

**United State Fish and Wildlife Service  
Private Stewardship Grant Program Proposal – 2006**

**Title** Critical Habitat Restoration in Driftless Area of Southwest Wisconsin

**Objectives** Increase populations of 28 federal and state listed species by restoring and improving 1,251 acres of critical habitat on six sites within bluffland, prairie, wetland, and grassland of the Driftless Region in southwestern Wisconsin.

**Duration:** Grant period: July 1, 2006 through June 30, 2009.

**Summary of Costs:**

	<b>US FWS</b>	<b>WHIP</b>	<b>MVC</b>	<b>Totals</b>
Contract Services	17,500	30,500	3,000	51,000
Volunteer Hours	0	0	28,882	28,882
Native Seed	12,000	7,500	12,000	31,500
Materials & Supplies	11,360	0	400	11,760
Staff Time	37,400	0	480	37,880
Machine Rental	0	0	500	500
Mileage	759	0	2968	3,727
<b>Totals</b>	<b>79,019</b>	<b>38,000</b>	<b>48,230</b>	<b>165,249</b>

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## 2. Project Description:

The Mississippi Valley Conservancy, working in conjunction with local governments, private landowners, local volunteers, and the Wisconsin Department of Natural Resources, is restoring bluffland, prairie, wetland and grassland habitat on six sites owned or managed by the Conservancy including three State Natural Areas. These efforts will enhance and expand the habitat for a range of rare and declining species in the Driftless Area of southwestern Wisconsin (see table below) and are part of an overall effort to protect the species and natural communities of the Mississippi River Blufflands as represented by the Blufflands Alliance, a four state effort by six land trusts in Illinois, Iowa, Minnesota and Wisconsin to protect and restore the unique landscapes of the region.

The six areas targeted for restoration cover 1,251 acres of protected bluffland, sand prairie, goat prairie (dry prairie), riverine wetland, and grassland habitat. These areas support or provide additional habitat for 28 listed species including roosts for the federally-threatened bald eagle, critical bird habitat for migratory and resident bird species, and a range of prairie and wetland habitat for many species restricted to our region. All sites are directly adjacent to and/or have streams or rivers flowing into the Upper Mississippi River National Wildlife & Fish Refuge (UMRNWFR) and Trempealeau National Wildlife Refuge.

The overall goals of the project are:

1. To increase habitat for rare and declining species within the bluffland, prairie, wetland and grassland habitats of the Mississippi River Valley in southwestern Wisconsin
  - Increase habitat for 28 federal- and state-listed species as well as other important groups such as migratory birds.
2. To expand rare and declining natural communities within the region such as the dry prairies (goat prairies) and lowland sand prairies.
  - Restore and enhance key habitats of the Mississippi River Valley landscape including 254 acres of dry prairies (goat prairies), river terrace sand prairies, wetland prairies and sedge meadows, savannas and woodlands. An additional 150 acres will be monitored and managed for exotic species.
3. To increase habitat and forest connectivity on a regional basis within large landscape areas of the blufflands for species such as the federally threatened bald eagle and the range of neo-tropical migrants and raptors that use the Mississippi River corridor.
  - Reduce forest fragmentation and enhance forest connectivity at Roe Preserve and Sugar Creek Bluff, both of which are adjacent to the Upper Mississippi River National Wildlife & Fish Refuge, a migratory corridor declared of global importance by the American Bird Conservancy.

**Tunnelville Cliffs State Natural Area- Lee Tract, Vernon County:** The Lee property adds 150 acres of permanently protected land to the Kickapoo Valley Reserve Project Area. It includes high bluffs along the Kickapoo River, moist cliff communities on north-facing slopes, springs and forested seeps, creeks with waterfalls and ice caves, significant dry bluff-prairie and oak savanna communities, an old-growth white pine remnant, as well as a healthy population of northern monkshood, a plant on the federal list of endangered species. This property will be

legally dedicated (in progress) as a State Natural Area affording the property protection as a natural area in perpetuity.

**Holland Sand Prairie, La Crosse County:** The 61 acre Holland Sand-Prairie site sits atop an expansive Mississippi River Terrace, created about 12,000 years ago during the last ice-age, that stretches nearly 30 miles from south La Crosse to Galesville, WI. Once home to a great expanse of native sand prairie and natural dunes, the La Crosse-Galesville Terrace is now almost completely developed into cities, towns, and farms. The dunes and hollows of the Holland Sand Prairie are the only undisturbed Aeolian (wind-formed) landforms in the entire area. The Sand Prairie extends to the edge of the Mississippi River Terrace, which rises up over 100 feet from the floodplain below. The sand prairie community on this site is very impressive, with some areas remaining much as were prior to European settlement. Over 150 species of native plants grow on the prairie, including 5 that are State threatened or listed (see appendix for complete list). The Holland Sand Prairie is also a significant grassland bird site, with several State-listed bird species utilizing it regularly. This newly acquired property will become a State Natural Area (in process) in the year 2006, and be preserved for public enjoyment and education forever.

**Cassville Bluffs State Natural Area-Roe Tract, Grant County:** The Roe Preserve is a 244-acre preserve owned by the Conservancy (190.6 ac) and WI DNR (53 ac). This large bluffland preserve directly abuts the McGregor District of the UMRNWR. The Upper Mississippi River Campaign of Audubon has stated that sites such as the Roe Preserve, which have connected upland and lowland forests along the River, are high priority for protection because of the high bird biodiversity in these areas. The preserve contains an eagle roost site in the older growth forest and the large expanse of woodlands provide additional habitat for neo-tropical migrants and raptors. Key restoration and protection work on site will focus on restoring 10 acres of sand prairie as well as monitoring and managing for invasive and nuisance plant species such as garlic mustard in the woodland areas (150 acres).

**Sugar Creek Bluff Preserve & State Natural Area, Crawford County:** This 110-acre bluffland preserve is owned by the Conservancy and contains critical dry prairie habitat for a variety of species including the timber rattlesnake, a protected species in Wisconsin. It is the southern anchor of our Sugar Creek/Rush Creek Priority area that covers about 5500 acres of some of the highest quality dry prairie (goat prairie) habitat in the entire blufflands region. The preserve also protects a ½ mile of Sugar Creek, a high quality stream flowing into the Mississippi River that supports the state-listed mud darter. Key restoration work will focus on restoring the goat prairie and savanna habitat to 40 acres, monitoring and removing invasive plants such as garlic mustard in the overall woodland area, and prescribed burning in the continuous prairie/savanna/woodland acreage of 50-80 acres.

**La Crosse River Conservancy, La Crosse County:** The Conservancy has 366 acres under protection (owned or easement) in this high quality riverine corridor that is the focus of a large partnership involving the Cities of Onalaska and La Crosse, Wisconsin DNR, Natural Resource Conservation Service, U.S. Fish & Wildlife Service and private landowners. Habitat ranges from high quality open wetland, sedge meadow and tamarack swamp to more impacted areas that have been hayed in past years. The project area supports the State-threatened Bell's vireo and Blanding's turtle. It is also visited regularly by the federally threatened Bald Eagle. The

focus of restoration work is primarily a 118-acre tract owned by the Conservancy and some newly acquired adjacent properties. In late 2002, we worked with NRCS to implement a restoration plan that included plugging ditches and digging scrapes across the tract. This work has been completed. Restoration work will now focus on controlling reed canary grass throughout the site and planting native prairie on 10 acres.

**Northern Engraving Grasslands, La Crosse County:** The Conservancy has a signed management agreement with the Northern Engraving Corporation to manage and to restore this 320-acre grassland bird preserve, one of the richest sites for these declining species in the area. More recently, MVC has negotiated a deal to purchase and permanently protect the entire site by 2006/2007. A management plan involving the Wisconsin Department of Natural Resources and the U.S. Fish & Wildlife Service was developed in 2001 to oversee the restoration of the site to a native prairie grassland to further enhance the site for grassland birds and other prairie species. To date, 80 acres of prairie has been restored. The site has been surveyed for birds since 1995 and a formal research study on grassland birds and invertebrates was initiated in 2001 to monitor the effects of restoration on the populations. Restoration work will focus on restoring prairie on an additional 120 acres over the three-year grant period by the removal of brush and invasive species, prescribed burning, and the planting of native prairie species.

The USFWS Private Stewardship Grant will provide critical funding to assist our restoration and management work at these six sites. We have already spent over \$1.85 million permanently protecting these critical areas in our region and an additional \$153,000 beginning our restoration and management work at the preserves prior to the grant period. This funding will allow the Conservancy to increase significantly our number of acres restored and managed at each site and to enhance our ability to meet the habitat needs of the rare and declining species that inhabit or use these sites for nesting, roosting, breeding and feeding. We will match this funding through NRCS WHIP grants, volunteer hours, assistance from Wisconsin DNR Endangered Resources staff, and funding provided to the Conservancy from Northern Engraving Corporation, owner of the grasslands site. This project provides key habitat restoration for rare and declining species as well as rare natural communities characteristic of the upper Mississippi River valley. We also hope to address forest fragmentation issues on the preserves by restoring open fields to native tree species and enhance the bluffland corridor adjacent to the Upper Mississippi River National Wildlife and Fish Refuge, a globally important migratory bird site.

**Table 1: Threatened and State-Listed Species for Mississippi Valley Conservancy restoration work sites: 2006**

A. Roe Preserve, Grant County		
Plants		
Yellow giant hyssop	<i>(Agastache nepetoides)</i>	WI Threatened
Jeweled shooting star	<i>(Dodecatheon amethystinum)</i>	WI Special Concern
American ginseng	<i>(Panax quinquefolium)</i>	WI Special Concern
Cliff goldenrod	<i>(Solidago sciaphila)</i>	WI Special Concern
Animals		
Bald eagle Roost Site	<i>(Haliaeetus leucocephalus)</i>	Federally Threatened
Timber rattlesnake	<i>(Crotalus horridus)</i>	WI Protected Species

Western worm snake	( <i>Carphophis amoenus</i> )	<b>WI Special Concern</b>
<b>B. Sugar Creek Bluff Preserve</b>		
<b>Plants</b>		
Cliff goldenrod	( <i>Solidago sciaphila</i> )	<b>WI Special Concern</b>
Heart-leaved skullcap	( <i>Scutellaria ovata</i> )	<b>WI Special Concern</b>
Upland boneset	( <i>Eupatorium sessilifolium</i> )	<b>WI Special Concern</b>
American ginseng	( <i>Panax quinquefolium</i> )	<b>WI Special Concern</b>
Golden-seal	( <i>Hydrastis canadensis</i> )	WI Special Concern
<b>Animals</b>		
Timber rattlesnake	( <i>Crotalus horridus</i> )	WI Protected Species
Blue racer snake	( <i>Coluber constrictor</i> )	WI Special Concern
Mud darter fish	( <i>Etheostoma nigrigenum</i> )	WI Special Concern
Bald eagle Roost Site	( <i>Haliaeetus leucocephalus</i> )	<b>Federally Threatened</b>
<b>C. La Crosse River Conservancy</b>		
<b>Animals</b>		
Bell's vireo	( <i>Vireo bellii</i> )	<b>WI Threatened</b>
Blanding's Turtle	( <i>Emydoidea blandingii</i> )	<b>WI Threatened</b>
Bald eagle Roost Site	( <i>Haliaeetus leucocephalus</i> )	<b>Federally Threatened</b>
<b>D. Northern Engraving Grasslands</b>		
<b>Birds</b>		
Bell's vireo	( <i>Vireo bellii</i> )	<b>WI Threatened</b>
	( <i>Ammodramus henslowii</i> )	WI Threatened
Grasshopper sparrow	( <i>Ammodramus saviannarum</i> )	WI Special Concern
Northern harrier	( <i>Circus cyaneus</i> )	WI Special Concern
Sedge wren	( <i>Cistothorus pinetis</i> )	WI Special Concern
Yellow bellied cuckoo	( <i>Coccyzus americanus</i> )	WI Special Concern
Bobolink	( <i>Dolichonyx oryzivorus</i> )	WI Special Concern
Orchard oriole	( <i>Icterus spurius</i> )	WI Special Concern
Savanna sparrow	( <i>Passerculus sandwichensis</i> )	WI Management Concern
Vesper sparrow	( <i>Pooecetes gramineus</i> )	WI Special Concern
Dickcissel	( <i>Spiza americana</i> )	WI Special Concern
Clay-colored sparrow	( <i>Spizella pallida</i> )	WI Management Concern
Field sparrow	( <i>Spizella pusilla</i> )	WI Special Concern
Eastern meadowlark	( <i>Sturnella magna</i> )	WI Special Concern
Western meadowlark	( <i>Sturnella neglecta</i> )	WI Special Concern
<b>Plants</b>		
Prickly pear cactus	<b>Opuntia humifusa</b>	<b>WI Special Concern</b>
<b>E. Holland Sand Prairie</b>		
<b>Birds</b>		
Bell's vireo	( <i>Vireo bellii</i> )	WI Threatened
	( <i>Ammodramus henslowii</i> )	WI Threatened
	( <i>Ammodramus saviannarum</i> )	WI Special Concern
	( <i>Dolichonyx oryzivorus</i> )	WI Special Concern
Vesper sparrow	( <i>Pooecetes gramineus</i> )	WI Special Concern
Dickcissel	( <i>Spiza americana</i> )	WI Special Concern
Field sparrow	( <i>Spizella pusilla</i> )	WI Special Concern
Eastern meadowlark	( <i>Sturnella magna</i> )	WI Special Concern
Western meadowlark	( <i>Sturnella neglecta</i> )	WI Special Concern
<b>Plants</b>		

Clustered poppy mallow	<i>Callirhoe triangulate</i>	WI Special Concern
Hills thistle	<i>Cirsium hillii</i>	WI Threatened
Prickly pear cactus	<i>Opuntia humifusa</i>	WI Special Concern
Silky prairie clover	<i>Petalostemum villosum</i>	WI Special Concern
Snowy campion	<i>Silene nivea</i>	WI Threatened
<b>F. Tunnelville Cliffs SNA- Lee tract</b>		
<b>Plants</b>		
Northern monkshood	<i>Aconitum noveboracense</i>	Fed. & WI Threatened
Sullivan's cool-wort	<i>Sullivantia sullivantii</i>	WI Special Concern
<b>Birds</b>		
Eastern meadowlark	<i>(Sturnella magna)</i>	WI Special Concern
Field sparrow	<i>(Spizella pusilla)</i>	WI Special Concern

**3. Project Statement of Work:**

a. We will restore, protect, and manage 1,251 acres of bluffland forest, dry prairie (goat prairie), sand prairie, grassland, riverine wet prairie, and sedge meadow to enhance and support 28 listed species as well as critical species groups such as migratory birds. For specific activities, see item c. below.

b. Although the grant project is supervised by the Conservancy's Executive Director, the primary work will be coordinated by the Conservancy's Director of Land Projects and Stewardship with assistance from MVC Staff, DNR Endangered Resources staff (at State Natural Area sites), Conservancy volunteer stewards, and other partner volunteers. Northern Engraving Corporation will provide matching funding to the Conservancy for the prairie restoration work at its grasslands.

**Project activities & monitoring**

**Tunnelville Cliffs SNA - Lee Tract: 150 acres protected: all targeted to restoration and monitoring**

Primary restoration areas:

1/5<sup>th</sup> acre northern monkshood site

20 acres of prairie and savanna

130 acres of woodland

- Protect northern monkshood site with monitoring, fencing, and signage
- Annual restoration burning of 20 acre goat prairie
- Invasive tree, shrub, and plant removal with ongoing monitoring on 150 acres
- Boundary fencing and signage to keep motorized vehicles and neighboring livestock off property

**Holland Sand Prairie: 61 acres protected and targeted for restoration, control and monitoring.**

- Annual restoration burning of 30 acres
- Removal of invasive trees, shrubs, and non-native plants by cutting, mowing, and treating with herbicide on 30 acres
- Prepare sites to seed and over-seed 5 acres per year
- Rare prairie plant rescue from adjacent land scheduled for housing development (5 acres)

**Cassville Bluffs SNA- Roe Preserve: 250 acres protected: 10 acres targeted for restoration & 150 for exotics monitoring and control**

Primary restoration areas:

10 acres (old fields): prairie restoration and planting

150 acres (woodland): monitoring, treating, removal of invasive plants including garlic mustard

- Increase sand prairie area by 10 acres to provide more habitat for prairie dependent species.
- Monitor, manage, and protect entire woodland area from garlic mustard and other invasives (150 acres)
- Manage use of restored areas by woodland and prairie species, especially birds and invertebrates

**Sugar Creek Bluff: 120 acres protected : 90 acres targeted for restoration/exotics monitoring and control**

Primary restoration areas:

40 acres (savanna/dry prairie, approximate 5 acres currently restored): brush removal; prescribed burn on remaining acreage

50 acres: (woodland) monitoring, treating, and removal of garlic mustard and other invasives; prescribed burns

- Continue restoration of primary dry prairie/savanna area to increase to 40 acres, thereby increasing habitat for declining prairie plant and animal species including existing and potential reptiles (den sites).
- Continue to restore and manage 12-acre field in lower preserve to enhance forest connectivity and stream habitat for mud darter.
- Monitor increase of populations of rare plants and determine increase in use by animal species, especially reptiles and birds.

**La Crosse River Conservancy: 366 acres protected: 10 acres targeted for restoration**

Primary restoration areas:

10 acres of 366-acre site: control reed canary grass and increase native prairie habitat. Site had previous wetland restoration activities (plugging ditches and digging scrapes) on entire area.

- Further enhance wetland restoration site by monitoring and treating remaining reed canary grass and expanding prairie/sedge meadow areas by 10 acres to provide more habitat for a host of species including Blanding's turtle and nesting bird species such as sandhill cranes.
- Monitor and maintain shrub habitat along the upland border to enhance habitat for Bell's vireo.

- With assistance of volunteers and DNR, monitor use of restored area by wetland species, especially birds and amphibians.

**Northern Engraving Grasslands: 320 acres managed: 120 acres targeted for restoration**  
 120 acres targeted for prairie restoration (40 acres per year): Majority of lowland sand prairie site is non-native grasses with encroaching brush and planted shrub rows. Prairie restoration is based on multi-partner Management Plan developed in 2001 to restore native grassland system and enhance area for grassland birds.

- Remove brush from 120 acres except for targeted small shrub areas which will be left for landscape diversity and to provide habitat for Bell's vireo.
- Plant native prairie species on 40 acres/year according to management plan.
- Continue bird monitoring study to determine effects on the existing animal populations and use of newly restored areas.

**d. Timeline:**

**2006:**

Months 7-12: Prairie/Savanna brush cutting/treating at Sugar Creek Bluff SNA, Holland Sand Prairie, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Invasives and Garlic Mustard Monitoring and Control at all properties; Fall prairie plantings at Northern Engraving Grasslands and Holland Sand Prairie.

**2007:**

Months 1-3: Prairie/Savanna brush cutting/treating at Sugar Creek Bluff SNA, Holland Sand Prairie, Cassville Bluffs SNA, and Tunnelville Cliffs SNA; Invasives and Garlic Mustard Monitoring & Control at Cassville Bluffs SNA and Sugar Creek Bluff SNA; Site preparation for prairie planting at Northern Engraving Grasslands; Prescribed burn at Sugar Creek Bluff SNA on prairie/savanna.

Months 3-6: Bird Monitoring at Northern Engraving Grasslands; Restoration burning at the Holland Sand Prairie, Northern Engraving Grasslands, Sugar Creek Bluff SNA, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Reed canary monitoring and control at La Crosse River Conservancy; prairie plant rescue with tree spades at the Holland Sand Prairie.

Months 7-12: Prairie/Savanna brush cutting/treating at Sugar Creek Bluff SNA, Holland Sand Prairie, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Invasives and Garlic Mustard Monitoring and Control at all properties; Fall prairie plantings at the Northern Engraving Grasslands, Cassville Bluffs SNA, the La Crosse River Conservancy, and the Holland Sand Prairie.

**2008:**

Months 1-3: Prairie/Savanna brush cutting/treating at Sugar Creek, Holland Sand Prairie, Cassville Bluffs SNA, and Tunnelville Cliffs; Garlic Mustard Monitoring & Control at Roe/Sugar Creek; Site preparation at Northern Engraving Grasslands; Prescribed burn at Sugar Creek on prairie/savanna.



Months 3-6: Bird Monitoring at Northern Engraving Grasslands; Restoration burning at the Holland Sand Prairie, Northern Engraving Grasslands, Sugar Creek Bluff SNA, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Reed canary monitoring and control at La Crosse River Conservancy.

Months 7-12: Prairie/Savanna brush cutting/treating at Sugar Creek Bluff SNA, Holland Sand Prairie, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Invasives and Garlic Mustard Monitoring and Control at all properties; Fall prairie planting at Northern Engraving Grasslands and the Holland Sand Prairie.

2009:

Months 1-3: Prairie/Savanna brush cutting at Sugar Creek, Holland Sand Prairie and Tunnelville Cliffs; Invasives and Garlic Mustard Monitoring & Control at Cassville Bluffs SNA, Sugar Creek Bluff SNA and Tunnelville Cliffs SNA; Site preparation at Northern Engraving Grasslands; Prescribed burn at Sugar Creek on Prairie/savanna; Spring planting.

Months 3-6: Bird Monitoring at Northern Engraving Grasslands; Restoration burning at the Holland Sand Prairie, Northern Engraving Grasslands, Sugar Creek Bluff SNA, Tunnelville Cliffs SNA, and Cassville Bluffs SNA; Reed canary monitoring and control at La Crosse River.

e. Overall Project Maintenance:

Because the Conservancy owns or has a management agreement on all lands, the maintenance of these restorations and the sites as a whole is indefinite and ongoing. Even if the Conservancy were to transfer the site to another conservation entity, restrictions would be placed on the deed or an easement would be in place to ensure the ongoing management and protection of the natural areas. In addition, the three State Natural Area sites have management restrictions agreed to by the Conservancy and the DNR to ensure continued stewardship of the lands.

4. Project Budget Please see Appendix A

5. Supporting Documentation: see enclosed maps

**Appendix A  
Budget Detail**

**US Fish and Wildlife Service  
Private Stewardship Grant Program**

**Mississippi Valley  
Conservancy**

	Costs	US FWS	WHIP	MVC	Total
<b>Holland Sand Prairie</b>					
Restor. Burning	Contract 3 X \$1,500		3,500	1,000	4,500
	Volunteer 72 Hours @ \$14			1,008	1,008
	Staff Time 48 hr @ \$40	1,920			1,920
Invasives Removal	Volunteer 258 hours @ \$14			3,612	3,612
	Staff Time 174 hr @ \$40	6,960			6,960
Seeding	Seed Cost \$7,500		5,500	2,000	7,500
	Volunteer 36 hours @ \$14			504	504
	Machine Rental \$500			500	500
	Staff Time 83 hr @ \$40	3,320			3,320
Fencing	Materials \$3,000	3,000			3,000
	Volunteer 72 Hours @ \$14			,008	1,008
	Staff Time 8 hr @ \$40	320			320
Transplanting w/ Spade	Contract 4 X \$1,500	6,000			6,000
	Staff Time 8 hr @ \$40			320	320
Mileage	20mi RT X 40 @ \$0.40			320	320
		21,520	9,000	10,272	<b>40,792</b>

	Costs	US FWS	WHIP	MVC	Total
<b>Tunnelville Cliffs SNA - Lee Tract</b>					
Restor. Buring	Contract 3 X \$2000		6,000		6,000
	Volunteer 36 hours @ \$14			504	504
	Staff Time 48 hr @ \$40	1,920			1,920
Invasives Removal	Volunteer 80 hr @ \$14			1,120	1,120
	Supplies \$200			200	200
	Staff Time 8 hr @ \$40	320			320
Northern Monkshood Protection	Volunteer 33 hr @ \$14			462	462
	Staff Time 4 hr @ \$40			160	160
Fencing & Signage	Materials \$1,000	1,000			1,000
	Volunteer 36 hours @ \$14			504	504
	Staff Time 16 hr @ \$40	640			640
Mileage	100mi. RT X 9 @ \$0.40			360	360
		3,880	6,000	3,310	<b>13,190</b>

	Costs	US FWS	WHIP	MVC	Total
<b>Northern Engraving</b>					
Seeding	Seed Cost \$20,000	10,000		10,000	20,000
	Volunteer 48 hr @ \$14			672	
	Staff Time 96 hr @ \$40	3,840			3,840
Restor. Burning	Contract 6 X \$1,500		9,000		9,000
	Volunteer 36 hours @ \$14			504	504
	Staff Time 48 hr @ \$40	1,920			1,920
Invasives Removal					

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Budget Detail**

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**Mississippi Valley  
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	Contract	6 X \$1,500	6,000		6,000
	Volunteer	72 Hours @ \$14		1,008	1,008
	Staff Time	16 hr @ \$40	640		640
<b>Monitoring</b>					
	Volunteer	216 hr @ \$14		3,024	3,024
<b>Fencing &amp; Signage</b>					
	Materials	\$4,000	4,000		4,000
	Volunteer	36 hours @ \$14		504	504
	Staff Time	16 hr @ \$40	640		640
<b>Mileage</b>		24 mi RT X 22 @ \$0.40	211		
			9,000	15,712	51,963

		<b>Costs</b>	<b>US FWS</b>	<b>WHIP</b>	<b>MVC</b>	<b>Total</b>
<b>Sugar Creek Bluff SNA</b>						
<b>Restor. Buring</b>						
	Contract	5 X \$1,500		7,500		7,500
	Volunteer	15 hours @ \$14			210	210
	Staff Time	48 hr @ \$40	1,920			1,920
<b>Invasives Removal</b>						
	Volunteer	22 Hours @ \$14			308	308
	Supplies	\$200	200			200
	Staff Time	66 hr @ \$40	2,640			2,640
<b>Garlic Mustard Removal</b>						
	Volunteer	400 hr @ \$14			5,600	5,600
	Supplies					
	Staff Time	8 hr @ \$40	320			320
<b>Fencing &amp; Signage</b>						
	Materials	\$500	500			500
	Volunteer	36 hours @ \$14			504	504
	Staff Time	4 hr @ \$40	160			160
<b>Mileage</b>		80mi RT X 16 @ \$0.40	512			512
			6,252	7,500	6,622	20,374

		<b>Costs</b>	<b>US FWS</b>	<b>WHIP</b>	<b>MVC</b>	<b>Total</b>
<b>La Crosse River Wetlands</b>						
<b>Invasives Removal</b>						
	Volunteer	36 Hours @ \$14			504	504
	Supplies	\$160	160			160
	Staff Time	25 hr @ \$40	1,000			1,000
<b>Trail Maintenance</b>						
	Volunteer	143 hr @ \$14			2,002	2,002
	Staff Time	8 hr @ \$40	320			320
<b>Land Use Study</b>						
	Volunteer	160 hr @ \$14			2,240	2,240
	Staff Time	16 hr @ \$40	640			640
<b>Wet Prairie Restoration</b>						
	Contract	\$2,000	2,000			2,000
	Volunteer	15 hr @ \$14			210	210
	Staff Time	8 hr @ \$40	320			320
<b>Fencing &amp; Signage</b>						
	Materials	\$2,000	2,000			2,000
	Volunteer	36 hours @ \$14			504	504
	Staff Time	16 hr @ \$40	640			640
<b>Mileage</b>		10 mi. RT X 9 @ \$0.40	36			36
			7,116		5,460	12,576

**Appendix A  
Budget Detail**

**US Fish and Wildlife Service  
Private Stewardship Grant Program**

**Mississippi Valley  
Conservancy**

	Costs	US FWS	WHIP	MVC	Total
<b>Cassville Bluffs SNA</b>					
Invasives Removal					
Volunteer	60 hours @ \$14			840	840
Supplies	\$200			200	200
Staff Time	71 hr @ \$40	2,840			2,840
Fencing & Signage					
Supplies	\$500	500			500
Contract	\$3,500	3,500			3,500
Volunteer	22 hours @ \$14			308	308
Staff Time	16 hr @ \$40	640			640
Trail Maintenance					
Contract	\$2,000			2,000	2,000
Volunteer	15 hr @ \$14			210	210
Staff Time	16 hr @ \$40	640			640
Restor. Buring					
Contract	3 X \$1,500		4,500		4,500
Volunteer	36 hr @ \$14			504	504
Staff Time	48 hr @ \$40	1,920			1,920
Seeding					
Seed Cost	\$4,000	2,000	2,000		4,000
Volunteer	36 hr @ \$14			504	504
Staff Time	24 hr @ \$40	960			960
Mileage	260 mi RT X 22 @ \$0.40			2,288	2,288
		<b>13,000</b>	<b>6,500</b>	<b>6,854</b>	<b>26,354</b>
<b>Grand Totals</b>		<b>79,019</b>	<b>38,000</b>	<b>48,230</b>	<b>165,249</b>

# LaCrosse River Conservancy

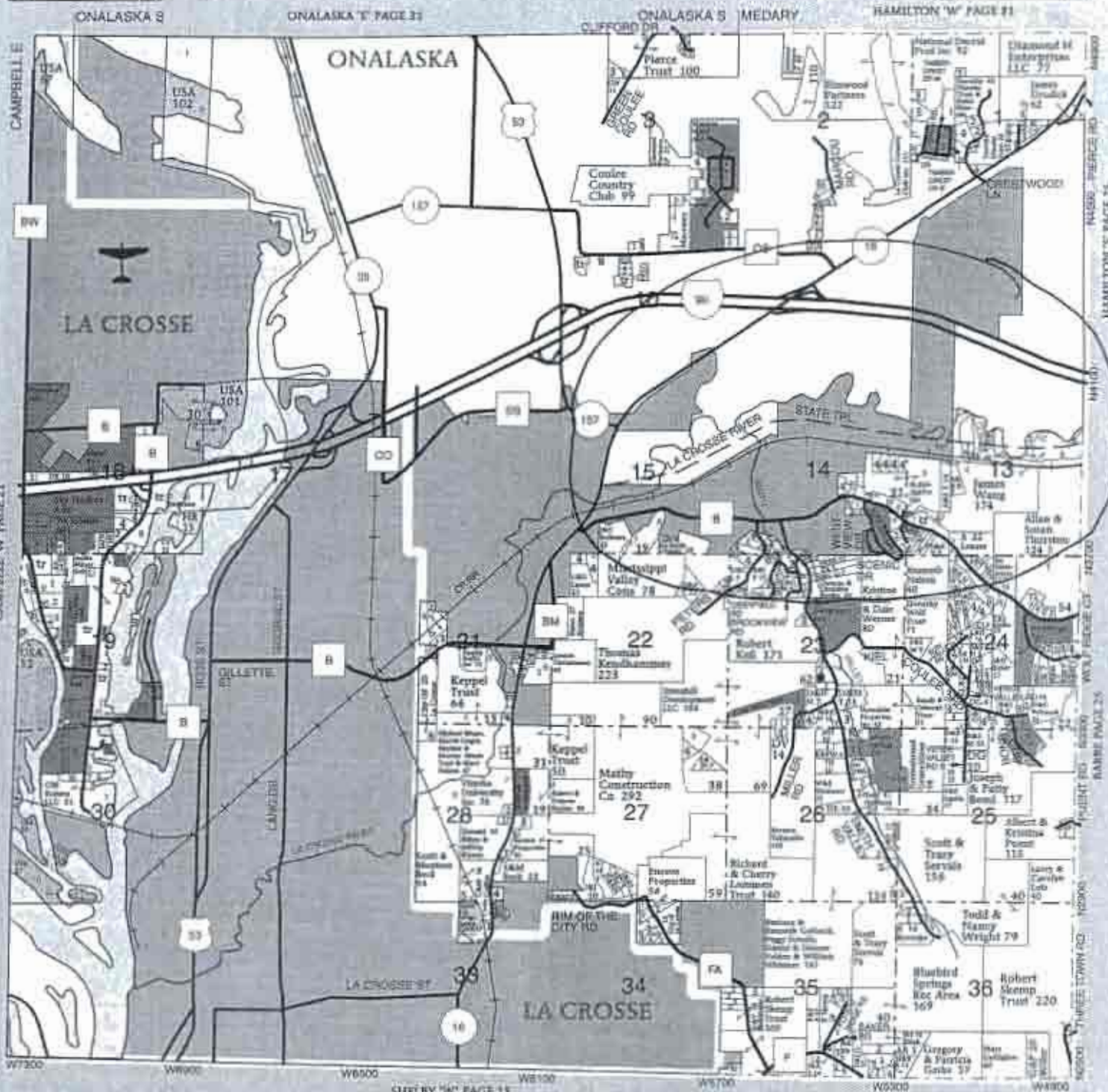
## CAMPBELL E/MEDARY/ONALASKA S

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See Pages 62 & 63 For Additional Names.



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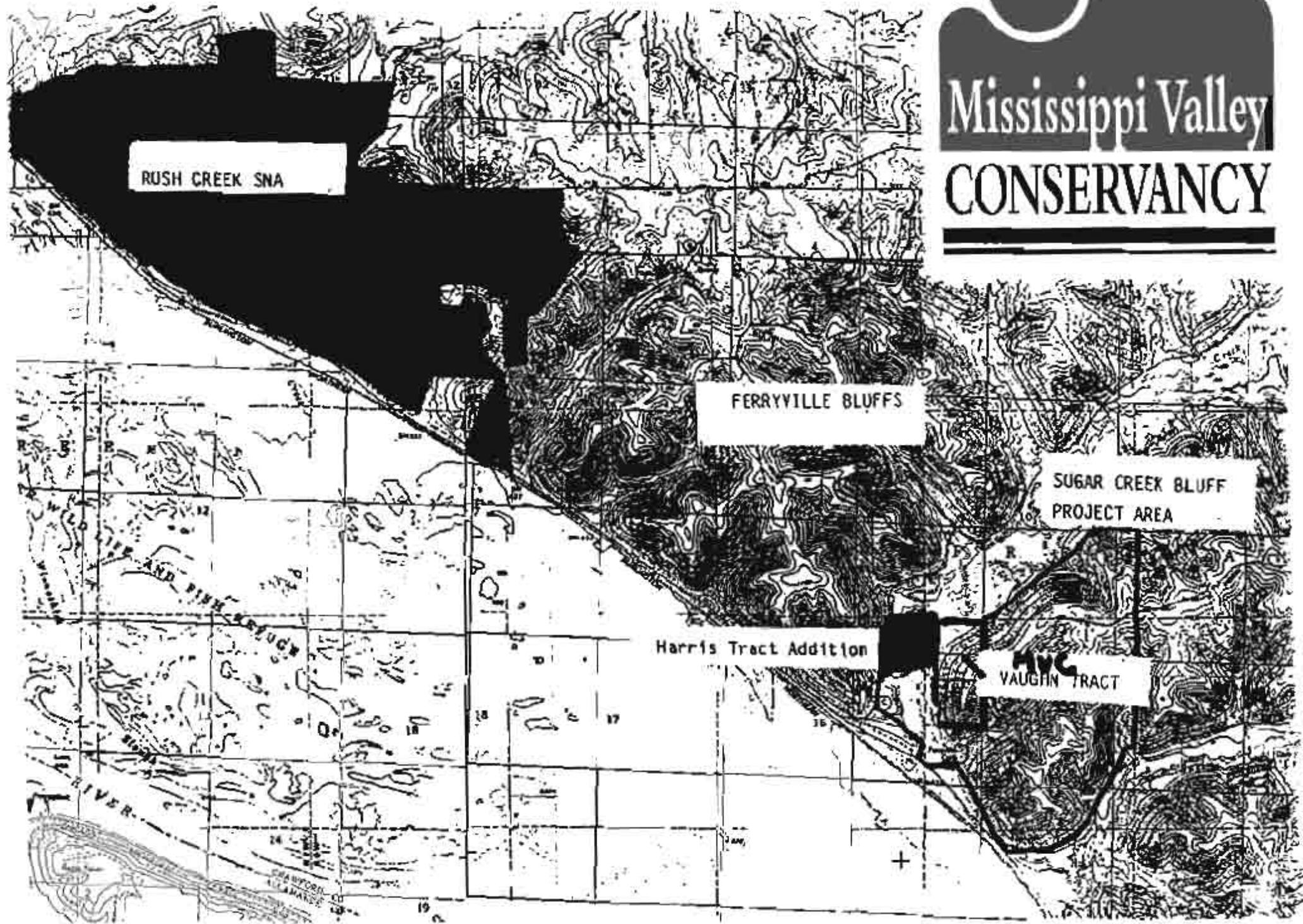
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Map B Landscape area showing Rush Creek SNA to Sugar Creek Bluff Project



Mississippi Valley  
**CONSERVANCY**





# Cassville Bluffs State Natural Area

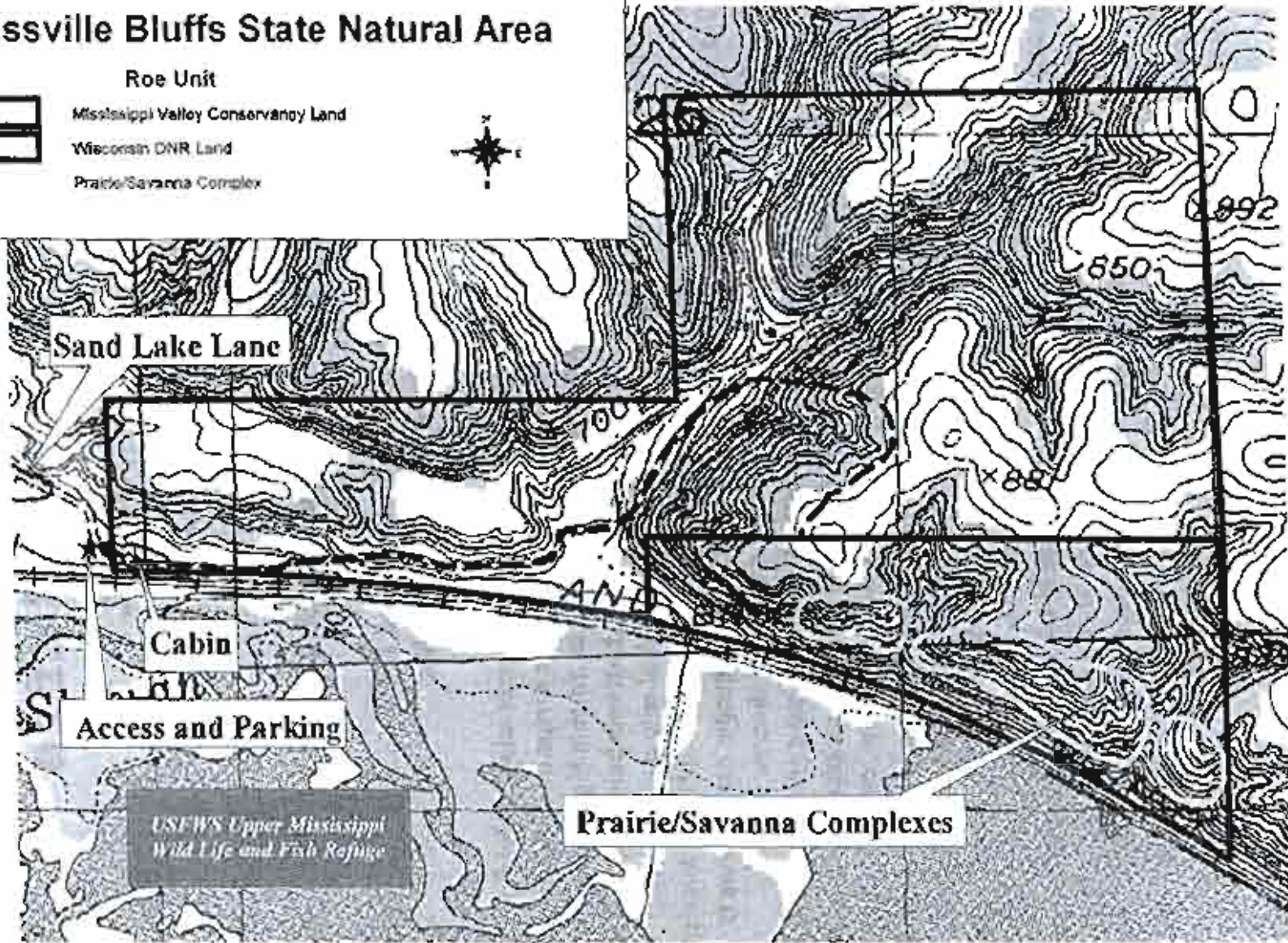
## Roe Unit



Mississippi Valley Conservancy Land

Wisconsin DNR Land

Prairie/Savanna Complex



# Cassville Bluffs Roe Unit

## STATE NATURAL AREA

**Location:** Grant County. T3N-R5W, Sections 26 S $\frac{1}{4}$ SE $\frac{1}{4}$ , 35 N $\frac{1}{2}$ NE $\frac{1}{4}$ . 244 acres.

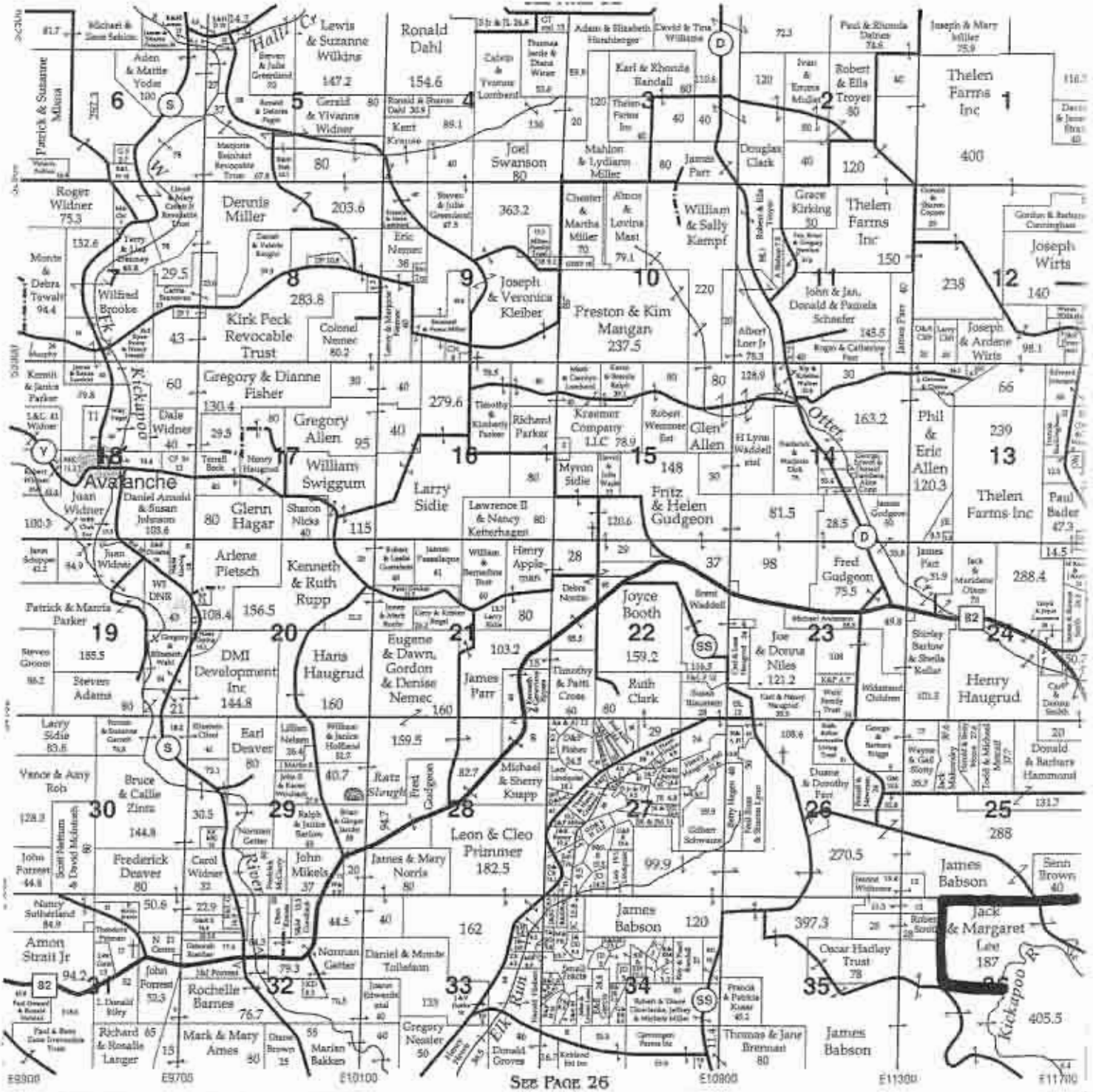
**Access:** From the intersection of State Highways 81 and 133 in Cassville, go south and east on 133 2.6 miles, then south on Sand Lake Lane 0.3 miles.

**Description:** Cassville Bluffs features a rare expanse of undeveloped bluff and sand terrace overlooking the Mississippi River that supports linear strips of dry prairie and rare chinquapin oak savanna. Extremely important and unique to this high quality natural area are the uplands, which remain connected to the river bottoms below and are not separated by any roads or highways. Currently, Wisconsin has only one mile of protected river front property that has no highway between the bluffs and Mississippi River. One of the rarest savanna types in Wisconsin, the chinquapin oak savanna is dominated by chinquapin oak with some bur oak and contains a diverse, intact groundlayer. The dry prairie is also diverse dominated by side oats grama with little bluestem, Indian grass, needle grass, big bluestem, and *Panicum* grasses. Prairie forbs include flowering spurge, western sunflower, cylindrical blazing star, compass plant, leadplant, and short green milkweed. The site also harbors the rare jeweled shooting star (*Dodecatheon amethystinum*) and there are scattered dolomite outcroppings several meters high that support numerous fern species including rusty woodsia and smooth cliffbrake. Along the bluff is an older growth forest that is an important roosting site for the federally threatened bald eagle (*Haliaeetus leucocephalus*). The bluffs are also important habitat for rare animals including two snakes: the timber rattlesnake (*Crotalus horridus*) and western worm snake (*Carphophis amoenus*). There are numerous agricultural and old fields that will be restored to native habitat in the future. Cassville Bluffs is owned jointly by the DNR and the Mississippi Valley Conservancy and was designated a State Natural Area in 2002.



State Natural Areas Program  
Bureau of Endangered Resources  
Wisconsin Department of Natural Resources  
P.O. Box 7921, Madison, WI 53707  
[www.dnr.state.wi.us/org/land/er/snas.htm](http://www.dnr.state.wi.us/org/land/er/snas.htm)





SEE PAGE 26

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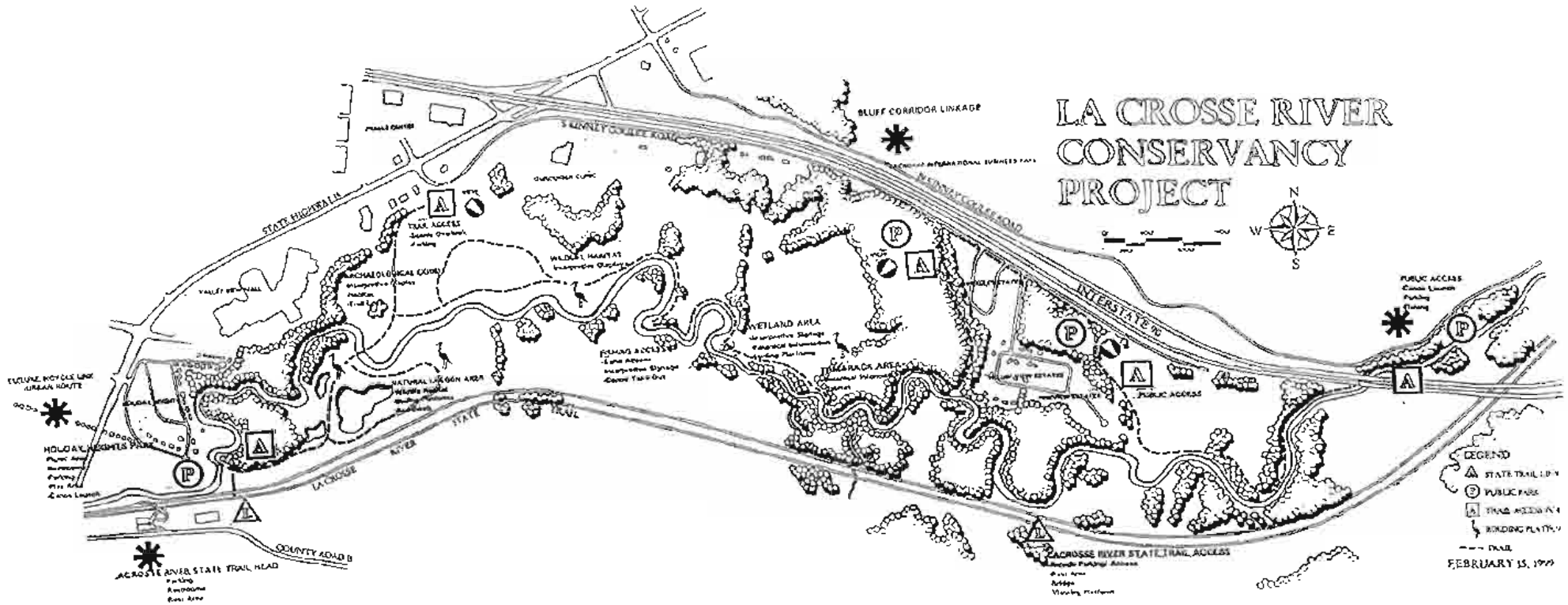
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# LA CROSSE RIVER CONSERVANCY PROJECT





## Holland Sand Prairie Plant List

November, 2004	George E. Howe, Conservation Specialist, MVC	
Common Name	Scientific Name	Status
Alum Root	Heuchera richardsonii	Native
Asparagus, wild	Asparagus officinalis	Exotic
Beach wormwood	Artemisia caudata	Native
Bergemot, wild	Monarda fistulosa	
Bicknellii sedge	Carex bicknellii	
Big bluestem	Andropogon gerardi	
Black-eyed Susan	Rudbeckia hirta	
Blue Vervain	Verbana hastata	
Blunt-leaved milkweed	Asclepias amplexicaulis	
Little bluestem	Andropogon scoparius	
Bur cucumber	Sicyos angulatus	
Butterfly milkweed	Asclepias tuberosa	Native
Canadian milk vetch	Astragalus canadensis	Native
Choke cherry	Prunus virginiana	Native
	Paspalum ciliatifolium	
Clammy ground-cherry	Physalis heterophylla	Native
Clustered poppy mallow	Callirhoe triangulata	Special concern, globally rare
Common evening-primrose	Oenothera biennis	Native
Common ironweed	Vernonia fasciculata	Native
Common milkweed	Asclepias syriaca	Native
Common spiderwort	Tradescantia ohiensis	Native
Common St. John's wort	Hypericum perforatum	Native
Coreopsis	Coreopsis palmata	Native
	Baptisia bracteata	
	Monarda punctata	
	Kuhnia eupatorioides	
	Krigia biflora	
	Smilacina racemosa	
idflax	Comandra umbellata	
	Equisetum arvense	
	Antennaria neglecta	
Fire-on-the-mountain	Euphorbia cyathophora	Native
Flowering spurge	Euphorbia corollata	Native
Fringed puccoon	Lithospermum incisum	Native
	Tephrosia virginiana	
Grey goldenrod	Solidago nemoralis	Native
Grooved yellow flax	Linum sulcatum	Native
Ground nut	Apios americana	
	Bouteloua hirsuta	
Hairy hawkweed	Hieracium longipilum	Native
Heath aster	Aster ericoides	Native
Hills thistle	Cirsium hillii	State threatened
Hoary alyssum		Exotic
Hoary puccoon	Lithospermum canescens	Native
Hairy puccoon	Lithospermum caroliniense	Native
Hoary vervain	Verbana stricta	Native
Horse nettle		
Indian grass	Sorghastrum nutans	Native
Indian hemp	Apocynum cannabinum	Native
June grass	Koeleria macrantha	Native
Lance-leaved ground-cherry	Physalis virginiana	Native
Late figwort	Scrophularia marilandica	Native
Leadplant	Amorpha canescens	Native
Low bindweed	Convolvulus spithameus	Native

Missouri goldenrod	<i>Solidago missouriensis</i>	Native
Needle grass	<i>Stipa spartea</i>	Native
New Jersey tea	<i>Ceanothus herbaceus</i>	Native
Nodding spurge	<i>Euphorbia maculata</i>	Native
Old field balsam	<i>Gnaphalium obtusifolium</i>	Native
Partridge pea	<i>Chamaecrista fasciculata</i>	Native
Pasque flower	<i>Anemone patens</i>	Native
Pasture thistle	<i>Cirsium discolor</i>	Native
Rough blazing star	<i>Liatris aspera</i>	Native
Prairie blue-eyed grass	<i>Sisyrinchium campestre</i>	Native
Prairie cinquefoil	<i>Potentilla arguta</i>	Native
Prairie larkspur	<i>Delphinium virescens</i>	Native
Prairie panic-grass	<i>Panicum leibergii</i>	native
Prairie smoke	<i>Geum triflorum</i>	Native
Prairie sunflower	<i>Helianthus pauciflorus</i>	Native
Prairie thistle	<i>Cirsium hillii</i>	Native
Prairie violet	<i>Viola pedatifida</i>	Native
Prickly pear cactus	<i>Opuntia humifusa</i>	Special concern
Purple Lovegrass	<i>Eragrostis spectabilis</i>	Native
Purple prairie clover	<i>Petalostemum purpureum</i>	Native
Pursh plantain	<i>Plantago purshii</i>	Native
Racemed milkwort	<i>Polygala polygama</i>	Native
Rock spikemoss	<i>Selaginella rupestris</i>	Native
Rough-headed bush clover	<i>Lespedeza capitata</i>	native
Rough hedge-nettle	<i>Stachys hispida</i>	Native
Sand cherry	<i>Prunus pumila</i>	Native
Showy goldenrod	<i>Solidago speciosa</i>	Native
Ciliate leaved paspalum	<i>Bouteloua curtipendula</i>	Native
Silky aster	<i>Aster sericeus</i>	Native
Silky prairie clover	<i>Petalostemum villosum</i>	Special concern
Slender fescue grass	<i>Festuca octoflora</i>	Native
Small skullcap	<i>Scutellaria leonardi</i>	Native
Smooth blue aster	<i>Aster laevis</i>	Native
Smooth brome	<i>Bromus inermis</i>	Exotic
Snowy campion	<i>Silene nivea</i>	Threatened
Starved panic-grass	<i>Panicum depauperatum</i>	Native
Stiff goldenrod	<i>Solidago rigida</i>	Native
Schweinitz's sedge	<i>Cyperus schweinitzii</i>	Native
Sweet goldnerod	<i>Solidago graminifolia</i>	Native
Switch grass	<i>Panicum virgatum</i>	Native
Tall goldenrod	<i>Solidago canadensis</i>	native
Tall lettuce	<i>Lactuca canadensis</i>	Native
Thimbleweed	<i>Anemone cylindrica</i>	Native
Trailing wild bean	<i>Strophostyles helvola</i>	Native
Western ragweed	<i>Ambrosia psilostachya</i>	Native
White campion	<i>Lychnis alba</i>	Native
White prairie clover	<i>Petalostemum candidum</i>	Native
White Sage	<i>Artemisia ludoviciana</i>	Native
White sweet clover	<i>Melilotus alba</i>	Exotic
Whorled milkweed	<i>Asclepias verticillata</i>	Native
Wild cucumber	<i>Echinocystis lobata</i>	Native
Wild four O'clock	<i>Mirabilis nyctaginea</i>	native
Wild plum	<i>Prunus americana</i>	Native
Wild rose	<i>Rosa sp</i>	Native
Slender wheat grass	<i>Agropyron trachycaulum</i>	Native
Yarrow	<i>Achillea millefolium</i>	Native