

# TPE Land Protection Project Proposal

**Project Name:** Swenson Hill Prairie and Shooting Star Prairie

**Landowners:** Paul and Judy Swenson

**Lead Chapter:** Empire-Sauk

**Location:** The properties are located within the SE1/4 of the SW1/4 of Section 30 and the NE1/4 of the NW1/4 of Section 31 of Township 8 North, Range 5E, the Town of Arena, in Iowa County, Wisconsin. Iowa County tax parcel IDs 002-0486 and 002-0495. The parcels are clearly visible from County Highway HH, north of its intersection with Mellum Road. There are no structures on the parcels and no fire numbers. Paul and Judy Swenson live approximately one-quarter mile south of the property.

**Description:** The project contains two distinct prairie remnants that have historically been incorporated into what was once known as the St. John's Prairie Complex, named for the nearby St. John's Catholic Church. The St. John's Complex includes nearby sites in addition to the Swenson sites. The remnants themselves have been variously named Swenson North and the Swenson/Buehlman tract, or Swenson Hill Prairie and Shooting Star Prairie (Swenson), as the later remnant is in divided ownership with distinct botanic differences between the two ownerships. Swenson Hill Prairie is the larger of the two at approximately 11.5 acres, including the surrounding woods. Shooting Star Prairie is approximately 3 acres in size. The two remnants are not contiguous.

Appended is a document from the mid-1990's detailing the larger St. John's Complex and the state of knowledge for these properties at that time.

In 2002, with funding provided by a US Fish and Wildlife Service (USFWS) grant for private lands, both Swenson Hill Prairie and Shooting Star Prairie were largely cleared of invasive red cedars, as well as some planted and volunteer white pines, black cherry, buckthorn, honeysuckle, and other invasive shrubs. In 2007, TPE volunteers burned roughly 2/3 of Swenson Hill Prairie. Scott Sauer along with volunteers from Quercus Land Stewardship conducted winter-season burns on Swenson Hill Prairie in 2011, 2012, 2014 and 2016.

## **Conservation Significance:**

Swenson Hill Prairie is, at five acres of open grassland, a large remnant representative of calcareous, dry-mesic hill prairie. It is largely free of common herbaceous weeds such as white sweetclover (*Melilotus alba*) and wild parsnip (*Pastinaca sativa*). There are small clusters of compass plant (*Silphium laciniatum*), indicating a light or non-existent grazing history (the hillside is considerably removed from the dairy barn on the Swenson farm). It is most notable for the

heterogeneity of its summer prairie flora, with leadplant, butterflyweed, and prairie coreopsis (*Amorpha canescens*, *Asclepias tuberosa*, and *Coreopsis palmata*) blooming in a vast, intermixed display. Likewise, the 2014 burn revealed a rich display of prairie spring ephemerals (violets, puccoon, and violet wood sorrel among them) on a lower, more level portion of the property. Other plants of note are tuberous Indian plantain, prairie turnip, cream Baptisia, and Hill’s thistle (*Arnoglossum plantagineum*, *Pediomelum esculentum*, *Baptisia bracteata* and *Cirsium Hillii*).

After extensive clearing in 2003, Shooting Star Prairie demonstrated why it received its common name. The skirt of brush at the base of the hill had concealed a huge display of the namesake plant. This small remnant is also home to one of four and the largest Wisconsin populations of pale false foxglove, *Agalinis skinneriana*, a prairie annual that is listed as Endangered or Threatened in all the States where it occurs.

Good invertebrate records from WDNR surveys in the 1990s and 2000s exists for both parcels (See Appendices). Across both tracts, thirteen prairie-specialist species – those dependent on prairie remnants – have been cataloged. On Swenson Hill Prairie, there is a collection record for the rare prairie leafhopper *Prairiana kansana*, but that collection was not repeated after the initial collection. The WDNR lists *P. kansana* as a Species of Greatest Conservation Need (SGCN). Shooting Star Prairie has rich sods of prairie dropseed (*Sporobolus heterolepis*) which harbor the State-endangered leafhopper *Attenuipyga vanduzeei*, known from only six or seven locations in the Upper Midwest. The State-threatened prairie specialist net-veined leafhopper *Polyamia dilata* is also found on Shooting Star Prairie.

The property is part of large roadless block that extends eastward from County Highway H to Ray Hollow Road, which leads south out of the village of Arena. TPE’s Rattlesnake Ridge abuts Ray Hollow Road. Drachenberg Prairie, immediately to the north of the two parcels included in this proposal, is equally diverse with a long history of visitation and management. The property to the east of Shooting Star Prairie, commonly referred to as the Buehleman tract, includes the eastern half of the Shooting Star remnant and a second prairie remnant that was considerably impacted by grazing. The Buehlman tract also contains a known timber rattlesnake (*Crotalus horridus*) hibernaculum. Both Drachenberg Prairie and the Buehlman prairies were covered under the 2002 USFWS private land grant facilitated by the prairie enthusiasts.

SGCN, Threatened and Endangered Species on the Swenson Hill and Shooting Star Prairies

Species	Site	Comments
Plants		
<i>Agalinis skinneriana</i>	SSP	WI endangered (S2)
<i>Arnoglossum plantagineum</i>	SHP	WI special concern (S3)
<i>Cirsium Hillii</i>	SHP	WI threatened (S3)
<i>Pediomelum esculentum</i>	SHP	WI special concern (S3)
Invertebrates		
<i>Attenuipyga vanduzeei</i>	SSP	WI endangered (S1)
<i>Polyamia dilate</i>	SSP	WI threatened (S2)
<i>Prairiana kansana</i>	SHP	WI special concern (S2) – little information

### **TPE & Other Conservation History with the Site:**

Either the Swenson North Unit or nearby Drachenberg Prairie were included in the description and analysis of dry-mesic prairies in John Curtis's seminal work *The Vegetation of Wisconsin* (1956). Notes within the 1990 TNC description of the sites and the St. John's Complex suggest that Olive Thompson visited these sites in the 1950's.

In 2002, TPE administered a Fish and Wildlife Service private lands grant that funded the removal of cedar and pine from the Swenson Remnants, Drachenberg Prairie, and the Buehlman remnants. There have been two small TPE work parties on the large remnant in the interim.

Prairie Enthusiasts field trips have visited the remnants at least four times since 2003. The Prairie Enthusiasts organized and conducted a prescribed burn of the site in April 2007. Four winter season fires have subsequently taken place on the large remnant – in 2011, 2012, 2014, and 2016.

### **Acquisition Cost & Funding Plan:**

The Swensons have expressed an interest in selling their agricultural lands, which include the prairie remnants. This interest includes a desire to see the prairies protected, and thus they are accommodating landowners. They are also interested in some form of farmland protection, and TPE could partner with a third party in facilitating this protection. Such protection would provide a secure buffer for TPE's conservation interests, either through agricultural easements or in direct TPE ownership of said buffer.

The Prairie Enthusiasts will cover the cost of an official land survey once an agreement about size, shape, and access is concluded. The Prairie Enthusiasts will then purchase the surveyed parcels from the Swensons using matching Stewardship dollars and credit accrued. The Swenson will then gift the amount of purchase back to The Prairie Enthusiasts as the foundation for legal protection and management funds. Encumbrances attached to Stewardship lands will be attached to the property.

### **Land Management Funding/Implementing Plan:**

See attached management plan (2004)

**Attachments:** (maps, aerial photos, species lists, etc.)

1937 Aerial Photo

2015 Aerial Site Photo

Plant Species List

**Prepared by:** Scott Sauer

# 1937 Aerial Photo – Swenson Prairies Project Area



1937 Aerial Image of a portion of the Town of Arena, WI, Sections 30 and 31  
St. John's Prairie Complex, St. John's Church in lower left

# 2015 Aerial Overview – Swenson Prairies Sites



## Swenson Hill and Shooting Star Prairies

2015 aerial with quarter/quarter parcel lines

DISCLAIMER: No guarantee in the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 400'



Print Date: 7/13/2016

## Ranking Criteria Score Sheet

Site: Swenson Hill Prairie and Shooting Star (Swenson) Prairie

Category	Score range	Score	Comments
1) Fits TPE mission?	yes/no		YES
2) Funding for management, monitoring, and legal defense?	0-10	5	needs resolution (two options in proposal)
3) Natural area quality?	0-40	35	
4) Critical habitat for rare and declining species?	0-10	8	four plants, three invertebrates, one reptile (timber rattler?)
5) Environmental gradients?	0-5	3	
6) Landscape context			
a. Parcel size?	5-15	7	15 acres
b. Proximity to other natural areas?	0-5	5	many prairie remnants and overgrown savanna/woodland adjacent nearby
c. Opportunity for expansion?	0-5	5	opportunity to many thousands of acres
d. Adjacent land uses compatible?	0-5	5	open rural
7) Education & outreach opportunities?	0-10	2	remote from urban areas
8) Is TPE the most appropriate agent?	0-5	5	TPE is ideally suited
9) Other considerations?	0-5	5	owners wanted it protected (donation)
10) Included within a larger conservation project?	0-10	7	Drachenberg Prairie and the adjacent Buehlman remnants, plus Rattlesnake Ridge are all contained within the same roadless block.
<b>Total</b>	<b>125 max</b>	<b>92</b>	

## Prairie Species

### Common Name Latin Name

Rough false foxglove *Agalinis aspera*

Slender wheat grass *Agropyron  
trachycaulum*

Leadplant *Amorpha canescens*

Canada anemone *Anemone canadensis*

Tall thimbleweed *Anemone virginiana*

Pussey toes *Antennaria plantaginifolia*

Dogbane *Apocynum* sp.

Columbine *Aquilegia canadensis*

Yellow false foxglove *Aureolaria  
grandiflora*

Butterfly milkweed *Asclepias tuberosa*

Green milkweed *Asclepias viridiflora*

Sky blue aster *Aster oolentangiensis*

Cream Wild Indigo *Baptisia bracteata*

Side-oats grama grass *Bouteloua  
curtipendula*

Kalm's brome *Bromus kalmii*

Tuberous Indian plantain *Cacalia tuberosa*

Harebell *Campanula rotundifolia*

Pennsylvania sedge *Carex pennsylvanica*

Mead's sedge *Carex meadii*

Bittersweet *Celastrus* sp.

Hill's thistle *Cirsium hillii*

Bastard toadflax *Comandra umbellata*

Prairie tickseed *Coreopsis palmata*

Gray dogwood *Cornus racemosa*

Poverty oats *Danthonia spicata*

Shooting star *Dodecatheon meadia*

Fleabane *Erigeron strigosus*

Flowering spurge *Euphorbia corollata*

Wood geranium *Geranium maculatum*

Avens *Geum canadense*

Western sunflower *Helianthus  
occidentalis*

Ox-eye sunflower *Heliopsis helianthoides*

Yellow star grass *Hypoxis hirsuta*

Eastern red cedar *Juniperus virginiana*

June grass *Koeleria cristata*

False boneset *Kuhnia eupatorioides*

Cylindrical blazing star *Liatris cylindracea*

Hoary puccoon *Lithospermum canescens*

Pale spike lobelia *Lobelia spicata*

Bee balm *Monarda fistulosa*

Muhly grass *Muhlenbergia* sp.

Evening primrose *Oenothera biennis*

Violet wood sorrel *Oxalis violacea*

Prairie panic grass *Panicum leibergii*

Few-flowered panic grass *Panicum  
oligosanthes*

Long-stalked panic grass *Panicum  
perlongum*

Panic grass *Panicum praecocius*

Virginia creeper *Parthenocissus* sp.

Lance-leaved ground cherry *Physalis  
virginiana*

Prairie cinquefoil *Potentilla arguta*

Wild plum *Prunus* sp.

Prairie Turnip *Psoralea esculenta* (2016)

Yellow coneflower *Ratibida pinnata*

Wild rose *Rosa* sp.

Raspberry *Rubus* sp.

Little bluestem *Schizachyrium scoparium*

Smooth skullcap *Scutellaria leonardi*

Rosinweed *Silphium integrifolium*

Blue-eyed grass *Sisyrinchium campestre  
(or albidum?)*

False Solomon's seal *Smilacina racemosa*

Greenbriar *Smilax hispida*

Gray goldenrod *Solidago nemoralis*

Sow thistle *Sonchus arvensis*

Indian grass *Sorghastrum nutans*

Needle grass *Stipa spartea*

Hoary vervain *Verbena stricta*

Prairie violet *Viola pedata*

Prickly ash *Zanthoxylum americanum*

## Swenson Prairie (North Unit)

### Weedy/Invasive Species (Native and Exotic)

#### Common Name Latin Name

Box elder *Acer negundo*

Quackgrass *Agropyron repens*

Ragweed *Ambrosia artemesiifolia*

Burdock *Arctium minus*

Asparagus *Asparagus officinalis*

Yellow rocket *Barbarea vulgaris*

Barberry *Berberis sp.*

Hemp *Cannabis sativa*

Hackberry *Celtis occidentalis*

Spotted knapweed *Centaurea sp.*  
(2016)

Horseweed *Conyza canadensis*

Crown vetch *Coronilla varia*

Queen Anne's lace *Daucus carota*

White snakeroot *Eupatorium rugosum*

Cleavers *Galium aparine*

St. John's wort *Hypericum perforatum*

Honeysuckle *Lonicera sp.*

Catnip *Nepeta cataria*

Plantain *Plantago major*

Kentucky bluegrass *Poa pratensis*

Quaking aspen *Populus tremuloides*

Cinquefoil *Potentilla recta*

Common plantain *Plantago major*

Black cherry *Prunus serotina*

Common buckthorn *Rhamnus cathartica*

Smooth sumac *Rhus glabra*

Black snakeroot *Sanicula gregaria*

Dandelion\* *Taraxacum officinale*

Meadow goat's beard *Tragopogon pratensis*

American elm (seedlings) *Ulmus americana*

Mullein *Verbascum blattaria*

Frost grape *Vitis riparia*

## Swenson Prairie

Woodland species that were growing under the invading trees on the prairie

#### Common Name Latin Name

Wild licorice *Gallium circaezens*

Sweet cicely *Osmorhiza claytoni*

Bloodroot *Sanguinaria canadensis*

Bellwort\* *Uvularia grandiflora*

Common wood violet *Viola sororia*

## Swenson Prairie

Savanna species at top of slope where oak trees create dappled sunlight conditions

#### Common Name Latin Name

Yellow false foxglove *Aureolaria grandiflora*

Moonseed *Menispermum candense* (2016)

Lion's foot *Prenanthes alba*