

OPENLANDS PROPERTY MANAGEMENT PLAN

Sphar Property

15805 Hebron Road, Harvard, IL (Hackmatack National Wildlife Refuge – Alden Sedge Meadow Core)

SECTION 1: PROPERTY INFORMATION

Property Address: South side of Hebron Road in rural Alden Township, Illinois. Property is associated with the nearby crossroads community Alden but has a Harvard mailing address at 15805 Hebron Road, Harvard, IL 60033. Located between Knickerbocker Road to the west and Johnson Road to the east.

Legal Description (Section, Township, Range, County):

The Southwest Quarter of Section 11, in Township 46 North, Range 6 East of the Third Principal Meridian, (except that part described as follows: Beginning at the Southwest corner of the Southwest Quarter of said Section 11, and running thence North along the West line of said Section, to the Northwest corner of the Southwest Quarter of said Section 11; thence East on the quarter section line, for a distance of 33 feet; thence South on a line parallel to the West line of said Section 11, to the South line of said Section; thence West on the South line of said Section, to the Place of Beginning), in McHenry County, Illinois. Also except part of the Southwest Quarter of Section 11, Township 46 North, Range 6 East of the Third Principal Meridian being described as follows: Beginning at the Northeast corner of the said Southwest Quarter; thence South 00 degrees 04 minutes 20 seconds East along the East line thereof, 1,320.64 feet to the South line thereof; thence North 89 degrees 42 minutes 11 seconds West along said South line, 214.61 feet; thence North 28 degrees 14 minutes 35 seconds West, 407.54 feet; thence North 00 degrees 04 minutes 20 seconds West parallel with the East line of said Southwest Quarter, 961.53 feet to the North line thereof; thence South 89 degrees 51 minutes 20 seconds East along said North line, 407.00 feet; to the Place of the Beginning, in McHenry County, Illinois.

Acreage: 146.368 acres in a single parcel (PIN 02-11-300-003).

Location Information and Regional Context:

e.g. regional project connections, geological or natural community history, etc.

The Sphar property is located in rural Alden, Illinois and falls within the Alden Sedge Meadow Core Area of the Hackmatack National Wildlife Refuge (“Hackmatack”). The property is comprised of a single parcel totaling 146.46 acres. It is a pre-acquisition for Hackmatack and will eventually be transferred to the U.S. Fish & Wildlife Service (“USFWS”) for permanent protection.

McHenry County has a glaciated landscape with excellent farmland soils and variable topography. The county is home to 86 known species on the Illinois endangered and threatened list, with three of those species cross-listed as federally endangered or threatened. The County’s Nippersink Creek watershed serves as the anchor for Hackmatack’s footprint and it is designated as a Biologically Significant Stream in the state of Illinois, as well as a Class A stream of high quality. About 0.3 miles of an unnamed tertiary stream (associated with the headwaters of the Nippersink Creek’s main stem, which are partially protected in the Alden Sedge Meadow Conservation Area adjacent to the south) flows through the northeastern corner of the Sphar property on an approximately northwest-southeast course.

The Sphar property is surrounded by farmland, protected conservation land, and rural residences on large lots, all characteristic of this portion of rural McHenry County. Most farmland in the area is under

conventional corn and soybean production, along with small beef cattle and dairy operations and hobby farming.

The Sphar tract adjoins a drainage district formed in 1958 for the purpose of straightening the Nippersink Creek and draining the streamside wetlands along its course.

Land Use History:

e.g. past ownership history, adjacent land uses including public lands, potential adjacent threats, land use history such as agriculture or development, etc.

The land has historically been under agricultural use, including both row crops and livestock. The current owners purchased the farm in 1959 and sold off 14 acres on the northeast approximately a decade ago. Traditionally this appears to have been an owner-operator farmstead, but in the last years the current owners had leased out their cropland to a third-party farmer rather than farming it themselves, as well as scaled back their own cattle operation to just a few head. The cropland is currently in conventional corn production for the 2019 planting season.

Nearby protected conservation lands include the following McHenry County Conservation District (“MCCD”) landholdings: Alden Sedge Meadow Conservation Area (adjacent to the south); the Rich Tract (0.9 miles to the southwest); High Point Conservation Area (1.5 miles to the west); Alden Gap Conservation Area, formerly known as Monastery Marsh (2.2 miles to the southwest); and Winding Creek Conservation Area (2.2 miles to the southeast). Several private conservation easements held by both The Land Conservancy of McHenry County and MCCD are also located in the surrounding areas of Alden and Hebron, not adjacent to the Sphar property.

Topography:

e.g. dominant landforms or glacial features

The property has a rolling topography, dropping in elevation about 70 feet from the hilly central portion of the parcel down to the lower, flatter areas in the southernmost third of the site.

Soils:

e.g. soil type description, drainage, runoff and erosion potential, agricultural potential, etc.

The property contains the following soil types in approximate order of dominance: 361C2 (Kidder loam, 4-6% slopes, eroded); 361D2 (Kidder loam, 6-12% slopes, eroded); 153A (Pella silt loam, 0-2% slopes, overwash); 327B (Fox silt loam, 2-4% slopes); 343A (Kane silt loam, 0-2% slopes); 330A (Peotone silty clay loam, 0-2% slopes); and 361E2 (Kidder loam, 12-20% slopes, eroded)

All of the above-listed soils, with the exception of 361D2 and 361E2, are considered prime farmland. Both 153A and 330A are only considered prime farmland if drained and are subject to issues with water ponding and poor tilth. 361C2, 327B, 361D2, and 361E2 are all prone to water erosion, and both 327B and 343A can have trouble with excessive permeability. Additionally, 343A tends to be wetter soil overall.

Hydrology:

e.g. presence of surface water on property such as streams or wetlands, potential for flooding, general water quality, etc.

About 12 acres of the property are located in a Zone A flood plain extending into the southeastern and southwestern corners of the site from the adjacent land to the south. The pocket wetland area in the southeastern quadrant of the site is the only area delineated as wetland according to the McHenry County Athena GIS tax parcel database. This area is about 0.5 acres in size.

The more poorly drained soils (343 and 153 likely supported sedge meadow and wet prairie inclusions within a matrix of oak dominated uplands occurring over the woodland soils (361, 327). The oak dominated communities were likely cleared for agricultural purposes by the early 20th century. The single inclusion of 330 soil, Peotone, is indicative of a wetland basin and prior to settlement this area was most likely a “wet woodland pocket.” This community type was very poorly drained, holding water throughout most of the year.

It is likely that all of the poorly drained to moderately poorly drained soils have been modified by the installation of sub surface drain tiles. These tile fields would have outlets into Nippersink Creeks to the south or the ditched portion of the headwater stream that forms a portion of the southwestern boundary of the parcel.

Natural Communities and Wildlife:

e.g. natural community type, evidence of remnant communities, endangered or threatened species, known wildlife species, etc.

The property contains isolated pockets of vegetation

The site currently supports a depauperate mix of heavily modified natural and cultural communities. These include row crop and hay fields. A heavily modified basin wetland dominated by invasive reed canary grass (*Phalaris arundinacea*) and several areas of unassociated woody growth were noted during the monitoring visit on September 6, 2019. It appeared that several acres of the property that would typically be under conventional corn or soybean were out of production and overgrown with species such as pigweed (*Amaranthus sp.*) and ragweed (*Ambrosia sp.*).

Exotic Species:

e.g. species observed, distribution, frequency, etc.

Most of the property is either farmed for conventional agriculture, hay, or out of production for at least this 2019 farming year. The small islands of natural areas dispersed on the property are overgrown with invasive species such as buckthorn (*Rhamnus cathartica*) and reed canary grass (*Phalaris arundinacea*).

Cultural and Aesthetic Resources:

e.g. historic structures, archaeological resources, etc.

About five acres in the northern portion of the site (accessible from Hebron Road and located roughly at the midpoint of the property’s northernmost boundary line) are developed as a farmstead. The structures present in this area include a farmhouse, two large barns, a smaller livestock barn, several smaller sheds and outbuildings, a silo, a mobile home, and various scattered farm implements no longer in use. Every structure is in dilapidated, tear-down condition and needs to be removed. The age of the house and barns is unconfirmed at this time. It is likely the home and at least one of the barns predate 1920. The extremely poor condition of the structures has determined them completely unsalvageable as far as potential restoration or renovation.

Anecdotal evidence suggests rich archaeological resources are present on the site; the previous owner asserts they have picked up dozens of arrowheads, stone axes, and other artifacts over the years, and it is possible (but unconfirmed) that a professional survey was done at one point. The current collection of artifacts resides with the seller's family. Additional research and assessment related to these potential archaeological resources is recommended.

The area was considered for a parallel study with a site in Eastern Europe during the 1970's however such a study was never initiated. Areas directly to the south on conservation district land have yielded the bones of ice age elk and bison. In both cases identification was made by the Field Museum of Natural History.

Restrictions:

e.g. any leases, mineral rights, right-of-ways, easements, etc. associated with the property, if applicable.

There is a farm lease on the property's croplands for the 2019 growing season. The lease will be negotiated to an acceptable termination date during the purchase transaction.

Commented [MK1]: Is there?? I thought there was an informal agreement to store hay...I don't know anything about an actual farm lease

SECTION 2: MANAGEMENT PLAN

General Restoration and Management Goals:

Provide a brief overview of project vision and purpose, e.g. maintain land health, restore pre-settlement vegetation, target habitat for key species, etc.

The Sphar property can be divided into three natural community management units: the Stream Unit, consisting of the tertiary stream corridor and surrounding riparian area; the Wetland Unit, consisting of the pocket wetland area in the southeastern quadrant of the property; and the Prairie Unit, consisting of cropland awaiting restoration into grassland bird habitat.

The purpose of restoration and management is to create resilient wildlife habitat in Hackmatack. This includes restoration activities that support recreated and remnant pre-settlement natural communities. It also moves beyond pre-settlement conditions into the unknown future, where we must plan ahead for adaptive management as the region is altered by climate change. Potential adaptive management approaches for the Sphar property include bank grading and riffles in the creek to create cooler microclimates for aquatic species that could be affected by higher temperatures and longer drought periods. It also includes a focus on high-quality, resilient grassland habitat that supports declining bird species affected by climate change and offers opportunities for carbon sequestration. This management plan will continue to be refined and updated as adaptive management plans are created, implemented, and measured.

Goals for each unit are as follows:

1. **Stream Unit:** Reestablish native wetland habitat where feasible. Assess and enhance aquatic habitat to support native fish and mussel populations.
2. **Wetland Unit:** Clear invasive brush and reestablish appropriate herbaceous layer. Assess surrounding hydrology to determine whether expansion of wetland area, removal of tiles, and other substantial hydrological work is desirable; if so, implement this work.

3. **Prairie Unit:** Reestablish native mesic prairie habitat to encourage soil regeneration and provide diverse native vegetation that supports grassland bird species and other wildlife highlighted as priorities in Hackmatack's federal refuge goals.

Note that additional restoration activities will be required upon removal of the buildings on the property, including grading of post-demolition areas, removal of trash and debris, and seeding with an appropriate cover crop followed by a seed mix and management activities. This area contains some mature trees. These should be assessed as far as species type, age, and condition to determine whether arborist care is required or if the trees should be removed to eliminate hazards or facilitate long-term habitat restoration goals in this area.

Key Objectives:

List specific tasks that are instrumental in reaching goals, e.g. discourage brush encroachment, control invasive species, restore native vegetation, etc., and include reason for each objective

It is recommended that management objectives related to the above goals include the following:

1. **Stream Unit:** Survey existing natural communities. Perform aggressive invasive species control and long-term follow-up in areas dominated by reed canary grass and other problematic species. Assess and enhance aquatic habitat to support native fish and mussel populations, e.g. potential for building riffles, addressing erosion with bank grading and stabilization measures, etc.
2. **Wetland Unit:** Clear invasive brush and assess condition and distribution of any native tree species. Reestablish appropriate herbaceous layer. Assess surrounding hydrology to determine whether expansion of wetland area, removal of tiles, and other substantial hydrological work is feasible, desirable, or necessary. If so, additional plans will be required to implement this work.
3. **Prairie Unit:** Install cover crop after farm lease terminates. Plant a custom native prairie mix to encourage soil regeneration and establish a baseline prairie habitat. Ongoing management activities such as prescribed burning and invasive species control will be required. Over-seeding may be performed as necessary.

The specific tasks required to restore the building area once structures are removed will be dependent on a variety of factors related to the demolition process, County and local ordinances, historic preservation law, and so on. This management plan should be updated accordingly once more information is provided by the Phase 1 Environmental Assessment and other surveys during due diligence.

Recommended Management Practices:

Provide overview of tools and methods used to complete objectives, e.g. prescribed fire, herbicide treatment, selective thinning, etc.

Management should be performed in accordance with regional industry practices. Tools and methods may include prescribed burning; herbicide application; selective thinning; mowing; use of a brush hog or other machine for heavy brush overgrowth; hand or machine seeding; erosion control measures such as erosion matting, blanket, or rip rap; plant plugs; and tree and shrub installation.

Timeline (per funding availability):

Task	Anticipated Completion
Stream Unit:	TBD
1) Conduct a survey of water quality conditions and aquatic biodiversity	TBD
2) Use collected data to develop a riparian restoration plan	TBD
3) Implement restoration plan activities (TBD, but expected to include aggressive invasives management and planting/seeding)	TBD
4) Perform follow-up monitoring of water quality conditions and aquatic biodiversity	TBD
5) Perform follow-up management as needed	TBD
Wetland Unit:	TBD
1) Assess existing native tree species, condition, and distribution, if applicable	TBD
2) Perform invasive species management, including brush removal	TBD
3) Perform seeding and planting to reestablish herbaceous layer	TBD
4) Perform follow-up management as needed	TBD
5) Assess feasibility of expanding wetland area, removing tiles, etc.	TBD
6) If wetland expansion is determined desirable, engage a consultant to provide further assessment and planning	TBD
Prairie Unit:	TBD
1) Install cover crop after farm lease terminates	Fall/Winter 2020
2) Install a custom prairie seed mix	Early Spring 2020
3) Perform invasive species control and follow-up management as needed	Winter 2021
Building Demolition Area Restoration:	TBD
1) Tasks to be determined at a later date when more information is available	TBD

Additional Remarks:

This management plan serves as a working document that may be revised as necessary. The management plan was created on July 11, 2019 by Aimee Collins, Director of Regional Conservation with input from Ed Collins of the McHenry Conservation District and Alysandra Tylewski, Stewardship Coordinator.

Last updated on September 11, 2019

SECTION 3: MAPS

<UNDER PRODUCTION>

