

**HARLEY WOODS PROJECT**

FINAL REPORT

Illinois Wildlife Preservation Fund

GRANT NUMBER 08-007W

**GRANTEE:** Campton Township  
4N498 Town Hall Road  
St. Charles, IL 60175

(630) 377-5705

**TIME** July 12, 2007-June 30, 2008**GRANTEE REPRESENTATIVE:** Jack Shouba

(630) 443-6126

[jackshouba@gmail.com](mailto:jackshouba@gmail.com)**PROJECT OBJECTIVES**

Harley Woods is an oak woods recently preserved as part of the Open Space Program of Campton Township, in Kane County. The objectives of the project were:

1. Conduct a plant inventory and floristic quality assessment
2. Prepare a management plan for the property
3. Hire a restoration contractor to remove aggressive invasive plants such as garlic mustard, Dame's rocket, multiflora rose, honeysuckle, etc.

**COMPLETED PROJECT DESCRIPTION**

1. The plant inventory/floristic quality assessment resulted in the identification of 153 species, of which 119 are native. The native mean conservatism value is 3.7 and the native Floristic Quality Index (FQI) is 40.6, indicating that this is a significant remnant natural community, particularly in the context of Kane County. This FQI score is higher than that of a number of Forest Preserves and other areas listed in *Kane County Wild Plants and Natural Areas* (3<sup>rd</sup> Ed.), by Dick Young.

It should be noted that Campton Township has recently added to the acreage preserved at Harley Woods, both by purchase and by conservation easement, so the FQI will undoubtedly be higher after the new parcels are surveyed botanically.

A copy of the inventory is attached to this report.

2. We prepared a management plan. The goal is to restore high quality oak woodland/savanna. After removal of debris, management activities will include removing invasive plants mechanically and with herbicides, and conducting prescribed burns.

(Additional acreage has been purchased , some of which is in row crops. This area will be replanted with native vegetation appropriate to the site.)

A copy of the management plan is attached to this report.

Township staff met with neighbors of the Woods to discuss our plans for the woods. Several people volunteered to help with management, so we plan to start volunteer work days this fall or winter.

3. We hired Witness Tree Native Landscapes, a local company that specializes in restoration work, to cut and/or herbicide invasive plants such as garlic mustard, Dame's rocket, multiflora rose, honeysuckle, etc.

#### TOTAL PROJECT EXPENDITURES

vendor: Witness Tree Native Landscapes

121 Ford Street

Geneva, IL 60134

amount: \$3009.95, paid by Campton Township, with \$2000 to be reimbursed from the grant.  
(copy of bills attached)

Campton Township Staff

amount: \$1016.50, paid by Campton Township (copy of spreadsheet attached)

Site: Harley Woods of Campton Township, Kane County, IL  
 Locale: South of Beith Road; north of Rte 38  
 Date: June 7 & September 6, 2006; May 17 & October 11, 2007  
 By: Campton Township (K. Johnson; J. Shouba; D. Morgan; J. Johnson)

Notes: Although disturbed from past land use and fire suppression, this is a nice woodland that contains several large oak and Black Walnut trees (including several that are around forty inches in diameter); rolling topography is another fine feature. Despite the presence of various Eurasian weeds through the understory, more than three-quarters of the flora is native. Overall, this landscape has great restoration potential and would provide a wonderful passive recreational experience.

Section 1. Summary Tables

FLORISTIC QUALITY DATA		Native		Adventive	
119 NATIVE SPECIES	Tree	119	77.8%	34	22.2%
153 Total Species	Shrub	20	13.1%	1	0.7%
3.7 NATIVE MEAN C	W-Vine	9	5.9%	12	7.8%
2.9 W/Adventives	H-Vine	7	4.6%	2	1.3%
40.6 NATIVE FQI	P-Forb	3	2.0%	0	0.0%
35.8 W/Adventives	B-Forb	51	33.3%	10	6.5%
1.7 NATIVE MEAN W	A-Forb	3	2.0%	5	3.3%
2.0 W/Adventives	P-Grass	9	5.9%	0	0.0%
AVG: Fac. Upland (+)	A-Grass	5	3.3%	4	2.6%
	P-Sedge	0	0.0%	0	0.0%
	A-Sedge	9	5.9%	0	0.0%
	Cryptogam	0	0.0%	0	0.0%
		3	2.0%		

Section 2. Species Inventory

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACARHO	0 Acalypha rhomboidea	3 FACU	Nt A-Forb	THREE-SEEDED MERCURY
ACENEG	0 Acer negundo	-2 FACW-	Nt Tree	BOX ELDER
ACESAI	0 Acer saccharinum	-3 FACW	Nt Tree	SILVER MAPLE
ACESAU	3 Acer saccharum	3 FACU	Nt Tree	SUGAR MAPLE
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
AGRHYE	1 Agrostis hyemalis	1 FAC-	Nt P-Grass	TICKLE GRASS
ALLPET	0 ALLIARIA PETIOLATA	0 FAC	Ad B-Forb	GARLIC MUSTARD
ALLCAN	2 Allium canadense	3 FACU	Nt P-Forb	WILD ONION
ALLTRB	6 Allium tricoccum burdickii	3 [FACU]	Nt P-Forb	BURDICK'S LEEK
AMBARE	0 Ambrosia artemisiifolia elatior	3 FACU	Nt A-Forb	COMMON RAGWEED
AMBTRI	0 Ambrosia trifida	-1 FAC+	Nt A-Forb	GIANT RAGWEED
ANECAN	4 Anemone canadensis	-3 FACW	Nt P-Forb	MEADOW ANEMONE
ANEQUI	7 Anemone quinquefolia	5 [UPL]	Nt P-Forb	WOOD ANEMONE
ANETHA	7 Anemone thalictroides	5 UPL	Nt P-Forb	RUE ANEMONE
APIAME	7 Apios americana	-3 FACW	Nt P-Forb	GROUND NUT
ARARAC	10 Aralia racemosa	5 UPL	Nt P-Forb	SPIKENARD
ARCMIN	0 ARCTIUM MINUS	5 UPL	Ad B-Forb	COMMON BURDOCK
ARIDRA	7 Arisaema dracontium	-3 FACW	Nt P-Forb	GREEN DRAGON
ARITRI	4 Arisaema triphyllum	-2 FACW-	Nt P-Forb	JACK-IN-THE-PULPIT
ASPOFF	0 ASPARAGUS OFFICINALIS	3 FACU	Ad P-Forb	ASPARAGUS
ASTLAT	4 Aster lateriflorus	-2 FACW-	Nt P-Forb	SIDE-FLOWERING ASTER
ASTSAD	2 Aster sagittifolius drummondii	3 [FACU]	Nt P-Forb	DRUMMOND'S ASTER
ATHFIM	8 Athyrium filix-femina michauxii	0 FAC	Cryptogam	LADY FERN
AURGRP	8 Aureolaria grandiflora pulchra	5 UPL	Nt P-Forb	YELLOW FALSE FOXGLOVE
BERTHU	0 BERBERIS THUNBERGII	4 FACU-	Ad Shrub	JAPANESE BARBERRY
BETNIG	7 Betula nigra	-3 FACW	Nt Tree	RIVER BIRCH
CXBLAN	1 Carex blanda	0 FAC	Nt P-Sedge	COMMON WOOD SEDGE
CXCEPP	3 Carex cephalophora	3 FACU	Nt P-Sedge	SHORT-HEADED BRACKETED SEDGE
CXGRIS	2 Carex grisea	1 [FAC-]	Nt P-Sedge	WOOD GRAY SEDGE
CXHIRT	5 Carex hirtifolia	5 UPL	Nt P-Sedge	HAIRY WOOD SEDGE
CXNORM	5 Carex normalis	0 [FAC]	Nt P-Sedge	SPREADING OVAL SEDGE
CXPENS	5 Carex pensylvanica	5 UPL	Nt P-Sedge	COMMON OAK SEDGE
CXRADI	6 Carex radiata	1 [FAC-]	Nt P-Sedge	STRAIGHT-STYLED WOOD SEDGE
CXROSE	4 Carex rosea	5 UPL	Nt P-Sedge	CURLY-STYLED WOOD SEDGE

CXSPAR	3	Carex sparganioides	0	FAC	Nt P-Sedge	LOOSE-HEADED BRACTED SEDGE
CARCOR	7	Carya cordiformis	3	[FACU]	Nt Tree	BITERNUT HICKORY
CAROVV	5	Carya ovata	3	FACU	Nt Tree	SHAGBARK HICKORY
CELORB	0	CELASTRUS ORBICULATUS	5	UPL	Ad W-Vine	ORIENTAL BITTERSWEET
CELSCA	4	Celastrus scandens	5	[UPL]	Nt W-Vine	CLIMBING BITTERSWEET
CELOCC	3	Celtis occidentalis	1	FAC-	Nt Tree	HACKBERRY
CIRLUC	1	Circaea lutetiana canadensis	3	FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
CIRARV	0	CIRSIIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CIRVUL	0	CIRSIIUM VULGARE	4	FACU-	Ad B-Forb	BULL THISTLE
CORRAC	1	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
CORAME	5	Corylus americana	4	FACU-	Nt Shrub	AMERICAN HAZELNUT
CRAMOL	2	Crataegus mollis	4	FACU-	Nt Tree	DOWNY HAWTHORN
CRAPUN	2	Crataegus punctata	5	UPL	Nt Tree	DOTTED HAWTHORN
CRYCAN	2	Cryptotaenia canadensis	0	FAC	Nt P-Forb	HONEWORT
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad P-Grass	ORCHARD GRASS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
DENLAC	5	Dentaria laciniata	3	FACU	Nt P-Forb	TOOTHWORT
DIOVIL	7	Dioscorea villosa	1	FAC-	Nt H-Vine	WILD YAM
DRYSPI	8	Dryopteris spinulosa	-2	FACW-	Cryptogam	SPINULOSE SHIELD FERN
DUCIND	0	DUCHEGNEA INDICA	4	FACU-	Ad P-Forb	INDIAN STRAWBERRY
ELAUMB	0	ELAEAGNUS UMBELLATA	5	UPL	Ad Shrub	AUTUMN OLIVE
ERIANB	0	Erigeron annuus	1	FAC-	Nt B-Forb	ANNUAL FLEABANE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt A-Forb	HORSEWEED
ERIPHI	4	Erigeron philadelphicus	-3	FACW	Nt P-Forb	MARSH FLEABANE
ERYALB	5	Erythronium albidum	5	UPL	Nt P-Forb	WHITE TROUT LILY
EUOALA	0	EUONYMUS ALATUS	5	UPL	Ad Shrub	BURNING BUSH
EUOFOR	0	EUONYMUS FORTUNEI	5	UPL	Ad Shrub	WINTERCREEPER
EUPRUG	4	Eupatorium rugosum	5	UPL	Nt P-Forb	WHITE SNAKEROOT
FRAAMA	5	Fraxinus americana	3	FACU	Nt Tree	WHITE ASH
GALAPA	1	Galium aparine	3	FACU	Nt A-Forb	ANNUAL BEDSTRAW
GERMAC	4	Geranium maculatum	5	[UPL]	Nt P-Forb	WILD GERANIUM
GEUCAN	1	Geum canadense	0	FAC	Nt P-Forb	WOOD AVENS
GLEHED	0	GLECHOMA HEDERACEA	3	FACU	Ad P-Forb	CREEPING CHARLIE
GLETRI	2	Gleditsia triacanthos	0	FAC	Nt Tree	HONEY LOCUST
GLYSTR	4	Glyceria striata	-3	[FACW]	Nt P-Grass	FOWL MANNA GRASS
HACVIR	0	Hackelia virginiana	1	FAC-	Nt B-Forb	STICKSEED
HELSTR	5	Helianthus strumosus	5	UPL	Nt P-Forb	PALE-LEAVED SUNFLOWER
HERMAX	5	Heracleum maximum	5	UPL	Nt P-Forb	COW PARSNIP
HESMAT	0	HESPERIS MATRONALIS	5	UPL	Ad P-Forb	DAME'S ROCKET
HIECAE	0	HIERACIUM CAESPITOSUM	5	UPL	Ad P-Forb	FIELD HAWKWEED
HOSLAN	0	HOSTA LANCIFOLIA	5	UPL	Ad P-Forb	PLANTAIN LILY
HYDVIR	5	Hydrophyllum virginianum	0	[FAC]	Nt P-Forb	VIRGINIA WATERLEAF
HYPPER	0	HYPERICUM PERFORATUM	5	UPL	Ad P-Forb	COMMON ST. JOHN'S WORT
IMPCAP	3	Impatiens capensis	-3	FACW	Nt A-Forb	ORANGE JEWELWEED
IMPPAL	6	Impatiens pallida	-1	[FAC+]	Nt A-Forb	YELLOW JEWELWEED
ISOBIT	8	Isopyrum biternatum	5	UPL	Nt P-Forb	FALSE RUE ANEMONE
JUGNIG	5	Juglans nigra	3	FACU	Nt Tree	BLACK WALNUT
JUNDUD	4	Juncus dudleyi	0	[FAC]	Nt P-Forb	DUDLEY'S RUSH
JUNTEN	0	Juncus tenuis	2	[FACU+]	Nt P-Forb	PATH RUSH
JUNVIC	2	Juniperus virginiana crebra	3	FACU	Nt Tree	RED CEDAR
LACCAN	2	Lactuca canadensis	2	FACU+	Nt B-Forb	WILD LETTUCE
LEEVI	7	Leersia virginica	-3	FACW	Nt P-Grass	WHITE GRASS
LEOCAR	0	LEONURUS CARDIACA	5	UPL	Ad P-Forb	MOTHERWORT
LIGVUL	0	LIGUSTRUM VULGARE	1	FAC-	Ad Shrub	COMMON PRIVET
LONMAA	0	LONICERA MAACKII	5	UPL	Ad Shrub	AMUR HONEYSUCKLE
LONPRO	7	Lonicera prolifera	5	UPL	Nt W-Vine	YELLOW HONEYSUCKLE
LONTAT	0	LONICERA TATARICA	5	[UPL]	Ad Shrub	TARTARIAN HONEYSUCKLE
MENCAN	6	Menispermum canadense	-1	FAC+	Nt W-Vine	MOONSEED
MORALB	0	MORUS ALBA	0	FAC	Ad Tree	WHITE MULBERRY
MUHSCH	0	Muhlenbergia schreberi	3	[FACU]	Nt P-Grass	NIMBLEWILL
ONOSEN	8	Onoclea sensibilis	-3	FACW	Cryptogam	SENSITIVE FERN
OSMLON	3	Osmorhiza longistylis	4	FACU-	Nt P-Forb	SMOOTH SWEET CICELY
OXAEUR	0	Oxalis europaea	3	FACU	Nt P-Forb	TALL WOOD SORREL
PANIMP	2	Panicum implicatum	1	FAC-	Nt P-Grass	OLD-FIELD PANIC GRASS
PARQUI	2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
PHYHET	3	Physalis heterophylla	5	UPL	Nt P-Forb	CLAMMY GROUND CHERRY
PHYAME	1	Phytolacca americana	1	FAC-	Nt P-Forb	POKEWEED
PILPUM	5	Pilea pumila	-3	FACW	Nt A-Forb	CLEARWEED
PLARUG	0	Plantago rugelii	0	FAC	Nt A-Forb	RED-STALKED PLANTAIN
POACOM	0	POA COMPRESSA	2	FACU+	Ad P-Grass	CANADA BLUE GRASS

POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POPEL	4	Podophyllum peltatum	3	FACU	Nt P-Forb	MAY APPLE
POLREP	5	Polemonium reptans	0	FAC	Nt P-Forb	JACOB'S LADDER
POLSCN	1	Polygonum scandens	0	FAC	Nt H-Vine	CLIMBING FALSE BUCKWHEAT
POLGVI	2	Polygonum virginianum	0	FAC	Nt P-Forb	WOODLAND KNOTWEED
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
POTSIS	4	Potentilla simplex	4	FACU-	Nt P-Forb	COMMON CINQUEFOIL
PRUSER	1	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
PRUVIR	3	Prunus virginiana	3	[FACU]	Nt Shrub	CHOKE CHERRY
QUEALB	5	Quercus alba	0	FAC	Nt Tree	WHITE OAK
QUEMAC	5	Quercus macrocarpa	1	FAC-	Nt Tree	BUR OAK
QUERUB	7	Quercus rubra	3	FACU	Nt Tree	RED OAK
QUEVEL	6	Quercus velutina	5	UPL	Nt Tree	BLACK OAK
RANSEP	5	Ranunculus septentrionalis	-4	FACW+	Nt P-Forb	SWAMP BUTTERCUP
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
RHUGLA	1	Rhus glabra	5	UPL	Nt Shrub	SMOOTH SUMAC
RHURAD	2	Rhus radicans	-1	FAC+	Nt W-Vine	POISON IVY
RIBMIS	5	Ribes missouriense	5	UPL	Nt Shrub	WILD GOOSEBERRY
ROSMUL	0	ROSA MULTIFLORA	3	FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3	Rubus allegheniensis	2	FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	2	Rubus occidentalis	5	UPL	Nt Shrub	BLACK RASPBERRY
SAMCAN	1	Sambucus canadensis	-2	FACW-	Nt Shrub	ELDERBERRY
SANCAD	6	Sanguinaria canadensis	4	FACU-	Nt P-Forb	BLOODROOT
SANGRE	2	Sanicula gregaria	-1	FAC+	Nt P-Forb	CLUSTERED BLACK SNAKEROOT
SCRMAR	4	Scrophularia marilandica	4	FACU-	Nt P-Forb	LATE FIGWORT
SMIRAC	3	Smilacina racemosa	3	FACU	Nt P-Forb	FEATHERY FALSE SOLOMON'S SEAL
SMISTE	5	Smilacina stellata	1	FAC-	Nt P-Forb	STARRY FALSE SOLOMON'S SEAL
SMTLAS	5	Smilax lasioneura	5	[UPL]	Nt H-Vine	COMMON CARRION FLOWER
SOLDUL	0	SOLANUM DULCAMARA	0	FAC	Ad W-Vine	BITTERSWEET NIGHTSHADE
SOLCAN	1	Solidago canadensis	3	FACU	Nt P-Forb	CANADA GOLDENROD
SOLFLE	7	Solidago flexicaulis	3	FACU	Nt P-Forb	BROAD-LEAVED GOLDENROD
SOLULM	5	Solidago ulmifolia	5	UPL	Nt P-Forb	ELM-LEAVED GOLDENROD
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
TRIREC	5	Trillium recurvatum	4	FACU-	Nt P-Forb	RED TRILLIUM
TRIAUA	5	Triosteum aurantiacum	5	UPL	Nt P-Forb	EARLY HORSE GENTIAN
TRIPER	5	Triosteum perfoliatum	5	UPL	Nt P-Forb	LATE HORSE GENTIAN
ULMAME	3	Ulmus americana	-2	FACW-	Nt Tree	AMERICAN ELM
URTPRO	2	Urtica procera	-1	FAC+	Nt P-Forb	TALL NETTLE
VERTHA	0	VERBASCUM THAPSUS	5	UPL	Ad B-Forb	COMMON MULLEIN
VERURU	5	Verbena urticifolia	5	UPL	Nt P-Forb	HAIRY WHITE VERVAIN
VIBLEN	5	Viburnum lentago	-1	FAC+	Nt Shrub	NANNYBERRY
VIBOPU	0	VIBURNUM OPULUS	3	[FACU]	Ad Shrub	EUROPEAN Highbush CRANBERRY
VIBREC	0	VIBURNUM RECOGNITUM	-2	FACW-	Ad Shrub	SMOOTH ARROW-WOOD
VINMIN	0	VINCA MINOR	5	UPL	Ad Shrub	PERIWINKLE
VIOPUB	5	Viola pubescens	4	FACU-	Nt P-Forb	YELLOW VIOLET
VIOSOR	3	Viola sororia	1	FAC-	Nt P-Forb	COMMON BLUE VIOLET
VITAES	7	Vitis aestivalis	3	FACU	Nt W-Vine	SUMMER GRAPE
VITRIP	2	Vitis riparia	-2	FACW-	Nt W-Vine	RIVERBANK GRAPE

# Native Landscape Management Guidelines for HARLEY WOODS – CAMPTON TOWNSHIP

Prepared by Campton Township  
4N498 Town Hall Road  
St. Charles, Illinois 60175

Spring 2008



Campton Township Mission Statement for Harley Woods Open Space:

*“To restore and enhance natural landscapes for purposes of native habitat protection, wildlife preservation, and passive recreation.”*

## Contents of Native Landscape Guidelines

Introduction and Purpose of Guidelines

Native Landscape Management Guidelines

Appendices:

Appendix I – Map of Harley Woods Open Space

Appendix II – Summary of Initial Open Space Restoration Activities at Harley Woods

Appendix III – Open Space Maintenance Activities Projected for 2008  
at Harley Woods

## Introduction and Purpose of Guidelines

Harley Woods is a 44-acre landholding owned and managed by Campton Township. The Harley Woods property was purchased from several families during the 2007 calendar year.

The purpose of these native landscape management guidelines (Guidelines) is to provide an outline of maintenance activities necessary to manage the “open space” (woodland / savanna, old field, and cultivated ground) at Harley Woods. To this end it should be noted:

- The management activities outlined herein and as performed at the site are appropriate to the mission statement for the open space acreage at Harley Woods.
- These Guidelines include a description of various maintenance activities and an annual “timeline” of when these activities are conducted during the calendar year.
- The information in these Guidelines can be used to budget staff hours and resources towards management of this open space from year to year.

The information presented in these Guidelines is intended for appropriate Campton Township maintenance and administration staff. Appendices in the back of the report include:

- Appendix I – Map of Harley Woods Open Space
- Appendix II – Summary of Initial Open Space Restoration Activities at Harley Woods
- Appendix III – Open Space Maintenance Activities Projected for 2008  
at Harley Woods



## Native Landscape Management Guidelines

### Initial Open Space Management at Harley Woods

Management of the open space began in spring 2008. The focus of initial landscape restoration activities was Garlic Mustard control in the south woodland/savanna, and was conducted by Witness Tree Native Landscape contractors. For purpose of documentation, a summary of these initial management activities is presented in Appendix II.

### Descriptions of Native Landscape Management Activities

The open space at Harley Woods includes *restoration of existing natural areas* as well as the *reconstruction of native landscapes*. The existing natural area at Harley Woods include woodland/savanna habitat; as is the case with most of our remnant landscapes, however, these woods are degraded from their natural state due to past land use including grazing, fire suppression, and logging. The other portions of open space include old-field habitat and a relatively small agricultural field currently in row crop production.

The following descriptions are meant to be general and not intended to detail all aspects of the management activity. All routine, on-going activities are described.

#### Prescribed Burn

A controlled, prescribed landscape fire is a fundamental management tool that should be conducted ever year across the woodland/savanna portions of the site, and across the proposed native prairie and wetland landscapes once they can support a fire. This is a natural process that is essential to the development and long-term survival of a native landscape. Burning helps to control non-native species that threaten to out-compete native plants, and these fires remove litter and help to recycle nutrients. Annual burn management should occur across all portions of the native landscape.

A burn plan needs to be prepared and necessary permits with the state and local authorities need to be secured. Where controlled burns occur near buildings or other sensitive areas (e.g., near trees), the dormant vegetation/fuel should be cut down prior to the burn event in order to reduce flame heights and fire intensity. Controlled burns take place when the vegetation is dormant, generally from late October through early April of the following calendar year. The burn event is scheduled when conditions of temperature, humidity, and wind speed are optimal as detailed in a site-specific burn plan.

A complete burn across the entire native landscape is not likely to occur in any given year. In general, a designated burn area should be from 70 to 100 percent “blackened” after a controlled burn; less than two-thirds (approximate) burn coverage is an indication that the

burn may not have been conducted when conditions were not optimal. Lastly, it is common practice to “clean-up” these native landscapes immediately after a controlled burn (this may include litter removal and mowing for aesthetic reasons).

#### Select Weed Control

This includes herbicide applications and/or hand weeding, both of which are necessary at certain times during the growing season. Herbicide applications are conducted with backpack sprayers or with larger spray equipment.

Common herbaceous weeds at Harley Woods that are targeted for control include: Garlic Mustard and Dames Rocket.

#### Woody Plant Control

This includes the targeted removal of various woody plants located across the woodland/savanna landscape. Work includes cutting down the shrub or tree, followed by burning the debris in a brush pile and/or chipping the material. Depending upon the species, herbicide may be applied to the cut stump.

Common shrubs and trees at Harley Woods that are targeted for control include: Box Elder, Green Ash, various European Honeysuckle shrubs, Common Buckthorn, and Multiflora Rose, to name a few. An invasive vine, European Bittersweet, is a problem in the eastern “lobe” of these woods.

#### Seed Collection & Dispersal

Mature seed of desirable native plants can be collected when mature. The seed can be dispersed in appropriate areas at the site or stored for later use. The stored seed can be sown at another property, and/or exchanged with other land managers.

#### Landscape Mowing

Landscape mowing will be an important management tool in the early years of the prairie establishment at Harley Woods. In general, two to four mowing events per year for the first few years are necessary to control spontaneous weedy growth. The vegetation is mowed down to a height of six to ten inches during each mowing event.

The timing of mowing (and select herbicide applications) events is based on weed growth and seed maturation. Once the prairie vegetation has established mowing, especially during the growing season, should be discouraged; from time to time, however, select mowing may still be necessary to control large patches of undesirable weeds. Landscape mowing is not a substitute for a controlled burn.

### Native Species Enhancement

This includes the addition of native species via overseeding and planting. Additional plant species not present in the landscape can be added if native to the region and if the appropriate habitat is present at the site. In a mature native landscape, seed can be collected and dispersed in order to improve native vegetation cover. Also, as trees mature and impact the prairie landscape via shade and other influences, appropriate shade-tolerant species need to be introduced into these specific zones. This likely will be the case in the proposed native prairie reconstruction that lies adjacent to the woods (northern portion of the current row-crop field), since ultimately this area will be more savanna-like.

An initial native landscape installation includes a basic suite of plant species that, generally, are relatively hardy and within a three- to five-year period will begin to form a native plant matrix/cover (assuming proper site preparation, installation, seed viability, early maintenance, etc.). If one of the goals of a *de novo* native landscape reconstruction is to recreate a fully-functioning system, then plant species enrichment must be incorporated into long-term stewardship.

### Site Monitoring/Assessments

Disciplined vegetation monitoring and/or regular field assessments should be conducted by a restoration ecologist in order to document the development of the native landscapes and to prescribe management actions. Any monitoring results should be documented in reports and the data could be presented to Township staff for planning purposes.

### Other Management Activities

It should be noted that other open space maintenance activities (such as fence repair, signage, trail maintenance, litter removal, various admin., etc.) will be necessary on an as-needed basis; yet, these are not directly tied to native vegetation and habitat management.

### Summary of Open Space Management Activities

- The descriptions presented above can be viewed as general management activities for the native landscapes at Harley Woods. Specific actions will be prescribed and coordinated by the Township's restoration ecologists based upon regular site inspections throughout the growing seasons and/or as outlined in monitoring reports.
- The primary maintenance activities within the savanna/woodland that should be anticipated in the first few years include woody plant control, select weed control, and prescribed burn management.
- Once the native prairie and wetland landscapes are installed, mowing will be required for the control of weeds. Once these areas are established, landscape mowing events should not be necessary, except to mow trails and fire breaks. Mowing an established prairie is not a substitute for prescribed burning
- The first prescribed burn across the *de novo* prairie and wetland landscapes will not occur until after three or four growing seasons, provided that the vegetation is mature enough to carry a fire.
- Controlled burn management should continue in perpetuity—this is the single most important management activity, and lack of a dedicated controlled burn program will result in failure of the native landscapes.
- If dedicated management is carried forth in the first several years then long-term maintenance activities will become less-demanding in terms of resource allocation. In ten years or so, the primary management will be that of an annual prescribed burn and native species enrichment.