

ELM Management Plan Calendar Year 2002

I. Introduction

The Fermi Laboratory Director established the [Ecological Land Management Committee](#) (ELM) to oversee and facilitate the restoration of available lands. In accordance with this objective, the ELM Committee manages available areas of the site as per principles of ecosystem management and restoration, in the effort to maintain and build biological diversity, conserve natural resources and increase the site's aesthetic appeal.

The 6800-acre Fermilab site is divided into management tracts as shown on the [CY 2001 Fermilab Land Management Map](#), which is updated annually to reflect changes in land usage. These tracts are defined by current land use practices and habitat diversity:

- Technical Area (TA) tracts are committed exclusively to the high-energy particle physics mission of the Laboratory
- Agricultural (AG) tracts are leased for agricultural use
- Recreational Area (RA) tracts support non-programmatic, recreational purposes
- Residential (R) tract refers to the residential area in the Village
- Ecological Land Management (ELM) tracts enhance the natural resources of the Laboratory.

Tract boundaries are meant to be dynamic and should change with management needs and ecological considerations.

This plan shall address the management of only those tracts available for restoration—ELM—and shall not interfere with the current or future mission of the Laboratory. The plan is intended to provide a long-range coherent vision for development, not set management priorities or propose year-to-year activities.

Each year the Committee reviews the accomplishments of the current calendar year and advises the Laboratory Director of prioritized activities for the next year. This advice, once approved by the Director, informs the activities of the more specific and detailed *Annual Plan*.

Only minor changes to this general plan may be made at this point without approval of the Director. The ELM Committee may make recommendations for ecological management of areas outside the scope of this plan and should take the following restrictions into consideration:

- Changes in Agricultural tract boundaries need the Director's approval.
- Management of the on-site lake shorelines must be coordinated with FESS.
- Recommendations for management of the lake bodies (e.g. stocking or fishing and/or water return ditches and the berms (e.g. cover species) shall be made to the Director.

II. ELM Accomplishments 2001

A summary of the Laboratory's ELM activities is listed below. Specific tract accomplishments are detailed in Section IV of this plan.

A. New Prairie

Approximately 15 acres of new prairie were planted on the MI Stockpile in ELM 4. The planting of this new prairie with Little Bluestem and Sideoats Grama is part of a program to develop short-grass areas and encourage the nesting of grassland birds. If the Little Blue Stem thrives as hoped, it will become a valuable seed-collecting source for the site.

B. Agricultural Leases

325 acres were added to Agriculture. This new lease includes half of the RA-2 (hayfield) tract (AG-8), which shall be rotated with the other half of RA-2 through a three-year "land management AG License" program.

C. Enrichment

1. ELM tracts 1, 16, 24, 25 and 26 were broadcast seeded with an enrichment mix.
2. 65 new trees and bushes were planted in ELM 24 during the 2001 Arbor Day activities. Species included shagbark hickory and bur oak.

D. Prairie Seed

1. Total seed collected

A total 85 forb species were hand collected by lab personnel and volunteers.

2. Harvests

a. Volunteer Harvest

Round-headed bush clover, obedient plant and nodding wild onion, among other species, were collected from the Main Ring tracts. Spiderwort, Golden Alexanders, and Culver's Root were collected along the Burlington Northern Railroad.

b. Machine Harvest

More than 8,000 pounds of prairie matrix seed were collected via machine harvesting in ELM tracts 24 and 25.

c. Summer Intern

A Roads and Grounds summer intern, Jennie Rudderham, collected many early and mid-summer prairie species that are rarely collected. Collected species include *Pedicularis canadensis* (prairie betony), *Hypoxis hirsuta* (yellow stargrass), *Sisyrinchium albidum* (blue-eyed grass), *Polygala senega* (Seneca snakeroot), *Panicum leibergii* (panic grass), *Phlox pilosa* (prairie phlox) and *Phlox glaberrima* (marsh phlox), *Lobelia spicata* (pale spike lobelia), *Zizia aurea* (golden alexanders), *Carex bicknellii* (Bicknell's sedge), *Anemone canadensis* (meadow anemone), *Allium canadense* (wild onion) and *Tradescantia ohiensis* (spiderwort); and trace amounts of *Comandra richardsiana* (false toadflax), *Dodecatheon meadia* (shooting star), *Heurecha richardsonii* (alum root), and *Galium obtusum* (wild madder).

Jennie also collected understory woodland plants such as *Hydrastis canadensis* (goldenseal), *Trillium grandiflorum* (large-flowered trillium) and *Lithospermum latifolium*

(broad-leaved puccoon); *Stipa spartina* (porcupine grass), a dry prairie species; and various sedges and rushes from wet prairie and wetland areas.

d. Other Prairies

Dr. Betz collected seed of *Zizia aurea* (golden alexanders) and *Cacalia plantaginea* (prairie Indian plantain) from the Hinsdale prairie. He also collected trace amounts of *Dodecatheon meadia* (shooting star) and *Heurecha richardsonii* (alum root).

3. Trades

Forb seed was received from Kane County, and Will County in exchange for combined bulk seed.

E. Noxious Weed Control

As part of the noxious weed control program, Roads and Grounds personnel sprayed teasel in ELM tracts 1, 4, 5, 9, 19, 20, 21, 24, 25 and 26; AG tracts 3, 4 and 7; and TA tract 1. Loosestrife control was conducted in ELM tracts 1, 10, 11, 15 and 24; buckthorn and honeysuckle in ELM tracts 24 and 25; and cottonwood in ELM 1. Oriental bittersweet in ELM tract 24 and TA tract 1 and poison hemlock in ELM tracts 21 and 23 were also sprayed.

The Roads and Grounds department does not have the resources to effectively manage the spread of these invasive exotics.

F. Prescribed Burns

Fermilab's request for a waiver of the DOE Moratorium on Prescribed Burning was approved. The Roads and Grounds department conducted burns in ELM 24 and ELM 25

G. Status of Flora

Robert F. Betz ([See Botanical Report-Fermilab 2001](#)) prepared the annual status report of flora on-site.

H. Status of the On-Site Bird Populations

Peter Kasper prepared the annual report on the on-site bird population, [2001 Fermilab Bird Report](#). Peter Kasper also maintains the on-going compilation of bird observations since 1987, [The Birds of Fermilab](#).

I. Status of Butterflies at Fermilab

The compilation of butterfly observations for the past three years may be seen at [Butterfly Observations](#). Tom Peterson prepared the third annual report on a survey of the butterflies on site, [Butterfly Report to the ELM Committee - Fermilab - 2001](#).

J. Deer Management

During the period from October 2000-March 2001, 21 white-tailed deer were removed from Fermilab. This represents a maintenance level of management. Based on a series of spotlight counts conducted in the spring of 2001, the Laboratory has set a goal of removing an additional 68 individuals during the 2001-2002 permit period.

K. NERP Projects

Seven projects are currently underway with an additional five projects proposed and awaiting approval and/or funding.

- ◆ **Assessment of the Impact of Biological Controls on Garlic Mustard (*Alliaria petiolata*) and Non-target Species in Forest Communities/Vicky Nuzzo with Bernd Blossey/Big Woods south of B Rd./Natural Area Consultants and Cornell University/Continuing**
- ◆ **Effects of Tree Removal on Recovery of Ground Cover in Big Woods at Fermilab/Liz Aicher/ Big Woods south of B Rd. and west of creek/Northern Illinois University/Continuing**
- ◆ **Arbuscular Mycorrhizal Fungi in Soil/J. Jastrow and M. Miller/Various/Argonne National Laboratory/Proposed**
- ◆ **Bird Species Composition at Fermilab/Fumiko Kanekawa/TBD/Northern Illinois University/Proposed**
- ◆ **Effect of Species Richness on the Establishments and Success of Garlic Mustard (*Alliaria petiolata*)/Roger Anderson/TBD/Illinois State University/Awaiting funding**
- ◆ **Differences in Reproductive Success of Prairie Plant Species between Restored and Remnant Prairies/Julie Jastrow/Various/Argonne National Laboratory/Continuing**
- ◆ **Carbon Sequestration in Terrestrial Ecosystems/Julie Jastrow et al./ELM-8/U.S. DOE/Continuing**
- ◆ **Bird Surveys at Fermilab/Peter Kasper with Denis Kania and Jack Pomatto/Site-wide/Fermilab and DuPage Birding Club/Continuing**
- ◆ **Biodiversity of Arbuscular Mycorrhizal Fungi and the Success of the Prairie Restoration/James Bever/ELM-8/University of California-Irvine/Continuing**
- ◆ **The role of insect flower herbivory in native and restored prairies/Carole Ollier/Various/University of California-Irvine/Proposed**

L. Other Accomplishments/Special Projects

1. Butterfly Website

A summer intern, Rory Parilac, worked with Liz Quigg and Tom Peterson to present his butterfly data into a child-friendly website format. [Welcome to Fermilab's Butterflies](#) features a butterfly search engine and a guide to observing butterflies.

2. Frog Survey

Beginning in the Spring 2001, Fermilab participated in the Chicago Wilderness sponsored "Calling Frog Survey". Data on frog species presence will be added to the regional herpetological atlas, which is maintained by Chicago Wilderness for our region. The survey was limited to three areas located in ELM 1, 24 and 27. In 2002, the survey will be extended to include areas in ELM 14.

Species reported for Fermilab for this year were *Rana clamitans* (green frog), *Rana catesbiana* (bull frog), *Bufo americanus* (American toad), and *Pseudacris triceriata* (chorus frog). Other species noted at the Lab, but not surveyed are *Hyla chrysoseles* (Cope's gray tree frog), *Pseudacris crucifer* (spring peeper), and *Rana pipiens* (Northern leopard frog).

3. Frog Website

Rory also created a [Frogs at Fermilab](#) website with a general description of frogs, provided by Rod Walton, and pop-up descriptions of the 8 species commonly found at the Laboratory.

4. Plant Search Database

Three summer interns (Jennie Rudderham, Rory Parilac, and Caleb McKinney) updated the [Fermilab Plant Search](#) database, adding more than 300 photos.

M. Community Participation

1. National Public Lands Days

For the third year, Fermilab registered its first fall volunteer harvest as a National Public Lands Day's event. Chicago Wilderness sponsors National Public Lands Day. The event was cancelled due to September 11 events which impacted access to the site.

2. Volunteer Harvest

Over 100 people participated in the one fall prairie harvests. The first fall harvest was canceled due to the tightened security measures from 9/11.

3. Third Thursday Clean-ups

On the third Thursday of good-weathered months, Roads and Grounds organizes a volunteer clean-up at the Laboratory. This year saw inbound and outbound Pine Street, prairie plot 12 along Kirk Road, and the shorelines of Swan Lake and the Reflector Ponds cleaned during employee lunch hours. Participation ranged from 10 to 25 persons for each clean-up.

4. Arbor Day

Approximately 125 people turned out for Arbor Day plantings.

5. Seed Exchange and Donation

Seed trades conducted so far this year include 2 garbage bags of prairie matrix to Spencer Cortwright of the Little Calumet River Project in Indiana, 1 bag of matrix to Lisa O'Brian of Red Gate High School in St. Charles, and 5 bags to Ron Panzer for enrichment of a new area at Markham Prairie. Six bags of prairie matrix was donated to St Charles Park District. Two additional schools received small amounts for their study areas.

6. Christmas Bird Counts

The annual spring and Christmas Bird Counts were organized and conducted on site by members of the DuPage Birding Club. The results may be viewed at [Christmas Bird Count](#).

7. Eagle Scout Projects

2 martin houses were installed—one at Casey's Pond and one at Logo Lake.

6 bat houses were installed—three at Site 29 and three at Site 58.

Park benches constructed for Big Woods trail.

III. ELM Recommendations 2002

The Committee believes that the first priority must be the ongoing maintenance and improvement activities (e.g. mowing, burning, enrichment, redistribution of small trees, and spraying of herbicides) conducted by the Roads and Grounds personnel. These activities are critical to maintaining and building on ecological improvements already underway.

The following recommendations involve activities, other than routine Roads and Grounds maintenance and improvements, that will further the long range goals established by the ELM Committee.

A. Habitat Development

1. Maintain Oxidation Pond Water Elevation at 717.0 Feet

The elevation at the bottom of the Oxidation Pond is 716.5 feet, and the boards in the A.E. Sea discharge structure are set at 718.0 feet. The Committee supports a management strategy for the A.E. Sea/Dusaf Pond that would maintain the water level at 717.0 feet. The resulting seasonal fluctuations above and below this level would allow significant improvement and development of a quality wetland in the Oxidation Pond after removal of the berm. In the interim, the Committee recommends the Oxidation Pond be pumped alternate years to maintain water elevations at or below 717.0 feet.

2. Burn Eastern Half of ELM 14 Prior to 5/1/2002

The Bell's Vireos were breeding in this area again this year and were found in both the burned and unburned sections. The Committee recommends that the eastern half be burned Spring 2002. The birds that use this area arrive in early May, so the burn should be done well before then.

3. MI Stockpile

The Committee recommends that the Main Injector stockpile be enriched with native seed.

4. Mensing Farm

The Committee recommends that this area be developed as a new picnic space.

5. Eola Rd. Grassland

Henslow's Sparrows returned to the site again this year, suggesting that our policy of mowing in August is having a beneficial impact on the habitat. However, the Committee recognizes the need to remove isolated trees in the area, as most grassland birds will not nest within 50 yards of a tree. The new land management sub-committee will evaluate tree removal and make recommendations.

6. Remove noxious invasive trees and brush around Meson Hill if time permits.

B. Management Programs

1. Experimental Sites for Threatened Plants

The Committee recommends the Lab consider whether establishing "Experimental Sites" for some threatened plants would introduce a special burden if the operational needs of the Lab dictated construction at that site. Currently, the committee recommends that such populations not be introduced into the site due to the approval cycle with the Fish and Wildlife Service that

could possibly seriously curtail proposed construction programs should they impact a threatened plant .

2. Tree Removal

Many places on site have an increasing population of “undesirable” trees—e.g. cottonwood, box elder and buckthorn. In the southern part of ELM-1, parts of ELM-6 and other locations scattered across the site, the number and size of these trees is negatively impacting the higher quality prairie development; and in the MI wetland mitigation area of ELM-4, numerous small cottonwood trees need to be removed because of their potential impact on the physics program.

The Roads and Grounds Department removes these aggressive trees as their schedule permits and as directed by the Committee. These trees may be encroaching on prairies or wetlands or may be in other areas of the site producing an undesirable seed source.

C. Laboratory Relations

1. Prairie Seed Agreements

The Committee encourages the on-going attempt to develop working relationships with commercial prairie seed vendors. This relationship may take the form of seed trade or “special AG land licenses”.

2. Research

The Committee continues to encourage the Lab to seek and participate in ecologically related research compatible with the Lab Ecological Land Management Program. The Committee also encourages the Lab to continue to seek interested individuals to conduct ecological surveys. For example, Tom Peterson’s Butterfly Survey Program and the Chicago Wilderness sponsored “Calling Frog Survey” are significant additions to the annual surveys being done on-site.

The Committee also recommends that NERP projects be updated and contacts made with questionable old projects.

3. Eagle Scout Projects

Two new Eagle Scout projects are underway.

4. Prairie Reconstruction Video

Work continues on the script and the collection of relevant video footage.

D. Miscellaneous

- Remove the cyclone fence from both sides of the road in ELM 24. Almost done.
- Backfill the chlorinator tank adjacent to the Oxidation Pond.
- Basal treat noxious trees in ELM 1 (Main Ring). Ongoing.
- Basal treat noxious brush on EJ&E remnant prairie.
- Install grass waterways in agriculture fields.

IV. TRACT MANAGEMENT 2002

◆ ELM-1/Prairie/C/Inside the Tevatron berm and extending northeast

Features

Habitat: Reconstructed prairie; cottonwood grove; Lake Logo and Main Ring Lake which support wetland complexes; American Lotus in Main Ring Lake

Wildlife: Great Blue Heron rookery near center; remnant-dependent butterflies, Black Dash and Eyed Brown and remnant-associated Delaware Skipper in sedge meadows

Research: NERP; deer exclosures

Access: Controlled

Other: Site of volunteer harvest

Long Range Plan

Habitat Goal: Prairie

Enrichment: Continue to overseed needed species

Fire Management: Burn every 2 to 3 years

Tree/Brush Removal: Remove cottonwood grove in far south side of ring.

2001 Plan

Continue to maintain and enrich. Certain areas in this tract are developed enough to begin planting in late successional species.

2001 Accomplishments

Enriched prairie and marshes with late successional forb species

2002 Plan

Maintain wet meadow and sedge areas with control of invasive brush like willows. Burn in Spring

◆ ELM-2/Woods/C/Near the center of the Tevatron berm

Features

Habitat: Potentially high-quality oak savannah with degraded, brushy understory

Access: Controlled

Long Range Plan

Habitat Goal: Oak savannah

Enrichment: Overseed with savannah understory species

Fire Management: Annual burn until underbrush controlled, then every 3 years

Tree/Brush Removal: Eliminate weedy brush and aggressive tree species such as box elder and cottonwoods.

2001 Plan

Continue thinning the noxious invasive tree species to increase sunlight to the understory. Seed aggressively with savannah species.

2001 Accomplishments

Enriched with savanna species.

2002 Plan

Spring burn

◆ **ELM-3/Woods/C/Western part of the interior of the Tevatron berm**

Features

Habitat: Poor condition wet woodland with many weedy tree species; large sections underwater each year

Access: Controlled

Long Range Plan

Habitat Goal: Wet woodland

2001 Plan

Implement a more aggressive development program.
Thin the weedy species of trees and shrubs.

2001 Accomplishments

Enriched with moist shade tolerant woodland species. Cottonwood control

2002 Plan

Aggressively enrich shade tolerant species and continue cottonwood control Burn in Spring

◆ **ELM-4/Prairie/SW/Eastern portion of Main Injector extending south and east**

Features

Habitat: Mesic and wet prairie; Girl Scout Woods and Site 14 Woods which contain site's only mature blue ash and white walnut trees and also mature shellbark hickories and a Biltmore ash; Main Injector wetland mitigation project in northern part

Research: NERP (successional dynamics theories)

Access: Controlled

Long Range Plan

Habitat Goals: Prairie; wood; wetland

Enrichment: Overseed needed prairie species and woodland understory species; enrich woods with appropriate trees

Fire Management: Burn every 2 to 3 years

2001 Plan

Add topsoil to MI stockpile on west side and seed with native prairie species.

2001 Accomplishments

Completed adding topsoil and final grade. Seeded entire area with side oats and little blue stem. Removed noxious trees in the wetland mitigation area

2002 Plan

Continue control of invasive tree species in wetland mitigation area. During growing season mow newly seeded area on MI stockpile to enhance native grasses Regrade and seed washouts. Survey the Main Injector wetland mitigation area for Dion Skippers, which are remnant dependent sedge skippers living in the adjacent undisturbed wetland in ELM 27.

◆ **ELM-5/Brush/S/Along the southern boundary of the site, adjacent to Butterfield Rd.**

Features

Habitat: Long narrow strip; trees planted in 1970's; lot of brush

Wildlife: Breeding area for Bell's vireo and yellow-breasted chats

Long Range Plan

Habitat Goal: Intermediate successional stage scrub

Fire Management: Burn in thirds, one each year

2001 Plan

No activity planned. Labor intensive work needed.

2001 Accomplishments

Mowed under power lines in late summer

2002 Plan

Continue Mowing to control woody plants

◆ **ELM-6/Prairie/S/South of Tevatron**

Features

Habitat: Poor quality wetland; potential as sedge meadow

Long Range Plan

Habitat Goals: Wetland; prairie in south

2001 Plan

Mow.

2001 Accomplishments

Mowed late summer.

2002 Plan

ELM sub-committee to investigate general use and improved management of this area

◆ **ELM-7/NERP/SE/Southeast corner of the site**

Features

Habitat: Mixture of early stage mesic prairie and pasture grass

Research: NERP (differences in responses of prairie and pasture grass to various environmental factors)

Long Range Plan

Habitat Goal: Maximize usefulness for potential future research

Enrichment: As resources permit

Fire Management: As resources permit

Mowing: Pasture grass to discourage invasive species

2001 Plan

Burn prairie areas.

Mow non-prairie areas.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow late summer or burn if time allows

◆ **ELM-8/NERP/SE/West of Tract ELM-7**

Features

Habitat: Mixture of early stage mesic prairie and pasture grass

Research: NERP

Long Range Plan

Habitat Goal: Maximize usefulness for potential future research

Enrichment: As resources permit

Fire Management: As resources permit

Mowing: Pasture grass to discourage invasive species

2001 Plan

Mow prairie areas.

Mow non-prairie areas.

Maintain nursery.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow late summer or burn if time allows

◆ **ELM-9/Prairie/E/Along east side of site from Batavia Rd. to Butterfield Rd.**

Features

Habitat: Sea of Evanescence; AE Sea shoreline; pasture grass fields in north; fallow ground in south; heavy mixed brush and planted trees

Long Range Plan

Habitat Goals: Wetland; shoreline development; prairie in south part

Mowing: Pasture grass during dormant season

2001 Plan

Mow and maintain.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow late summer or early fall to control woody plants

◆ **ELM-10/Prairie/SC/East of Tevatron, west of Eola Rd.**

Features

Habitat: Wetland; mesic areas

Long Range Plan

Habitat Goals: Wetland; prairie

2001 Plan

Develop the wetland area. Enrich with native species.

Maintain the mesic area. Planned B0 to D0 utility corridor will have an impact on this area.

Plans may need to be adjusted in the near term.

2001 Accomplishments

None

2002 Plan

Mow late summer or early fall burn if possible, enrich wetlands with native seed.

◆ **ELM-11/Grassland/Along Eola Rd. east of Tevatron**

Features

Habitat: Pasture grass; shrubs; wetland pocket in south-central part; tree nursery and Model Rocket Club site in northwest part

Long Range Plan

Habitat Goals: Grassland

Enrichment: Possible

Fire Management: Burn wetland

Tree/Brush removal: Cut shrubs

Mowing: Every other year

Herbicide: For problem species

2001 Plan

Mow to keep out woody invasive species and encourage cool season grasses.

2001 Accomplishments

Mowed late summer

2002 Plan

Continue late summer mowing to control woody plants

◆ **ELM-12/NERP/SE/North of ELM-8**

Features

Habitat: Mixture of early stage mesic prairie and pasture grass

Research: NERP

Long Range Plan

Habitat Goal: Maximize usefulness for potential future research

Enrichment: As resources permit

Fire Management: As resources permit

Mowing: Pasture grass to discourage invasive species

2001 Plan

Burn or mow prairie areas.

Mow non-prairie areas.
Manage the little bluestem field.

2001 Accomplishments

Overseeded the entire 2 acre test tract with little blue stem located in the northern section of ELM 12. Sprayed broadleaf herbicide on northern one half of this tract

2002 Plan

Monitor little blue stem tract and mow during growing season to enhance sunlight to immature plants

◆ **ELM-13/NERP/SE/East of ELM-12**

Features

Habitat: Mixture of early stage mesic prairie and pasture grass
Research: NERP

Long Range Plan

Habitat Goal: Maximize usefulness for potential future research
Enrichment: As resources permit
Fire Management: As resources permit
Mowing: Pasture grass to discourage invasive species

2001 Plan

Burn or mow prairie areas.
Mow non-prairie areas.

2001 Accomplishments

Mowed late summer to control woody plants

2002 Plan

ELM Sub-Committee to evaluate land use around existing prairie areas. Continue late summer mowing or burn prairie if time allows.

◆ **ELM-14/Brush/SE/Between and south of Lake Law and AE Sea**

Features

Habitat: Lake Law and AE Sea shorelines; invasive brush; Owl's Nest Woods (3-acres quality oak-hickory woods); recently planted mixed native wood species along AE Sea shore; hedge row along southern boundary
Wildlife: Bell's Vireos

Long Range Plan

Habitat Goals: Intermediate successional stage open scrub transitioning into brushy edge (to buffer Owl's Nest Woods); manage shoreline erosion to protect valuable trees
Tree/Brush Removal: Remove 10% of largest non-native trees each year

2001 Plan

Remove largest 10% non-native trees.
Area to be monitored for bird nesting before burning.

2001 Accomplishments

No burn this year

2002 Plan

Burn eastern half in spring. Continue removing 10% of larger trees annually

◆ **ELM-15/Grassland/SE/Southeast corner of Batavia and Eola Rd.s**

Features

Habitat: Upland pasture grass; Lake Law shoreline

Wildlife: Grassland nesting birds

Other: Dog Run

Long Range Plan

Habitat Goals: Stable grassland; protect grassland birds

Mowing: Annually late in season

2001 Plan

Mow as needed to control woody invasive species.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow after July 15 to maintain grassland bird habitat

◆ **ELM-16/Grassland/NE/Along and on either side of Eola Rd. north of Batavia Rd.**

Features

Habitat: Pasture grass; invasive weeds; wetland

Wildlife: Grassland nesting birds

Long Range Plan

Habitat Goals: Grassland; protect grassland birds

Fire Management: To control goldenrod

Mowing: To control goldenrod

2001 Plan

Mow to control broad-leaved weeds and woody invasive species.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow after July 15 to maintain grassland bird habitat

◆ **ELM-17/Grassland/NE/West of Village, north of Batavia Rd.**

Features

Habitat: Pasture grass; invasive weeds

Wildlife: Grassland nesting birds; wintering owls

Long Range Plan

Habitat Goals: Grassland; protect grassland birds

Fire Management: To control goldenrod

Mowing: To control goldenrod

2001 Plan

Mow as needed to control woody invasive species.

2001 Accomplishments

Mowed late summer

2002 Plan

Mow after July 15 to maintain grassland bird habitat

◆ **ELM-18/Woods/NE/Wraps around north and west sides of Village**

Features

Habitat: Mixed wooded area; lots of brush; many planted conifers and aesthetic trees

Wildlife: Wintering birds and mammals

Long Range Plan

Habitat Goal: Unmanaged wooded area

Mowing: Adjacent to Batavia Rd. for aesthetic reasons

2001 Plan

No maintenance planned.

2001 Accomplishments

None

2002 Plan

None

◆ **ELM-19/Grassland/E/East of Village**

Features

Habitat: Eastern DUSAF Pond and Oxidation Pond shorelines; 25-year-old trees in south planted for aesthetics; pasture grass in south; invasive brush in west central part; large white oak and ash in west central part

Wildlife: Brush birds

Long Range Plan

Habitat Goals: Undisturbed brush and shorelines, grassland. Managed water level in former oxidation pond to establish wetland.

Mowing: Pasture grass during dormant season

2001 Plan

Mow.

Continue development of Oxidation Pond as a wetland.

When appropriate, open Pond to DUSAF Pond.

2001 Accomplishments

Mowed late summer

2002 Plan

Continue mowing to control woody plants

◆ **ELM-20/Prairie/E/Along eastern boundary south of Wilson St.**

Features

Habitat: Emergent wetlands; wet prairie with mesic and upland features; prairie remnant that extends east to railroad tracks

Wildlife: Remnant-dependent Meadow Fritillaries and Eyed Browns and remnant-associated Coral Hairstreaks and Delaware Skippers

Long Range Plan

Habitat Goals: New prairie; emergent wetland; enrich prairie remnant

2001 Plan

Continue to herbicide brush as time allows.

Mow if necessary.

2001 Accomplishments

Cut and herbicided stumps of woody plants on prairie remnant. Remnant dependent, and relatively rare in northeastern Illinois, Meadow Fritillary butterflies were found living in ELM 20 and the adjacent TA 4 area

2002 Plan

Continue to mow and control brush. Survey ELM 20 again at the appropriate times to check for the persistence of the Meadow Fritillary population. Since Meadow Fritillary caterpillars are reported to feed on violets, during the spring blooming period, check for the locations and species of violets which might be supporting the Meadow Fritillary caterpillars.

◆ **ELM-21/NERP/E/Northeastern corner of site**

Features

Habitat: Young mesic and upland prairie plantings; no fire management

Research: NERP

Long Range Plan

Habitat Goals: Prairie; control brush

Fire Management: When NERP projects allow

Mowing: Annually, where possible, until fire management can be instated

2001 Plan

High priority for burning.

Mow if burning is not practical.

2001 Accomplishments

None

2002 Plan

Mow late summer or burn if time allows

◆ **ELM-22/Grassland/N/North of railroad east of McChesney Rd.**

Features

Habitat: Old field with invasive brush; isolated from other tracts

Long Range Plan

Habitat Goal: Prairie

Enrichment: Overseed with prairie matrix

Mowing: Mow

2001 Plan

Mow as needed.

2001 Accomplishments

None

2002 Plan

Mow late summer or fall to control woody plants

◆ **ELM-23/Prairie/N/North part of site south of railroad tracts west of railhead storage**

Features

Habitat: Finest on-site prairie remnant; Casey's Pond shoreline

Long Range Plan

Habitat Goal: New prairie; enrich remnant

Enrichment: Overseed area near Casey's Pond with prairie matrix

Fire Management: Burn remnant

2001 Plan

Enrich.

Mow as needed.

Burn when fuel load will carry fire.

2001 Accomplishments

Overseeded new prairie area spring Mowed early summer to control Canada thistle Burned remnant prairie fall 02 Overseeded with prairie matrix in weedy areas fall 02

2002 Plan

Enrich.

Mow as needed.

◆ **ELM-24/Woods/NW/West part of site extending from Wilson St. to south of Giese Rd.**

Features

Habitat: Big Woods remnant which contains some of highest floristic quality trees, herbaceous plants and flowering woodland species; reconstructed prairie in north and south; programmatic

areas including Lederman Education Center and Receiving Complex; Lootens Woods in far northwest corner adjacent to Site 29

Wildlife: Remnant-associated butterflies such as Great Spangled Fritillaries, Northern Pearly Eyes, Gray Commas and Banded Hairstreaks in savanna-like openings at Big Woods edge.

Research: Nuggo, Aicher vegetation study in support of deer management.

Long Range Plan

Habitat Goal: Native woodland

Corridors: Connect existing wooded areas with future tree plantings to eliminate fragmentation

Enrichment: Woodland understory species

Fire Management: Burn every 2 or 3 years

2001 Plan

Plant trees on Arbor Day.

Continue vegetation studies concerning the deer management program.

Enrich understory.

Evaluate need for burning.

2001 Accomplishments

Planted 70 trees for Arbor/Earth Day. Burned in fall

2002 Plan

Encourage native grasses and forbs in the open woods understory rather than filling in the space with more trees. ELM Land Management Sub-Committee to evaluate appropriate use of open field East of Directors driveway

◆ **ELM-25/Prairie/W/Along west side of site from Giese Rd. to south of Wilson St.**

Features

Habitat: Morgan's Woods which contains several unique (to site) woodland flower colonies; wooded area in northwest; wetland in northwest; new prairie reconstruction

Long Range Plan

Habitat Goal: Woodland; prairie

Enrichment: Overseed needed species in prairie

Fire Management: Burn new prairie areas every year, older areas every 3 years

Relocation: Relocate plants (e.g. hepaticas) threatened by Kirk Rd.

2001 Plan

Enrich and burn

2001 Accomplishments

Burned plots 15, 17 20, 21 fall 2001

2002 Plan

Continue enrichment of forbs in prairie areas

◆ **ELM-26/Prairie/SW/Along west side of site south of ELM-24 includes western part of Main Injector**

Features

Habitat: Pasture grass in west which contains a patch of gentians; mixed brush and small woods in north; 2-acre quality prairie plot northwest of MI berm and 25-acre plot of quality prairie inside berm

Access: Berm and land within controlled

Long Range Plan

Habitat Goal: New prairie (replace pasture grass fields)

Enrichment: Existing prairies

Fire Management: Every 2 to 3 years

2001 Plan

Continue management.

2001 Accomplishments

None

2002 Plan

Mow late summer or burn if time allows.

◆ ELM-27/Woods/SW/Along Indian Creek inside Main Injector**Features**

Habitat: Floodplain wood with swampy areas

Wildlife: Dion Skippers

Access: Controlled

Long Range Plan

Habitat Goal: Wood; wetlands

Enrichment: Plant trees; enrich understory; enrich wetlands

2001 Plan

No maintenance planned.

2001 Accomplishments

We found that a population of the remnant-dependent and relatively rare Dion Skipper, a sedge skipper found by Ron Panzer in the late 1980's, is still living in the sedges along Indian Creek.

2002 Plan

Maintain wet meadow and sedge areas with control of invasive brush, like willows. Check again for the continued presence of the Dion Skippers, identify the sedges on which they might be dependent, and check to see if and when they spread into the adjacent Main Injector wetland mitigation area in ELM 4.

◆ ELM-28/Prairie/C/Northeast of Tevatron berm**Features**

Habitat: New prairie reconstruction

Long Range Plan

Habitat Goal: Prairie

Enrichment: Intensively as resources permit

Fire Management: Annually

2001 Plan

Enrich and burn.

2001 Accomplishments

Overseeded with prairie matrix and enriched with forbs

2002 Plan

Burn in spring