

Red Bison Display Garden Project

Grant # 01-019W

June 25, 2001

Submitted by Allison Eyring
on behalf of University YMCA ←
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608/962-1989

Check payable to

Red Bison of the University of Illinois YMCA received Grant #01-019W from the Illinois Department of Natural Resources from contributions to the Illinois Wildlife Preservation Fund in July of 2000. The contract was enacted in November 2000 and the funds were spent in the spring of 2001. The project is entitled Red Bison Display Garden Project and is located in Champaign, Illinois. This project was installed during two phases, the first during the fall of 2000 and the second during the spring of 2001.

Red Bison was formed approximately six years ago. Three students at the University of Illinois were enrolled in a Restoration Ecology class, and their assignment was to develop a management plan for a site. The site they chose is what Red Bison currently manages as prairie. It is approximately one mile long and 100 feet wide. The site is primarily located within the Village of Savoy in Champaign County. The northern border of the site is Windsor Road which is the southern most street in the City of Champaign, although 100 feet of the land south of Windsor Road has been annexed by the City of Champaign, including the Display Garden project site. The east border of the site is railroad tracks of the Canadian National/Illinois Central Railroad, as shown in Appendix A, Figure 1. The west border is Route 45, locally known as Neil Street, which can be seen in Appendix A, Figure 2.

The site was remnant prairie until 7 years ago when Neil Street was widened. A local organization, Heartland Pathways, arranged for sections of the prairie soil to be moved to a nearby restoration site, and Red Bison's site now contains only a few thriving remnant pieces. Most of the site has been returned to prairie as a result of efforts by Red Bison to restore, and where necessary, reestablish prairie.

Across Neil Street, west of the project site, are numerous commercial businesses including car dealerships and insurance agencies, as can be seen in Appendix A, Figure 3. Across Windsor Avenue, north of the site, is a project which was sponsored by the City of Champaign. They established prairie species on the steep slopes around a culvert. East of the culvert is a stretch of prairie maintained by Grand Prairie Friends on either sides of a drainage swale. East of Red Bison's Display Garden are farm fields, a park, and a small lake which is the headwaters of the Embarras River.

Red Bison currently manages the land south of the project site as tall grass prairie, including species of dry, mesic and wet tall grass prairies. A current list is included in Appendix B, List 1. This project brings together some of the most showy species of the tall grass prairie and displays them for the public. There are nineteen species which make up the planting, and they flower at various times throughout the growing season. A complete list has been included in Appendix B, List 2.

The materials used in the planting project were plant plugs, shredded hardwood mulch, various tools, a sign and labor. The plants were obtained from several sources during the two phases of the project. For the fall planting Grand Prairie Friends, a local community organization, donated over 300 plugs. SORF, funding through the University of Illinois, provided moneys for 80 plugs to be purchased from Prairie Nursery. In the spring, Midwest Groundcovers donated over 100 plugs, and the grant from the Department of Natural Resources from contributions to the Illinois Wildlife Preservation Fund provided funding to purchase 132 plugs from The Natural Garden. The mulch was purchased from the Landscape Recycling Center of Urbana for the first phase, and purchased from the University of Illinois Horticulture Club for the second phase. The tools needed for the installation of the project included shovels, mattocks, trowels, rakes, and backpack sprayers. Many of them Red Bison already owned, although several were purchased with funding from the University YMCA. The sign was constructed in the spring and is made of treated lumber, plywood and plexi-glass. Members of Red Bison and community groups, namely Grand Prairie Friends, donated the labor which would have been the largest cost of the project. Expenditures of the grant are detailed in Appendix C.

Methods used for both phases of installation were that of a designer and gardener. The date was set to begin the planting in October. During September of 2000, the site was prepared by spraying a solution of Roundup to control the turf existing on the site, reducing the competition for the young plugs to be planted. Saturday, October 5, a crew of ten Red Bison members assembled. There were over 300 plants to plant and seven cubic yards of mulch to spread. The plants were arranged so they could be planted efficiently and orderly. The plants, which were primarily plugs 2" x 2", were planted by

hand, as seen in Appendix A, Figure 3. They were taken out of the plastic pots they were growing in, the roots were loosened, and then they were placed in a hole, approximately 4" deep and 3" wide, made by a shovel, mattock or trowel, as shown in Appendix A, Figure 4. Soil was patted around the roots and stems, and 2" of shredded hardwood mulch was spread by hand around the stem of the plant. Next, the plants were watered utilizing backpack sprayers and labeled with wood sticks. Watering was conducted every three days during the following three weeks when the rain was not sufficient.

A temporary interpretive sign was installed early in the spring. It displays a sign which describes the project as well as names the sponsors and several of the species. A copy of the sign is included in Appendix D. It is made of a 4' x 4" x 4" treated lumber post, painted white, with one end cut to a 45° angle. A piece of plywood, 10" x 12", painted white, is attached to the post with screws. A piece of plexi-glass is cut the same size of the plywood and secured to the plywood with screws. Between the plywood and the plexi-glass is a piece of clear plastic, an overhead, on which is printed the interpretive information. The bottom of the wood post has a 4" hole into which a 8" metal rod slides halfway. The rod is then driven into the ground and serves to hold the wood post vertical. The wood post rests in the ground. The permanent sign was constructed in May and has been erected at the site, as seen in Appendix A, Figure 5.

During the spring of 2001, phase II, the same planting process was repeated. The workdays were scheduled and the mulch and plants were ordered. On the workday the areas where the new plants would be located were identified. Red Bison members worked on digging holes and planting. The new mulch was spread around the plants and they were watered. This is shown in Appendix A, Figure 6.

The current results of the two phases include a site transformed from turf to a garden of native perennials. This spring, over 90% of the plants installed during phase I have begun to grow, and several are blooming currently. The species diversity of the entire Red Bison site has been increased by 8 species as a result of this project. The ongoing benefits and perennial displays as a result of this project will continue to produce positive results.

This project is a progressive step to teach the community about the native prairie communities of Illinois. It also serves to strengthen the link between a student organization and the community of Champaign-Urbana. Located on a busy intersection, this project delights and interests the community. Numerous individuals have made remarks to the club that they appreciate the efforts of Red Bison on the Display Garden and think it is a success. An individual jogging by the site this spring remarked, "I'm really looking forward to seeing it [the project] next year" to a member of Red Bison.

The interpretive sign serves to educate the visitors about the species of the tall grass prairie and informs them about how this project was realized. The Illinois Department of Natural Resources and the Illinois Wildlife Preservation Fund benefits from Red Bison's Display Garden because it is a project which increases the plant species diversity in the community and seeds can be spread throughout the region to other sites where they are lacking. The increased species diversity will benefit numerous wildlife which currently inhabit and feed in adjacent areas. In addition, the project replaced turf with native species which serve to stabilize soil on slopes and filter runoff, improving the quality of the ground water.

Red Bison realizes this project is an ongoing effort. The work done to apply for this grant and to obtain permission for the project to be installed was only the beginning. The members of Red Bison who worked on the planning and installation have begun to work on the management and maintenance of the project. The effort and results thus far have been a great success, and the coming years will see the maturing of a beautiful garden. The generous support of the Illinois Department of Natural Resources from contributions to the Illinois Wildlife Preservation Fund, along with other organizations, has allowed this project to become a reality. The members of Red Bison have really enjoyed and appreciated working to see this project through.

APPENDIX B LIST 1

Red Bison Praire Site Species List

Last updated: 10/08/99

Natives

Grasses and Grass-like (Graminoid): 9

<i>Andropogon gerardii</i>	big bluestem
<i>Bouteloua curtipendula</i>	side-oats grama
<i>Carex</i> spp.	sedges
<i>Elymus canadensis</i>	nodding wild rye
<i>Panicum virgatum</i>	switch grass
<i>Schizachyrium scoparium</i>	little bluestem
<i>Sorghastrum nutans</i>	Indian grass
<i>Spartina pectinata</i>	cordgrass
<i>Stipa spartea</i>	porcupine grass

Forbs: 68

<i>Allium canadense</i>	wild onions
<i>Amorpha canescens</i>	leadplant
<i>Anemone cylindrica</i>	thimbleweed
<i>Apocynum cannabinum</i>	prairie dogbane
<i>Aquilegia canadensis</i>	wild columbine
<i>Asclepias incarnata</i>	swamp milkweed
<i>Asclepias syriaca</i>	common milkweed
<i>Aster ericoides</i>	heath aster
<i>Aster laevis</i>	smooth aster
<i>Aster novae-angliae</i>	New England aster
<i>Baptisia leucantha</i>	wild cream indigo
<i>Calystegia sepium</i>	hedge bindweed
<i>Campsis radicans</i>	trumpet creeper vine
<i>Ceanothus americanus</i>	New Jersey tea
<i>Claytonia virginica</i>	spring beauty
<i>Coreopsis palmata</i>	prairie coreopsis
<i>Coreopsis tripteris</i>	tall coreopsis
<i>Dalea purpurea</i>	purple prairie clover
<i>Desmanthus illinoensis</i>	Illinois bundle flower
<i>Desmodium sessilifolium</i>	sessile-leaved tick trefoil
<i>Dodecatheon meadia</i>	shooting star
<i>Echinacea pallida</i>	pale purple coneflower
<i>Echinacea purpurea</i>	purple coneflower
<i>Erigeron annuus</i>	annual fleabane
<i>Erigeron strigosus</i>	daisy fleabane
<i>Eryngium yuccifolium</i>	rattlesnake master

<i>Eupatorium altissimum?</i>	tall boneset
<i>Euphorbia corollata</i>	flowering spurge
<i>Fragraria virginiana</i>	wild strawberry
<i>Galium aparine</i>	bedstraw
<i>Gaura longiflora</i>	large-flowered gaura
<i>Helianthus sp.</i>	sunflower
<i>Hypericum punctatum</i>	spotted St. John's wort
<i>Lactuca canadensis</i>	wild lettuce
<i>Lespedeza capitata</i>	round-headed bush clover
<i>Liatris pycnostachya</i>	prairie blazing star
<i>Liatris spicata</i>	dense blazing star
<i>Lobelia cardinalis</i>	cardinal flower
<i>Mirabilis nyctaginea</i>	wild four o'clock
<i>Monarda fistulosa</i>	wild bergamot
<i>Oxalis stricta</i>	yellow wood sorrel
<i>Oenothera biennis</i>	common evening primrose
<i>Opuntia humifusa</i>	prickly pear
<i>Parthenium integrifolium</i>	wild quinine
<i>Penstemon digitalis</i>	white beardtongue
<i>Physostegia virginiana</i>	obedient plant
<i>Potentilla arugta</i>	prairie cinquefoil
<i>Potentilla simplex</i>	common cinquefoil
<i>Pycnanthemum tenuifolium</i>	slender mountain mint
<i>Ratibida pinnata</i>	yellow coneflower
<i>Rosa carolina</i>	prairie rose
<i>Rubus allegheniensis</i>	blackberry
<i>Rudbeckia hirta</i>	black eyed Susan
<i>Ruellia humilis</i>	wild petunia
<i>Silphium integrifolium</i>	rosinweed
<i>Silphium laciniatum</i>	compass plant
<i>Silphium perfoliatum</i>	cup plant
<i>Silphium terebinthinaceum</i>	prairie dock
<i>Sisyrinchium albidum</i>	white blue-eyed grass
<i>Solidago canadensis</i>	tall goldenrod
<i>Solidago rigida</i>	stiff goldenrod
<i>Tradescantia virginiana</i>	common spiderwort
<i>Verbena helianthoides</i>	yellow crownbeard
<i>Vernonia fasciculata</i>	common ironweed
<i>Veronicastrum virginicum</i>	Culver's root
<i>Vitis riparia?</i>	riverbank grape
<i>Zizia aurea</i>	golden alexanders

Exotics: 20+

Achillea millefolium

Arctium sp.

Asparagus officinalis

Brassica rapa

Cirsium arvense

Conium maculatum

Convolvulus arvensis

Daucus carota

Lepidium campestre

Lychnis alba

Melilotus alba

Melilotus officinalis

Ornithogalum umbellatum

Pastinaca sativa

Plantago lanceolata

Rumex crispus

Taraxicum officinale

Trifolium pratense

Verbascum thapsus

Vinca sp.

yarrow

burdock*

wild asparagus

field mustard

Canada thistle*

poison hemlock

field bindweed

wild carrot

field peppergrass

white campion

white sweet clover*

yellow sweet clover*

star-of-bethlehem

wild parsnip*

English plantain

curly dock

dandelion

red clover

mullein

crown vetch*

* plants that are a serious problem and represent a threat to our site.

There are also numerous grasses such as Kentucky Blue grass and brome grass that are not listed. These can be moderately controlled with fire.

APPENDIX B LIST 2

Red Bison Display Garden Species List 5/10/01

- Amorpha canescens - Lead Plant
- Anemone cylindrical - Thimbleweed
- Asclepias tuberosa - Butterfly-weed
- Baptisia leucantha - White Wild Indigo
- Baptisia leucophea - Cream Wild Indigo
- Bouteloua curtipendula - Side-oats Grama
- Coreopsis palmata - Stiff Coreopsis
- Dodecatheon meadia - Shootingstar
- Echinacea pallida - Pale Purple Coneflower
- Liatris aspera - Rough Blazingstar
- Liatris cylindracea - Cylindrical Blazingstar
- Penstemon digitalis - Smooth Penstemon
- Petalostemum purpurea - Purple Prairie Clover
- Pycnanthemum tenuifolium - Slender Mountain Mint
- Silene regia - Royal Catchfly
- Solidago graminifolia - Lance-leaved Goldenrod
- Sporobolus heterolepis - Prairie Dropseed
- Tradescantia ohioensis - Ohio Spiderwort
- Veronicastrum virginicum - Culver's Root

APPENDIX C

Grant Expenditures

Natural Garden

132 Plant Plugs @ \$3.99 = \$526.68

15% discount = - \$79.00

= \$447.68

Shipping and Handling = \$24.51

= \$472.19

Tax = \$29.10

Total cost = \$501.29

Amount allocated from grant = \$474.00

Remaining costs donated by
other sources = \$27.29

Horticulture Club

2 Cubic Yards Hardwood Mulch = \$20.00

Amount allocated from grant = \$20.00

Lowe's

1- 1/4" x 2' x 2' Plywood = \$3.34

1- 4" x 4" x 8' Lumber Post = \$4.97

= \$8.31

Tax = \$0.62

Total = \$8.93

Amount allocated from grant = \$6.00

Remaining costs donated by
other sources = \$2.93

Total amount allocated from grant = \$500.00

Red Bison's Showy Planting Project

The plants before you are components of our native tall grass prairie. We have provided a palette of beautiful and seasonal color, which can be elements of private landscapes. There are a total of over twenty native plant species which make up this planting project. We will be providing a diagram to show the names of the plants later this spring. A few species are White Wild Indigo (*Baptisia leucantha*), Purple Prairie Clover (*Petalostemum purpureum*) and Royal Catchfly (*Silene regia*). This planting project was first drafted in fall of 1999, and was installed in October of 2000. There will be additional plants added this spring and the maintenance will be a continual process.

This project was installed by members of Red Bison, a program of the University YMCA. Red Bison is a registered Student Organization of the University of Illinois dedicated to the preservation and restoration of Illinois' prairies. Red Bison was first formed seven years ago as part of Students for Environmental Concerns (SECS). Now we are an organization of over 40 members and we manage the mile-long stretch of land between Windsor Road and Curtis Road, between Neil Street (Route 45) and the railroad tracks. The grant which enabled this project was funded by the Illinois Department of Natural Resources from contributions to the Illinois Wildlife Preservation Fund. Also, we would like to express our thanks to the University YMCA, SORF, Midwest Groundcovers (St. Charles, IL), and Ruth Green for their enthusiastic contributions and constant support.

To contact Red Bison email Mark Uchanski (meuchans@uiuc.edu) or Ellie Kron (kron@uiuc.edu).







RED BISON
PRAIRIE CORRIDOR



MANAGED BY
RED BISON
UNIT FACA



