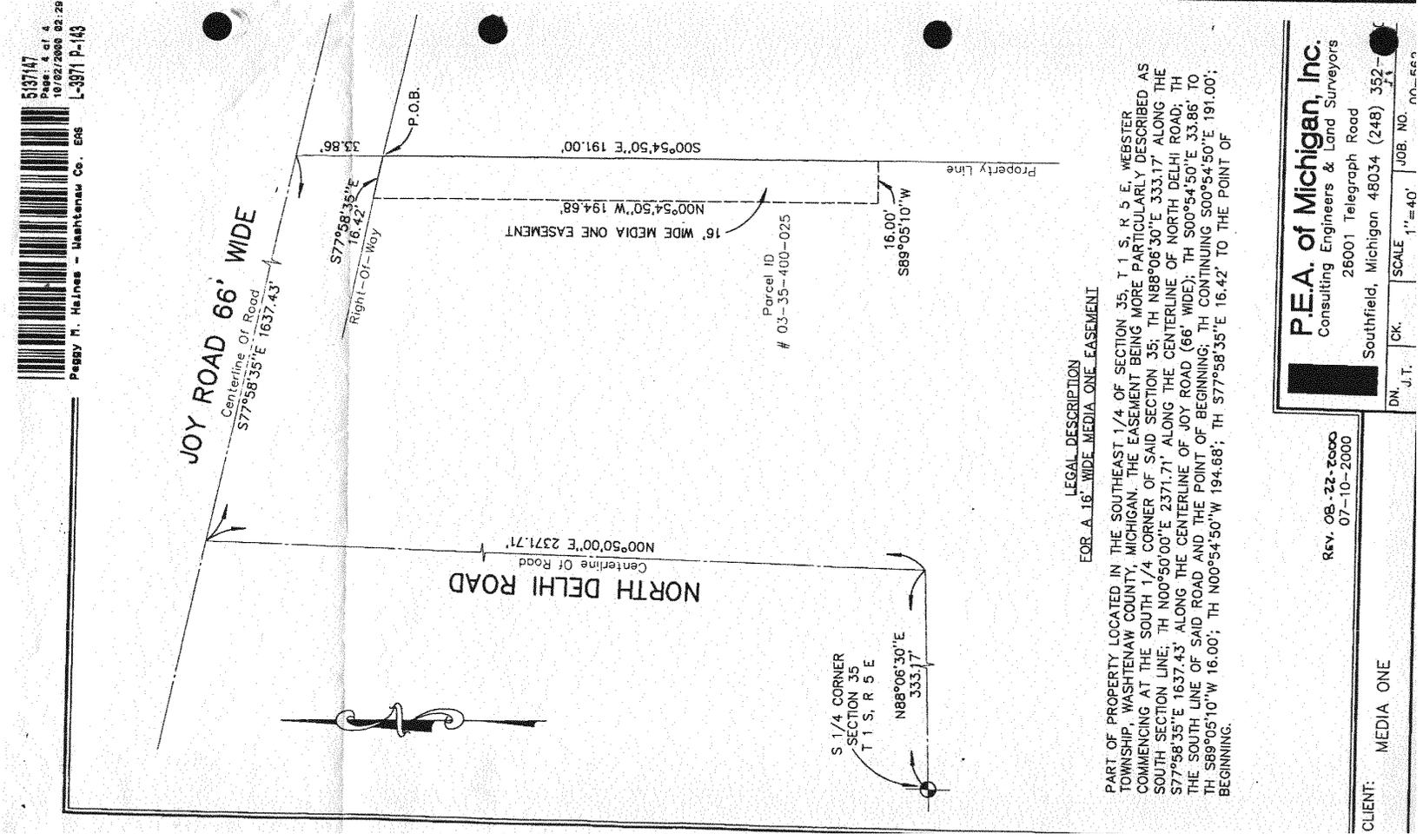
Restrictions

The Preserve must be used and perpetually maintained for the purpose of a nature preserve, limited to passive, quiet enjoyment of nature, and for the observation of natural succession of trees and plants in response to changes in the climate. No improvements to trails or parking space, forest, or stream modifications, or invasive species removal are permitted. Motorized vehicles, bicycles, firearms, dogs, smoking, or alcoholic beverages are not permitted.

Key Documents & Location

Warranty deed, environmental assessment, management plan, title insurance, aerial photos are on hand at Legacy's office in Woodland Preserve hard folder and on the server in file (\\Npserv-llc\sharedfiles\Land\PRESERVES\Woodland Nature Preserve -Maddock).

Legal Sketch



5137147
Page: 4 of 4
10/02/2000 02:29
L-3971 P-143
Peggy M. Halnes - Mauternew Co. GIS

LEGAL DESCRIPTION
FOR A 16' WIDE MEDIA ONE EASEMENT

PART OF PROPERTY LOCATED IN THE SOUTHEAST 1/4 OF SECTION 35, T 1 S, R 5 E, WEBSTER TOWNSHIP, WASHTENAW COUNTY, MICHIGAN. THE EASEMENT BEING MORE PARTICULARLY DESCRIBED AS COMMENCING AT THE SOUTH 1/4 CORNER OF SAID SECTION 35; TH N88°06'30"E 333.17' ALONG THE SOUTH SECTION LINE; TH N00°50'00"E 2371.71' ALONG THE CENTERLINE OF NORTH DELHI ROAD; TH S77°58'35"E 1637.43' ALONG THE CENTERLINE OF JOY ROAD (66' WIDE); TH S00°54'50"E 33.86' TO THE SOUTH LINE OF SAID ROAD AND THE POINT OF BEGINNING; TH CONTINUING S00°54'50"E 191.00'; TH S89°05'10"W 16.00'; TH N00°54'50"W 194.68'; TH S77°58'35"E 16.42' TO THE POINT OF BEGINNING.

Rev. 08-22-2000
07-10-2000

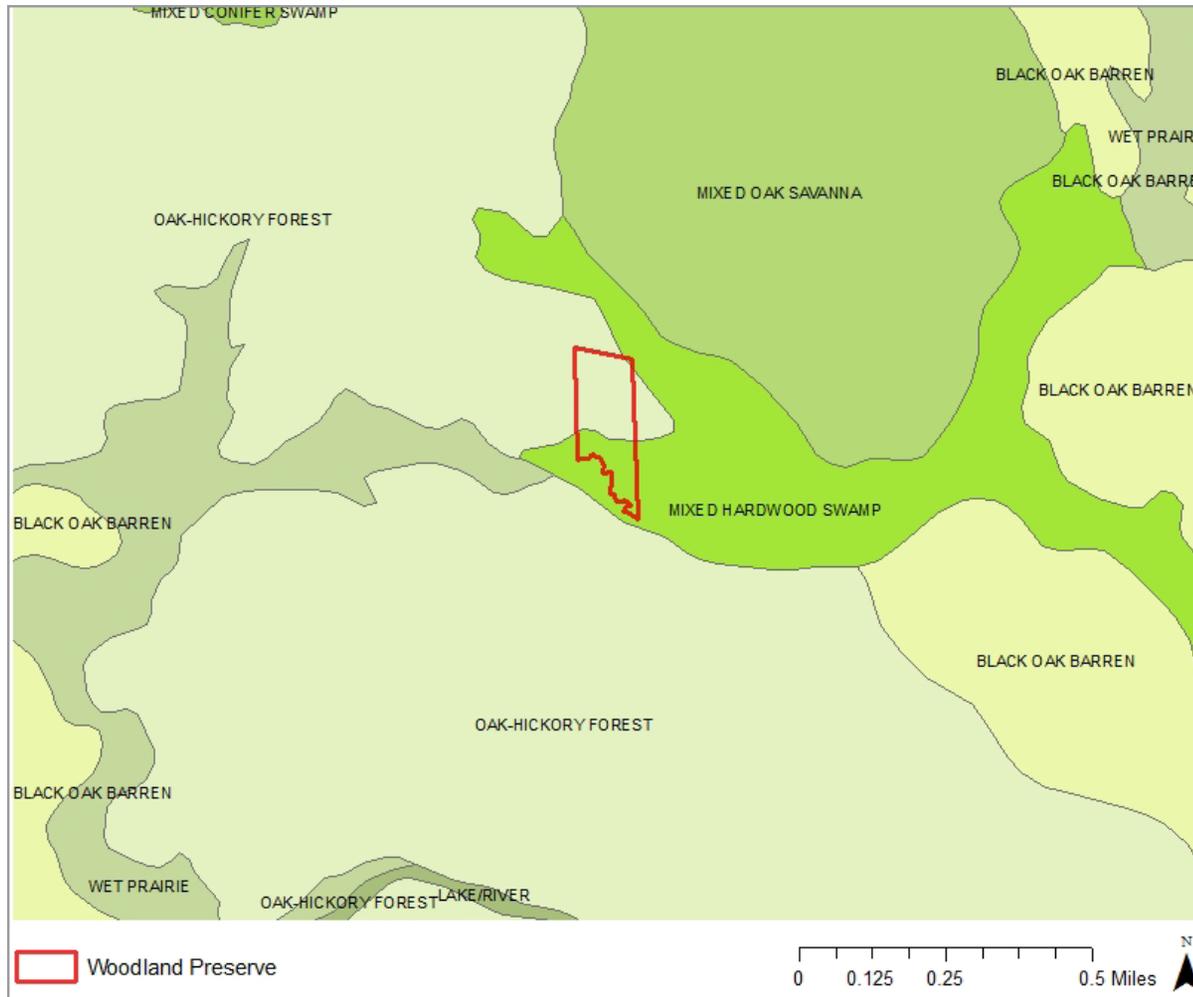
P.E.A. of Michigan, Inc.
Consulting Engineers & Land Surveyors
26001 Telegraph Road
Southfield, Michigan 48034 (248) 352-1111

CLIENT: MEDIA ONE

DN. J.T. | CK. | SCALE 1"=40' | JOB NO. 00-560

APPENDIX C

Historic Map



Woodland Preserve

Webster Township,
Washtenaw County,
Michigan

LAND COVER CIRCA
1800

Map 7 Historic land cover circa 1800 (data source: SEMCOG)