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TENTH-YEAR RESTORATION MONITORING REPORT FOR THE BLACKWELL LANDFILL PRAIRIE RESTORATION

Prepared for:

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January 2011

Conservation Design Forum

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TENTH-YEAR RESTORATION MONITORING REPORT

FOR THE

BLACKWELL LANDFILL PRAIRIE RESTORATION

Warrenville, Illinois

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CONSERVATION DESIGN FORUM
Project No. 09038.00

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Date: January 21st, 2011

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EXECUTIVE SUMMARY

- This report documents restoration maintenance activities, as well as vegetation monitoring data that occurred during the 2010 calendar year at the Blackwell Landfill prairie restoration site. The monitoring data represent the *ninth* full growing season of the native landscape reconstruction. The first monitoring year (2001) documented the prairie seed installation, and established baseline transect data.

- Restoration maintenance activities completed in 2010 included: prescribed burn; targeted weed control via herbicide applications and plant removal from late spring through fall; and miscellaneous woody sapling removal. In addition, native prairie grass seed was collected and dispersed across the project site and fire breaks were mowed in preparation of a controlled burn that is planned for spring of 2011.

- The results of the vegetation monitoring indicate the landscape is developing as should be expected for a prairie reconstruction that has completed its ninth year of growth from seed. Some portions of the landscape lack uniform prairie cover; this is primarily due to challenging site conditions such as steep slopes and compacted soils. In many other portions of the site, prairie vegetation is well established.

- Time and continued maintenance (annual controlled burn and native seed collection and dispersal) are necessary for the site to mature into a more evenly-disposed prairie landscape. Overall floristic quality values should remain around their current levels with continued maintenance.

- At this point the prairie landscape at Blackwell Landfill is typical of many native landscape reconstructions of similar scale and age. Overall, the landscape is doing well, due in large measure to dedicated maintenance activities that have been performed every year since the initial seed installation. In time and with continued maintenance, there is reason to believe that prairie grasses will be well-dispersed across all portions of the project site. At this point in its maturity, the site itself can be the source of most of the prairie grass seed used in seed collection and dispersal.

- A root penetration assessment was conducted in September, with the results summarized in a field report, dated October 12th. This was the second such assessment, the first having occurred in September 2005. The methods and results are not summarized herein; see field report for more information.

INTRODUCTION

PROJECT SITE LOCATION AND PURPOSE

As depicted on EXHIBIT A – PROJECT LOCATION MAP, Blackwell Landfill is located north of Butterfield Road (Route 56), between Batavia Road and Winfield Road, in Warrenville, DuPage County, Illinois (SW1/4, Section 26, T39N, R9E). The site is owned and operated by the Forest Preserve District of DuPage County. As detailed on EXHIBIT B – BLACKWELL LANDFILL PRAIRIE RESTORATION, the project area includes most of the slopes across the landfill.

The purpose of prairie restoration monitoring is two-fold. First, restoration monitoring is a fundamental component to all *de novo* ("from scratch") native landscape reconstructions to assess the vegetation development and make recommendations for proper land management. Another important purpose of monitoring is to provide data to the U.S. Environmental Protection Agency in regards to the development of the native landscape across the landfill slopes as outlined in the approved restoration plan (Montgomery Watson Harza and Conservation Design Forum, 2000).

RESTORATION ACTIVITIES CONDUCTED IN 2010

The following is a chronological list of management activities that were conducted at the prairie restoration site in 2010. [See earlier monitoring reports for activities that were conducted in previous years.]

- April 15th: prescribed burn; with approximately one-half of the prairie landscape burned to ash.
- May 19th; June 3rd, June 17th: targeted weed control of (primarily) Field Thistle, Crown Vetch, and Bird's Foot Trefoil using Tahoe™, Roundup™, or a mixture of *Garlon*™ and a 2,4-D herbicide.
- August 25th; September 15th: targeted weed control of (primarily) Field Thistle, Crown Vetch, and Bird's Foot Trefoil using Tahoe™, Roundup™, or a mixture of *Garlon*™ and a 2,4-D herbicide.
- September 29th; October 13th: collection of prairie grass seed; cut and remove miscellaneous saplings; select weed control via herbicide application.
- November 4th: mow fire breaks around site in preparation for a spring 2011 controlled burn.

The prescribed burn in April was conducted by the Forest Preserve District of DuPage County. All other maintenance at the site was performed by V-3 Consultants (Woodrige, IL).

MONITORING METHODS

There are many ways to monitor *de novo* restorations and measure their performance. The approach utilized in this project emphasizes vegetation development and floristic quality assessment (FQA) methods. This is consistent with the approved landscape restoration plan and this monitoring strategy has been utilized at the site over the past several years. In summary, the vegetation is sampled along transect lines established within representative portions of the project site, and a qualitative inventory of the vegetation across the entire landscape is recorded as well. These vegetation sampling protocols are repeated every year so that trends in floristic development can be monitored over time.

A critical component in the evaluation of a prairie restoration is to determine the extent of native species recruitment and establishment across the landscape. A useful method in the determination of floristic quality is through an analysis of the conservatism and diversity of species that are recorded during the monitoring event. Conservatism represents the degree to which an experienced field botanist has confidence that a given species is representative of a high-quality, remnant habitat (i.e., those natural areas with intact presettlement structure, composition, and processes). Native plant species display varying degrees of tolerance to disturbance, as well as varying degrees of fidelity to specific habitat integrity. Native plants of a given region exhibit an observable range of conservatism, and each native species can be assigned a *coefficient of conservatism* (C value) ranging from 0 to 10, "weedy to conservative," that reflects its disposition.

The Mean C is the average coefficient of conservatism for a site. The floristic quality index (FQI) is a statistic derived by multiplying Mean C by the square root of the number of species inventoried; thus, the FQI is a function of conservatism and diversity. In general, site inventories with FQI values less than 20 are degraded or derelict plant communities, or are very small habitat remnants. Site inventories with FQI values in the twenties through low thirties suffer from various kinds of disturbance, but generally have potential for habitat restoration and recovery. When site inventories have FQI values in the middle thirties or higher, and/or have Mean C values of 3.4 or higher, one can be confident that there is sufficient native character present for the area to be at least regionally noteworthy. Site inventories with indices in the middle forties and higher are undoubtedly significant natural area remnants of statewide importance.

As management and time cause changes to take place, Mean C and FQI values will reflect the extent to which conservative species are being recruited and the floristic quality is improving. If an inventoried site has a large proportion of conservative plants, the Mean C is higher; in a degraded site, the Mean C is lower. The presence of a large proportion of adventive species and non-conservative native species suggest that an area is degraded. The Mean C and FQI values for a sampling transect are calculated for the transect as a whole and for the average quadrat; a comparison of floristic values between the transect and quadrat level is useful to understand the uniformity of native species establishment.

Another useful measurement that is important in the evaluation of a *de novo* landscape restoration is that of the wetness value (W). Each plant species has been assigned a wetness category that indicates its probability of occurrence in a wetland. Plants are designated as *Obligate Wetland* (OBL=-5), *Facultative Wetland* (FACW=-3), *Facultative* (FAC=0), *Facultative Upland* (FACU=3), and *Obligate Upland* (UPL=5). For about 20% of our flora, a "+" or "−" sign has been attached to the three *Facultative* categories to express the exaggerated tendencies of those species. The "+" sign denotes that the species generally has a greater estimated probability of occurrence in wetlands; the "−" sign denotes that it generally has a lesser estimated probability of occurrence in wetlands. Mean wetness values can be compared from year to year to gain an understanding on what type of plant species have become established across the restoration site.

Four straight-line transects have been established across the Blackwell Landfill prairie restoration. A description of each transect location is as follows, and their locations are depicted on EXHIBIT B. These are the same transects used in the restoration monitoring events that have been conducted in previous years.

Transect 1 is located at vault cover "DV-10" in the northwestern portion of the site. The transect is oriented 0° north, and the first quadrat is placed 10 paces north of the vault cover.
Transect 2 is located at vault cover "DV-17" in the western portion of the site. The transect is oriented 90° east, and the first quadrat is placed 5 paces east of the vault cover.
Transect 3 is located at vault cover "DV-13" in the southeastern portion of the site. The transect is oriented 270° west. The first quadrat is placed 5 paces west of the vault cover.
Transect 4 is located at vault cover "DV-18" in the northeastern portion of the site. The transect is oriented 45° northeast. The first quadrat is placed 5 paces northeast of the vault cover.

A 0.25m^2 quadrat is placed at 10-pace intervals along each transect line until 10 quadrats are sampled. The vegetation within each quadrat is identified and given a relative cover/abundance number from 1 to 5 as shown in Table 1 below. A compass is used to stay on the correct orientation, and photographs are taken at the start of each transect in order to document the current site conditions.

Table 1. Summary of cover/abundance values

COVER/ ABUNDANCE NUMBER	APPROXIMATE COVER
1	1 to 5 plants present
2	5% to 25% cover
3	25% to 75% cover
4	Common/scattered throughout
5	Ubiquitous

The cover/abundance data is used to determine the relative importance value (RIV) for each species recorded along a transect. The RIV of each species is calculated by summing relative frequency and relative cover and dividing by 2. This and other information gathered via transect sampling offers important quantitative data that is used to interpret the development of the native landscape.

RESULTS AND DISCUSSION

The results of the plant inventories and transect sampling are presented below. The field work occurred on September 15th, 2010 and was performed by Kenneth Johnson. The weather conditions during the monitoring event were partly sunny, with air temperatures around 80° Fahrenheit, so sampling conditions were optimum. Photographs taken during the field work are included at the back of the report. Refer to EXHIBIT B for a plan view of the project site.

GENERAL PLANT INVENTORY AND FQA DATA

The results of the plant inventory and associated FQA data for the Blackwell Landfill prairie restoration are presented in APPENDIX I. Table 2 below summarizes the total number of native species recorded during the inventory (NS), along with the percent that these native species comprise of all plants recorded (%TS). The last two columns are the native Mean C and FQI values. For comparative purposes, these same data are presented from the restoration

monitoring conducted in previous years. Also shown is similar data from 1999 when a fall vegetation inventory of the landfill slopes was conducted (as part of the initial planning efforts for the landfill landscape, prior to any landscape restoration).

Table 2. FQA data summary

PLANT INVENTORY & FQA DATA SUMMARY			
Year	NS (%TS)	Mean C	FQI
1999	37 (44%)	1.8	11
2001	53 (47%)	1.7	13
2002*	42 (46%)	2.2	14
2003	71 (56%)	2.5	22
2004	72 (55%)	2.8	23
2005	57 (49%)	3.2	24
2006	72 (60%)	3.1	27
2007	61 (57%)	2.8	22
2008	56 (59%)	2.8	21
2009	69 (60%)	3.2	27
2010	72 (60%)	3.2	27

* = First full growing season of the *de novo* prairie landscape.

The results of the inventory data indicate a positive trend in the establishment of the initial landscape restoration over the past several years. Based upon these data and general site observations during the 2010 calendar year, the prairie is developing as expected for having completed its ninth full-growing season since installation (installation occurred in early summer of 2001).

As in the past few years, the most frequently encountered species noted during the September meander/inventory included: prairie grasses such as Side-oats Grama, Canada Wild Rye, and Indian Grass, and cool-season Eurasian grasses such as Smooth Brome and Quack Grass. The back slopes are dominated by Crown Vetch and Eurasian grasses.

As has been documented in previous reports, some portions of the landscape have been slow to establish a uniform cover of prairie vegetation due to steep slopes and compacted soils. On the other hand, other portions of the site have a well-established cover of prairie grasses and have performed very well. Overall, these FQA values should remain around their current levels as long as routine maintenance is continued.

TRANSECT SAMPLING AND FQA DATA

The results of the four straight-line transects are presented in APPENDIX II. As stated above, each transect runs through a representative portion of the prairie landscape, and each is the same as that sampled in previous years. Transect sampling helps to quantify the vegetation changes and landscape development at the site. A comparison of floristic values between

the transect and the quadrat level data is useful to understand the uniformity of native species establishment.

Tables 3—6 below presents a summary of the data collected for each transect. The aggregate transect data are presented separately from the average quadrat data. The number of native taxa (NT) is given, along with native Mean C and native FQI values. For comparative purposes these same data from past restoration monitoring are included in the table.

Table 3. Transect 1 data summary

T1	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2001	6	2.5	6	1.7	0.7	1.0
2002	11	1.8	6	2.4	2.7	4.2
2003	12	2.7	9	3.1	2.9	5.0
2004	10	3.1	10	2.6	4.8	6.9
2005	7	3.7	10	2.0	3.8	5.3
2006	9	4.1	12	2.7	2.9	5.6
2007	14	2.9	11	3.2	4.1	6.8
2008	10	3.1	10	2.0	2.3	4.0
2009	16	3.0	12	3.0	4.6	7.6
2010	12	2.6	9	1.4	2.2	2.8

Table 4. Transect 2 data summary

T2	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2001	9	3.0	9	0.9	0.5	1.1
2002	8	2.5	7	1.4	2.6	3.7
2003	11	2.7	9	2.0	2.3	3.7
2004	17	2.8	11	2.4	1.3	2.4
2005	10	2.7	9	1.7	2.2	3.1
2006	11	1.8	6	1.4	1.1	1.5
2007	12	3.4	12	1.9	1.7	2.7
2008	6	1.5	4	1.3	1.2	1.5

T2	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2009	6	2.2	5	1.5	1.1	1.6
2010	7	1.4	4	1.4	1.5	1.8

Table 5. Transect 3 data summary

T3	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2001	8	0.6	2	2.1	0.2	0.3
2002	11	2.1	7	2.8	1.4	2.6
2003	12	2.7	9	3.7	2.1	4.5
2004	15	3.0	12	2.9	3.1	4.9
2005	16	3.6	14	3.9	3.3	6.2
2006	19	3.8	17	3.5	3.1	5.9
2007	16	2.4	10	3.8	2.7	5.2
2008	20	4.0	18	4.2	4.2	8.5
2009	17	3.4	14	3.5	3.3	6.4
2010	26	3.0	16	4.3	3.3	6.7

Table 6. Transect 4 data summary

T4	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2001	8	0.6	2	2.4	0.1	0.3
2002	13	3.0	11	3.3	4.4	7.3
2003	22	3.1	15	5.6	3.2	7.9
2004	16	4.0	16	4.6	4.7	9.7
2005	19	4.0	17	4.3	4.7	9.7
2006	16	4.1	17	4.6	4.2	9.4
2007	17	4.8	20	4.3	4.7	10.1
2008	17	4.1	17	4.3	4.2	9.1

T4	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
YEAR	NT	MEAN C	FQI	NT	MEAN C	FQI
2009	18	4.4	19	4.8	4.8	10.5
2010	17	4.2	17	4.1	4.0	8.5

A summary of these data is very much the same as what was stated last year, namely:

- Targeted weed control, compacted soils, and/or steep slopes in the areas of the site where Transects 1 and 2 are located have hindered prairie vegetation establishment. New- and Old-world weeds remain common and dominate some portions of these (and other) areas of the site. Continued overseeding of native prairie grasses, targeted weed control efforts, and annual burn management will, in time, help to improve native vegetation cover.
- The landscape in the vicinity of Transects 3 and 4 continues to show generally impressive FQA values for a native landscape recreation. It is likely these results will level off at or near these current figures.

The relative importance values (RIV) for the top 50% of species from each transect are presented in APPENDIX III. For comparative purposes these same data from past restoration monitoring are included in the tables. All of the prairie grasses are common across much of the landscape, except for the back slopes (including the vicinity of Transect 2).

Eurasian, cool-season grasses, such as Smooth Brome (*Bromus inermis*) and Kentucky Blue Grass (*Poa pratensis*) remain common across the site; Crown Vetch (*Coronilla varia*) remains a common weed on the back slopes and locally elsewhere despite repeated targeted herbicide applications. Various other weeds remain common in scattered stands across the landscape as well.

A combined assessment of all 40 quadrats from each year is summarized in Table 7 below. With several years of data, this analysis offers an aggregate performance of the entire site as a whole from year to year.

Table 7. Combined transect data summary

TRANSECT/YR	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
	NT	MEAN C	FQI	NT	MEAN C	FQI
2001	19	1.6	7	1.8	0.4	0.7
2002*	20	2.1	9	2.5	2.8	4.5
2003	33	2.3	13	3.6	2.6	5.3
2004	31	3.2	18	3.1	3.5	6.0
2005	27	3.5	18	3.0	3.5	6.1
2006	27	3.5	18	3.1	2.8	5.6
2007	33	3.1	18	3.3	3.3	6.2
2008	27	3.5	18	3.0	3.0	5.8
2009	30	3.2	18	3.2	3.5	6.5
2010	35	3.0	18	2.8	2.8	5.0

* = First full growing season of the *de novo* prairie landscape.

These data show an average of the quadrat values and, overall, show a positive trend in FQA values over the first nine years of vegetation establishment.

SEEDED SPECIES RECRUITMENT

An alphabetical list of the 37 native species that were seeded as part of the prairie landscape installation in May and June of 2001 are presented in APPENDIX IV. Each species is listed along with its C value (in parenthesis). If the species was recorded from the site during the 2010 monitoring event it is indicated with a "Y", and if not it is indicated with a "N". The columns to the right summarize the RIV of each species if recorded during the transect sampling.

In summary, 28 of the 37 seeded species were recorded during the monitoring event in September of 2010. For comparative purposes these same data from past restoration monitoring are presented in Table 8 below.

Table 8. Summary of seeded species recruitment

SEEDED SPECIES RECRUITMENT		
YEAR	NO. SPECIES	MEAN C
2001 Seeding	37	5.6
2001	10	4.5

SEEDED SPECIES RECRUITMENT		
YEAR	NO. SPECIES	MEAN C
2002*	12	4.8
2003	19	5.3
2004	26	5.3
2005	24	5.4
2006	28	5.5
2007	23	5.0
2008	25	5.0
2009	28	5.3
2010	28	5.3

* = First full growing season of the *de novo* prairie landscape.

Over the past few years, prairie grasses such as Big Bluestem Grass, Indian Grass, etc., have consistently been in the top 50% RIV. This is a positive sign that can be attributed to the seed collection and dispersal efforts and prescribed burns.

Future restoration monitoring should be compared to these data in order to show trends in the development of the intended native landscape. In general, after four full growing seasons approximately 40% of the seeded prairie species should be recorded in a site inventory—and if so, then the initial seeding should be considered satisfactory. Based upon the 2010 data, after nine growing seasons, approximately 76% of the seeded species are present across the project site.

The native Mean W of the site is summarized in Table 9 below and for comparative purposes these same data from past restoration monitoring are included. These are compared to the Mean W of the 37 seeded species (2001 seeding).

Table 9. Summary of native Mean W

2001 SEEDING	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
2.5	1.5	1.3	1.4	1.6	1.6	1.3	1.7	1.4	1.3	1.5

In general, these data indicate that the site is recruiting from more mesic than dry-mesic plant species, and can be used to inform plant selection in future native species enhancement efforts.

SUMMARY

Maintenance activities that were completed across the Blackwell Landfill prairie restoration in 2010 included: prescribed burn; targeted weed control via herbicide applications and plant removal; and miscellaneous woody sapling removal. In the fall, additional targeted weed control was conducted, native prairie grass seed was collected and dispersed across the project site, and fire breaks were mowed in preparation of a spring 2011 prescribed burn.

Overall, the results of the vegetation monitoring data indicate the native landscape restoration is progressing in a positive manner, due to on-going maintenance that has been performed since the initial seed installation. In time and with continued maintenance, there is reason to believe that prairie grasses will be well-dispersed across all portions of the project site. At this point in its maturity, the site itself can be the source of most of the prairie grass seed used in seed collection and dispersal.

GENERAL REFERENCES

The following documents were reviewed and referenced in the preparation of this report.

Conservation Design Forum. (January) 2002. First Year Restoration Monitoring Report for the Blackwell Landfill Prairie Restoration. Elmhurst, IL.

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APPENDICES

APPENDIX I

VEGETATION INVENTORY & FLORISTIC QUALITY ASSESSMENT

The following is a summary of the inventory data generated using Wilhelm and Masters' *Floristic Quality Assessment and Computer Applications*, 1999. Plant nomenclature follows Swink and Wilhelm's *Plants of the Chicago Region*, 1994. More information on floristic quality assessment methodology can be found in *Erigenia*, number 15, November, 1997. The plant inventory and assessment is divided into 2 sections as follows.

Section 1 includes three tables that summarize the inventory assessment data. The table to the left is an analysis of the floristic quality of the project area. In addition to listing the number of native species and total number of species, the mean coefficient of conservatism (MEAN C), floristic quality index (FQI), and mean wetness (MEAN W) values are presented. These are calculated once for native species only, and a second time including adventive species (W/Adventives). The two other tables summarize the number and percent of species in each physiognomic group (A=annual, B=biennial, P=perennial, W=woody, H=herbaceous).

Section 2 includes the plant inventory arranged alphabetically, with each species preceded by its database acronym and coefficient of conservatism (C=0 to 10, weedy to conservative); and followed by its wetness coefficient (W=-5 to +5, wet to dry), corresponding national wetland indicator status (OBL=obligate wetland species, FAC=facultative species, UPL=upland species), physiognomic group, and common name. Adventive species are written in ALL CAPS and have an asterisk (*) for their C value.

The Mean C is the average coefficient of conservatism for the site. The FQI is derived by multiplying Mean C by the square root of the number of species present. In general, sites with FQI values less than twenty are degraded or derelict plant communities, or are very small habitat remnants. Sites with FQI values in the twenties through low thirties suffer from various kinds of disturbance, but generally have potential for habitat restoration and recovery. When sites have FQI values in the middle thirties or higher, one can be confident that there is sufficient native character present for the area to be at least regionally noteworthy. Sites with indices in the middle forties and higher are often also statewide significant natural areas.

Site: **Blackwell Landfill Prairie Reconstruction**
Locale: Warrenville, Du Page County, IL
Date: September 15, 2010
By: Conservation Design Forum (K Johnson)

SECTION 1 SUMMARY TABLES

FLORISTIC QUALITY DATA	Native	72	60.0%	Adventive	48	40.0%
72 NATIVE SPECIES	Tree	8	6.7%	Tree	4	3.3%
120 Total Species	Shrub	4	3.3%	Shrub	3	2.5%
3.2 NATIVE MEAN C	W-Vine	2	1.7%	W-Vine	0	0.0%
1.9 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
26.8 NATIVE FQI	P-Forb	38	31.7%	P-Forb	11	9.2%
20.7 W/Adventives	B-Forb	3	2.5%	B-Forb	12	10.0%
1.5 NATIVE MEAN W	A-Forb	6	5.0%	A-Forb	6	5.0%
2.0 W/Adventives	P-Grass	8	6.7%	P-Grass	9	7.5%
AVG: Fac. Upland (+)	A-Grass	1	0.8%	A-Grass	3	2.5%
	P-Sedge	2	1.7%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	A-Sedge	0	0.0%
	Cryptogam	0	0.0%			

SECTION 2 SPECIES INVENTORY

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ABUTHE	0	ABUTILON THEOPHRASTI	4	FACU-	Ad A-Forb	VELVETLEAF
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX ELDER
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
AGRALA	0	AGROSTIS ALBA	-3	FACW	Ad P-Grass	REDTOP
ALLPET	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
ALLVIN	0	ALLIUM VINEALE	3	FACU	Ad P-Forb	FIELD GARLIC
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	GIANT RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ANDSCO	5	Andropogon scoparius	4	FACU-	Nt P-Grass	LITTLE BLUESTEM GRASS
APOSIB	2	Apocynum sibiricum	-1	FAC+	Nt P-Forb	PRAIRIE INDIAN HEMP
ARCMIN	0	ARCTIUM MINUS	5	UPL	Ad B-Forb	COMMON BURDOCK
ASCSYR	0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
ASCVER	1	Asclepias verticillata	5	UPL	Nt P-Forb	WHORLED MILKWEED
ASTERI	5	Aster ericoides	4	FACU-	Nt P-Forb	HEATH ASTER
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
ASTSAD	2	Aster sagittifolius drummondii	3	[FACU]	Nt P-Forb	DRUMMOND'S ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BAPLEO	10	Baptisia leucophaea	5	UPL	Nt P-Forb	CREAM WILD INDIGO
BARVUL	0	BARBAREA VULGARIS	0	FAC	Ad B-Forb	YELLOW ROCKET
BIDFRO	1	Bidens frondosa	-3	FACW	Nt A-Forb	COMMON BEGGAR'S TICKS
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
BRANIG	0	BRASSICA NIGRA	5	UPL	Ad A-Forb	BLACK MUSTARD
BROINE	0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CIRVUL	0	CIRSIUM VULGARE	4	FACU-	Ad B-Forb	BULL THISTLE
CONARV	0	CONVOLVULUS ARVENSIS	5	UPL	Ad P-Forb	FIELD BINDWEED
CONSEP	1	Convolvulus sepium	0	FAC	Nt P-Forb	HEDGE BINDWEED
CORTRP	5	Coreopsis tripteris	0	FAC	Nt P-Forb	TALL COREOPSIS
CORRAC	1	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
CORVAR	0	CORONILLA VARIA	5	UPL	Ad P-Forb	CROWN VETCH
CYPESC	0	Cyperus esculentus	-1	[FAC+]	Nt P-Sedge	FIELD NUT SEDGE
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad P-Grass	ORCHARD GRASS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
DESILS	3	Desmanthus illinoensis	5	UPL	Nt P-Forb	ILLINOIS SENSITIVE PLANT
DESCAA	4	Desmodium canadense	1	FAC-	Nt P-Forb	SHOWY TICK TREFOIL
DIPLAC	0	DIPSACUS LACINIATUS	5	UPL	Ad B-Forb	CUT-LEAVED TEASEL
DIPSYL	0	DIPSACUS SYLVESTRIS	5	UPL	Ad B-Forb	COMMON TEASEL
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELAUMB	0	ELAEAGNUS UMBELLATA	5	UPL	Ad Shrub	AUTUMN OLIVE

ELYCAN	4	Elymus canadensis	1	FAC-	Nt	P-Grass	CANADA WILD RYE
ELYVIR	4	Elymus virginicus	-2	FACW-	Nt	P-Grass	VIRGINIA WILD RYE
ERASPE	3	Eragrostis spectabilis	5	UPL	Nt	P-Grass	PURPLE LOVE GRASS
ERIANS	0	Erigeron annuus	1	FAC-	Nt	B-Forb	ANNUAL FLEABANE
ERIVIL	0	ERIOCHLOA VILLOSA	5	UPL	Ad	A-Grass	CHINESE CUP GRASS
ERYYUC	9	Eryngium yuccifolium	-1	FAC+	Nt	P-Forb	RATTLESNAKE MASTER
EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt	P-Forb	TALL BONESET
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt	P-Forb	LATE BONESET
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad	P-Grass	TALL FESCUE
FRAAMA	5	Fraxinus americana	3	FACU	Nt	Tree	WHITE ASH
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt	Tree	GREEN ASH
GLETRI	2	Gleditsia triacanthos	0	FAC	Nt	Tree	HONEY LOCUST
HELMOL	9	Helianthus mollis	5	UPL	Nt	P-Forb	DOWNY SUNFLOWER
HELSTR	5	Helianthus strumosus	5	UPL	Nt	P-Forb	PALE-LEAVED SUNFLOWER
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt	P-Forb	FALSE SUNFLOWER
HIBTRI	0	HIBISCUS TRIONUM	5	UPL	Ad	A-Forb	FLOWER-OF-AN-HOUR
HORJUB	0	HORDEUM JUBATUM	-1	FAC+	Ad	P-Grass	SQUIRREL-TAIL GRASS
JUNDUD	4	Juncus dudleyi	0	[FAC]	Nt	P-Forb	DUDLEY'S RUSH
JUNTOR	4	Juncus torreyi	-3	FACW	Nt	P-Forb	TORREY'S RUSH
JUNVIC	2	Juniperus virginiana crebra	3	FACU	Nt	Tree	RED CEDAR
LACCAN	2	Lactuca canadensis	2	FACU+	Nt	B-Forb	WILD LETTUCE
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad	B-Forb	PRICKLY LETTUCE
LEPCAM	0	LEPIDIUM CAMPESTRE	5	UPL	Ad	B-Forb	FIELD CRESS
LESCAP	4	Lespedeza capitata	3	FACU	Nt	P-Forb	ROUND-HEADED BUSH CLOVER
LONMAA	0	LONICERA MAACKII	5	UPL	Ad	Shrub	AMUR HONEYSUCKLE
LOTCOR	0	LOTUS CORNICULATUS	1	FAC-	Ad	P-Forb	BIRD'S FOOT TREFOIL
MEDSAT	0	MEDICAGO SATIVA	5	UPL	Ad	P-Forb	ALFALFA
MELALB	0	MELILOTUS ALBA	3	FACU	Ad	B-Forb	WHITE SWEET CLOVER
MELLOF	0	MELILOTUS OFFICINALIS	3	FACU	Ad	B-Forb	YELLOW SWEET CLOVER
MONFIS	4	Monarda fistulosa	3	FACU	Nt	P-Forb	WILD BERGAMOT
MORALB	0	MORUS ALBA	0	FAC	Ad	Tree	WHITE MULBERRY
NEPCAT	0	NEPETA CATARIA	1	FAC-	Ad	P-Forb	CATNIP
OENBIE	0	Oenothera biennis	3	FACU	Nt	B-Forb	COMMON EVENING PRIMROSE
PANVIR	5	Panicum virgatum	-1	FAC+	Nt	P-Grass	SWITCH GRASS
PARINT	8	Parthenium integrifolium	5	UPL	Nt	P-Forb	WILD QUININE
PENCAL	7	Penstemon calycosus	3	FACU	Nt	P-Forb	SMOOTH BEARD TONGUE
PETPUR	9	Petalostemum purpureum	5	UPL	Nt	P-Forb	PURPLE PRAIRIE CLOVER
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad	P-Grass	REED CANARY GRASS
PHLPRA	0	PHLEUM PRATENSE	3	FACU	Ad	P-Grass	TIMOTHY
PHYSUB	0	Physalis subglabrata	5	UPL	Nt	P-Forb	TALL GROUND CHERRY
PHYAME	1	Phytolacca americana	1	FAC-	Nt	P-Forb	POKEWEED
PLARUG	0	Plantago rugelii	0	FAC	Nt	A-Forb	RED-STALKED PLANTAIN
POAPRA	0	POA PRATENSIS	1	FAC-	Ad	P-Grass	KENTUCKY BLUE GRASS
POLCON	0	POLYGONUM CONVOLVULUS	1	FAC-	Ad	A-Forb	BLACK BINDWEED
POLPEN	0	Polygonum pensylvanicum	-4	FACW+	Nt	A-Forb	PINKWEED
POPALB	0	POPULUS ALBA	5	UPL	Ad	Tree	WHITE POPLAR
POPDEL	2	Populus deltoides	-1	FAC+	Nt	Tree	EASTERN COTTONWOOD
PYCVIR	5	Pycnanthemum virginianum	-4	FACW+	Nt	P-Forb	COMMON MOUNTAIN MINT
QUERUB	7	Quercus rubra	3	FACU	Nt	Tree	RED OAK
QUEVEL	6	Quercus velutina	5	UPL	Nt	Tree	BLACK OAK
RATPIN	4	Ratibida pinnata	5	UPL	Nt	P-Forb	YELLOW CONEFLOWER
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad	Shrub	COMMON BUCKTHORN
RHUGLA	1	Rhus glabra	5	UPL	Nt	Shrub	SMOOTH SUMAC
RHURAD	2	Rhus radicans	-1	FAC+	Nt	W-Vine	POISON IVY
RUBOCC	2	Rubus occidentalis	5	UPL	Nt	Shrub	BLACK RASPBERRY
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt	P-Forb	BLACK-EYED SUSAN
RUMCRI	0	RUMEX CRISPUS	-1	FAC+	Ad	P-Forb	CURLY DOCK
SALFRA	0	SALIX FRAGILIS	-1	FAC+	Ad	Tree	CRACK WILLOW
SALINT	1	Salix interior	-5	OBL	Nt	Shrub	SANDBAR WILLOW
SCIATR	4	Scirpus atrovirens	-5	OBL	Nt	P-Sedge	DARK GREEN RUSH
SETFAB	0	SETARIA FABERI	2	FACU+	Ad	A-Grass	GIANT FOXTAIL
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad	A-Grass	YELLOW FOXTAIL
SILINI	5	Silphium integrifolium	5	UPL	Nt	P-Forb	ROSIN WEED
SILLAC	5	Silphium laciniatum	5	UPL	Nt	P-Forb	COMPASS PLANT
SILTER	5	Silphium terebinthinaceum	3	FACU	Nt	P-Forb	PRAIRIE DOCK
SOLAME	0	Solanum americanum	4	FACU-	Nt	A-Forb	BLACK NIGHTSHADE
SOLCAR	0	SOLANUM CAROLINENSE	4	FACU-	Ad	P-Forb	HORSE NETTLE
SOLALT	1	Solidago altissima	3	FACU	Nt	P-Forb	TALL GOLDENROD
SOLGIG	4	Solidago gigantea	-3	FACW	Nt	P-Forb	LATE GOLDENROD
SOLRIG	4	Solidago rigida	4	FACU-	Nt	P-Forb	STIFF GOLDENROD
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt	P-Grass	INDIAN GRASS

TRIHYB	0	TRIFOLIUM HYBRIDUM	1	FAC-	Ad P-Forb	ALSIKE CLOVER
TRIPRA	0	TRIFOLIUM PRATENSE	5	UPL	Ad P-Forb	RED CLOVER
ULMPUM	0	ULMUS PUMILA	5	UPL	Ad Tree	SIBERIAN ELM
VERTHA	0	VERBASCUM THAPSUS	5	UPL	Ad B-Forb	COMMON MULLEIN
VERHAS	4	Verbena hastata	-4	FACW+	Nt P-Forb	BLUE VERVAIN
VITRIP	2	Vitis riparia	-2	FACW-	Nt W-Vine	RIVERBANK GRAPE

APPENDIX II

TRANSECT SAMPLING & FLORISTIC QUALITY ASSESSMENT

The following is a summary of the transect data generated using Wilhelm and Masters' *Floristic Quality Assessment and Computer Applications*, 1999. Plant nomenclature follows Swink and Wilhelm's *Plants of the Chicago Region*, 1994. More information on floristic quality assessment methodology can be found in *Erigenia*, number 15, November, 1997. The results of each transect are presented in four sections as described below.

Section 1 is a summary of the quadrat data for the transect. The data listed for each quadrat includes the mean coefficient of conservatism (MC), floristic quality index (FQI), and mean wetness (MW). These values are calculated once for native species only, and a second time including adventive species (W/Ad). Also presented for each quadrat are the number of native species (NS), and number of total species (TS). Shown below each of these columns are their values averaged per quadrat (AVG), and standard deviation (STD). The columns to the far right are sequential averages of the wetness coefficients ([(x+n+y)/3]), data that can be useful in the evaluation of plants along a slope or topographical catena.

Section 2 is a summary these same values for the entire transect. First, there is a tabulation of the species in each conservatism category (0 to 10) and the percentage of species in three conservatism classes (0 to 3, 4 to 6, 7 to 10). The two columns below summarize the number and percent of species in each physiognomic group (A=annual, B=biennial, P=perennial, W=woody, H= herbaceous). Next, there is a summary of the relative importance values (RIV) of each physiognomic group; these values are calculated by summing the frequency (FRQ) and the cover class (COV) of each group found in the transect then dividing by two.

Section 3 is a table that lists the relative importance values for each species found in the transect sampling. Each species RIV is calculated by summing its relative frequency and its relative cover, then dividing by two. Each scientific name is followed by its coefficient of conservatism and wetland indicator status.

Section 4 is the transect inventory arranged alphabetically to scientific name. This is followed by a list of the quadrats along the transect string that includes the cover class value determined for each species recorded in the quadrat.

Site: Blackwell Prairie
Locale: **Transect 1**
Date: September 15, 2010
By: Conservation Design Forum (K Johnson)

Section 1

TRANSECT DATA, QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	0.0	0.0	0.0	0.0	5.0	5.0	1	2	2.0	3.7
2	5.0	1.3	5.0	2.5	-1.0	2.5	1	4	1.3	2.9
3	0.0	0.0	0.0	0.0	0.0	1.3	0	4	-0.3	2.1
4	0.0	0.0	0.0	0.0	0.0	2.7	0	3	1.3	2.2
5	5.0	0.8	5.0	2.0	4.0	2.8	1	6	1.3	2.5
6	0.0	0.0	0.0	0.0	0.0	2.0	0	3	2.6	2.7
7	2.3	1.3	4.5	3.4	3.8	3.1	4	7	2.9	2.7
8	2.5	0.7	3.5	1.9	5.0	3.0	2	7	3.8	3.1
9	3.0	2.0	6.0	4.9	2.8	3.2	4	6	2.9	3.0
10	4.0	1.0	4.0	2.0	1.0	2.8	1	4	1.9	3.0
AVG	2.2	0.7	2.8	1.7	2.1	2.8	1.4	4.6		
STD	2.1	0.7	2.5	1.7	2.3	1.0	1.5	1.8		

Section 2

C	NUMBER	
0	6	
1	0	
2	0	0 to 3
3	0	50.0%
4	2	
5	3	
6	0	4 to 7
7	0	41.7%
8	1	
9	0	8 to 10
10	0	8.3%

12 NATIVE SPECIES
26 TOTAL SPECIES
2.6 NATIVE MEAN C
1.2 W/Adventives
8.9 NATIVE FQI
6.1 W/Adventives
3.3 NATIVE MEAN W
2.8 W/Adventives

Native	12	46.2%	Adventive	14	53.8%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	6	23.1%	P-Forb	4	15.4%
B-Forb	1	3.8%	B-Forb	2	7.7%
A-Forb	1	3.8%	A-Forb	0	0.0%
P-Grass	4	15.4%	P-Grass	7	26.9%
A-Grass	0	0.0%	A-Grass	1	3.8%
P-Sedge	0	0.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Ad P-Grass	22	69	47.8	67.0	57.4
Nt P-Forb	7	10	15.2	9.7	12.5
Ad P-Forb	7	9	15.2	8.7	12.0
Nt P-Grass	5	10	10.9	9.7	10.3
Ad B-Forb	2	2	4.3	1.9	3.1
Nt B-Forb	1	1	2.2	1.0	1.6
Nt A-Forb	1	1	2.2	1.0	1.6
Ad A-Grass	1	1	2.2	1.0	1.6

Section 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
POA PRATENSIS	0	FAC-	6	19	13.0	18.4	15.7
DACTYLIS GLOMERATA	0	FACU	6	15	13.0	14.6	13.8
FESTUCA ELATIOR	0	FACU+	4	16	8.7	15.5	12.1
BROMUS INERMIS	0	UPL	3	11	6.5	10.7	8.6
CIRSIUM ARVENSE	0	UPL	4	6	8.7	5.8	7.3
Elymus canadensis	4	FAC-	2	4	4.3	3.9	4.1
Heliopsis helianthoides	5	UPL	2	3	4.3	2.9	3.6
AGROPYRON REPENS	0	FACU	1	3	2.2	2.9	2.5
Bouteloua curtipendula	8	UPL	1	3	2.2	2.9	2.5
PHLEUM PRATENSE	0	FACU	1	3	2.2	2.9	2.5
Physalis subglabrata	0	UPL	1	3	2.2	2.9	2.5
Panicum virgatum	5	FAC+	1	2	2.2	1.9	2.1
PHALARIS ARUNDINACEA	0	FACW+	1	2	2.2	1.9	2.1
Andropogon scoparius	5	FACU-	1	1	2.2	1.0	1.6
Asclepias syriaca	0	UPL	1	1	2.2	1.0	1.6
Aster pilosus	0	FACU+	1	1	2.2	1.0	1.6
CONVOLVULUS ARVENSIS	0	UPL	1	1	2.2	1.0	1.6
DAUCUS CAROTA	0	UPL	1	1	2.2	1.0	1.6
Erigeron annuus	0	FAC-	1	1	2.2	1.0	1.6
Eupatorium altissimum	0	[FACU]	1	1	2.2	1.0	1.6
LOTUS CORNICULATUS	0	FAC-	1	1	2.2	1.0	1.6
MELILOTUS ALBA	0	FACU	1	1	2.2	1.0	1.6
Ratibida pinnata	4	UPL	1	1	2.2	1.0	1.6
SETARIA GLAUCA	0	FAC	1	1	2.2	1.0	1.6
Solanum americanum	0	FACU-	1	1	2.2	1.0	1.6
TRIFOLIUM HYBRIDUM	0	FAC-	1	1	2.2	1.0	1.6
			46	103			

Section 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
ANDSCO	5	Andropogon scoparius	4	FACU-	Nt P-Grass	LITTLE BLUESTEM GRASS
ASCSYR	0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
BROINE	0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CONARV	0	CONVOLVULUS ARVENSIS	5	UPL	Ad P-Forb	FIELD BINDWEED
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad P-Grass	ORCHARD GRASS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERIANS	0	Erigeron annuus	1	FAC-	Nt B-Forb	ANNUAL FLEABANE
EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt P-Forb	TALL BONESET
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
LOTCOR	0	LOTUS CORNICULATUS	1	FAC-	Ad P-Forb	BIRD'S FOOT TREFOIL

MELALB	0	MELILOTUS ALBA	3	FACU	Ad	B-Forb	WHITE SWEET CLOVER
PANVIR	5	Panicum virgatum	-1	FAC+	Nt	P-Grass	SWITCH GRASS
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad	P-Grass	REED CANARY GRASS
PHLPRA	0	PHLEUM PRATENSE	3	FACU	Ad	P-Grass	TIMOTHY
PHYSUB	0	Physalis subglabrata	5	UPL	Nt	P-Forb	TALL GROUND CHERRY
POAPRA	0	POA PRATENSIS	1	FAC-	Ad	P-Grass	KENTUCKY BLUE GRASS
RATPIN	4	Ratibida pinnata	5	UPL	Nt	P-Forb	YELLOW CONEFLOWER
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad	A-Grass	YELLOW FOXTAIL
SOLAME	0	Solanum americanum	4	FACU-	Nt	A-Forb	BLACK NIGHTSHADE
TRIHYB	0	TRIFOLIUM HYBRIDUM	1	FAC-	Ad	P-Forb	ALSIKE CLOVER

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
BROINE	5
PHYSUB	3

>

QUAD	2
ACRONYM	COVER
BROINE	4
CIRARV	2
PANVIR	2
POAPRA	2

>

QUAD	3
ACRONYM	COVER
CIRARV	2
DACGLO	2
PHAARU	2
POAPRA	4

>

QUAD	4
ACRONYM	COVER
DAUCAR	1
FESELA	5
POAPRA	3

>

QUAD	5
ACRONYM	COVER
ANDSCO	1
BROINE	2
DACGLO	1
LOTCOR	1
PHLPRA	3
POAPRA	2

>

QUAD	6
ACRONYM	COVER
DACGLO	3
FESELA	4
POAPRA	4

>

QUAD	7
ACRONYM	COVER
AGRREP	3
ASTPIL	1
DACGLO	3
EUPALT	1
HELHEL	2
RATPIN	1
TRIHYB	1

>

QUAD	8
ACRONYM	COVER
ASCSYR	1
CIRARV	1
FESELA	4
HELHEL	1
MELALB	1
POAPRA	4
SETGLA	1

>

QUAD	9
ACRONYM	COVER
BOUCUR	3
CIRARV	1
DACGLO	3
ELYCAN	1
ERIANS	1
SOLAME	1

>

QUAD	10
ACRONYM	COVER
CONARV	1
DACGLO	3
ELYCAN	3
FESELA	3

Site: Blackwell Prairie
Locale: **Transect 2**
Date: September 15, 2010
By: Conservation Design Forum (K Johnson)

Section 1

TRANSECT DATA, QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.5	1.0	3.5	2.2	3.0	2.8	2	5	3.0	3.0
2	4.0	0.8	4.0	1.8	3.0	3.2	1	5	2.7	3.0
3	1.3	0.6	2.5	1.7	2.0	3.0	4	9	2.7	3.0
4	1.0	0.2	1.0	0.4	3.0	2.8	1	5	2.7	2.7
5	1.0	0.3	1.0	0.5	3.0	2.3	1	4	1.0	1.9
6	4.0	1.0	4.0	2.0	-3.0	0.8	1	4	0.0	2.1
7	0.0	0.0	0.0	0.0	0.0	3.2	0	6	-0.1	2.6
8	0.7	0.3	1.2	0.8	2.7	3.8	3	6	0.9	3.4
9	1.0	0.3	1.0	0.6	0.0	3.3	1	3	0.9	4.1
10	0.0	0.0	0.0	0.0	0.0	5.0	0	2	0.0	4.2
AVG	1.5	0.4	1.8	1.0	1.4	3.0	1.4	4.9		
STD	1.5	0.4	1.6	0.8	2.0	1.1	1.3	1.9		

Section 2

C	NUMBER	
0	3	
1	2	
2	0	0 to 3
3	0	71.4%
4	2	
5	0	
6	0	4 to 7
7	0	28.6%
8	0	
9	0	8 to 10
10	0	0.0%

7	NATIVE SPECIES
21	TOTAL SPECIES
1.4	NATIVE MEAN C
0.5	W/Adventives
3.8	NATIVE FQI
2.2	W/Adventives
1.4	NATIVE MEAN W
2.1	W/Adventives

Native	7	33.3%	Adventive	14	66.7%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	1	4.8%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	6	28.6%	P-Forb	4	19.0%
B-Forb	0	0.0%	B-Forb	3	14.3%
A-Forb	1	4.8%	A-Forb	3	14.3%
P-Grass	0	0.0%	P-Grass	3	14.3%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	0	0.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Forb	13	32	26.5	28.1	27.3
Ad P-Grass	10	38	20.4	33.3	26.9
Ad P-Forb	15	25	30.6	21.9	26.3
Ad B-Forb	6	12	12.2	10.5	11.4
Ad A-Forb	3	5	6.1	4.4	5.3
Ad Shrub	1	1	2.0	0.9	1.5
Nt A-Forb	1	1	2.0	0.9	1.5

Section 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
BROMUS INERMIS	0	UPL	7	28	14.3	24.6	19.4
Solidago altissima	1	FACU	5	17	10.2	14.9	12.6
CORONILLA VARIA	0	UPL	7	10	14.3	8.8	11.5
CIRSIUM ARVENSE	0	UPL	5	10	10.2	8.8	9.5
BARBAREA VULGARIS	0	FAC	3	7	6.1	6.1	6.1
Monarda fistulosa	4	FACU	3	6	6.1	5.3	5.7
POA PRATENSIS	0	FAC-	2	8	4.1	7.0	5.5
ALLIARIA PETIOLATA	0	FAC	2	4	4.1	3.5	3.8
Convolvulus sepium	1	FAC	2	3	4.1	2.6	3.4
NEPETA CATARIA	0	FAC-	2	3	4.1	2.6	3.4
Aster novae-angliae	4	FACW	1	3	2.0	2.6	2.3
BRASSICA NIGRA	0	UPL	1	2	2.0	1.8	1.9
FESTUCA ELATIOR	0	FACU+	1	2	2.0	1.8	1.9
Physalis subglabrata	0	UPL	1	2	2.0	1.8	1.9
POLYGONUM CONVOLVULUS	0	FAC-	1	2	2.0	1.8	1.9
SOLANUM CAROLINENSE	0	FACU-	1	2	2.0	1.8	1.9
Ambrosia artemisiifolia elatior	0	FACU	1	1	2.0	0.9	1.5
ATRIPLEX PATULA	0	FACW-	1	1	2.0	0.9	1.5
DIPSACUS LACINIATUS	0	UPL	1	1	2.0	0.9	1.5
Eupatorium serotinum	0	FAC+	1	1	2.0	0.9	1.5
RHAMNUS CATHARTICA	0	FACU	1	1	2.0	0.9	1.5
			49	114			

Section 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ALLPET	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BARVUL	0	BARBAREA VULGARIS	0	FAC	Ad B-Forb	YELLOW ROCKET
BRANIG	0	BRASSICA NIGRA	5	UPL	Ad A-Forb	BLACK MUSTARD
BROINE	0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CONSEP	1	Convolvulus sepium	0	FAC	Nt P-Forb	HEDGE BINDWEED
CORVAR	0	CORONILLA VARIA	5	UPL	Ad P-Forb	CROWN VETCH
DIPLAC	0	DIPSACUS LACINIATUS	5	UPL	Ad B-Forb	CUT-LEAVED TEASEL
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
NEPCAT	0	NEPETA CATARIA	1	FAC-	Ad P-Forb	CATNIP
PHYSUB	0	Physalis subglabrata	5	UPL	Nt P-Forb	TALL GROUND CHERRY
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POLCON	0	POLYGONUM CONVOLVULUS	1	FAC-	Ad A-Forb	BLACK BINDWEED
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
SOLCAR	0	SOLANUM CAROLINENSE	4	FACU-	Ad P-Forb	HORSE NETTLE
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD

TRANSECT STRING

```
>
    QUAD          1
ACRONYM       COVER
CORVAR            1
FESELA            2
MONFIS            2
POAPRA            4
SOLALT            2
>
    QUAD          2
ACRONYM       COVER
ATRPAT            1
BROINE            5
CORVAR            1
DIPLAC            1
MONFIS            2
>
    QUAD          3
ACRONYM       COVER
AMBARE            1
BARVUL            2
BROINE            2
CIRARV            2
CORVAR            2
EUPSEM            1
MONFIS            2
SOLALT            1
SOLCAR            2
>
    QUAD          4
ACRONYM       COVER
BARVUL            2
CIRARV            2
CORVAR            2
NEPCAT            1
SOLALT            5
>
    QUAD          5
ACRONYM       COVER
BARVUL            3
CIRARV            2
NEPCAT            2
SOLALT            5
>
    QUAD          6
ACRONYM       COVER
ALLPET            2
ASTNOV            3
BROINE            4
POAPRA            4
>
    QUAD          7
ACRONYM       COVER
ALLPET            2
BRANIG            2
BROINE            4
CORVAR            1
POLCON            2
RHACAT            1
>
    QUAD          8
ACRONYM       COVER
BROINE            3
CIRARV            1
CONSEP            2
CORVAR            2
PHYSUB            2
SOLALT            4
>
    QUAD          9
ACRONYM       COVER
BROINE            5
CIRARV            3
CONSEP            1
>
    QUAD         10
ACRONYM       COVER
BROINE            5
CORVAR            1
```

Site: Blackwell Prairie
Locale: **Transect 3**
Date: September 15, 2010
By: Conservation Design Forum (K Johnson)

Section 1

TRANSECT DATA, QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	4.0	3.3	8.9	8.2	2.6	2.2	5	6	1.2	1.0
2	3.8	3.0	7.5	6.7	-0.2	-0.2	4	5	1.3	1.3
3	1.8	1.6	4.5	4.2	1.5	2.0	6	7	1.2	1.3
4	5.0	4.0	10.0	8.9	2.5	2.2	4	5	2.0	2.2
5	2.5	1.5	6.1	4.7	2.0	2.5	6	10	1.7	2.0
6	3.0	2.1	6.7	5.7	0.6	1.3	5	7	1.7	2.0
7	4.8	3.2	9.5	7.8	2.5	2.3	4	6	2.3	2.3
8	3.8	2.1	7.5	5.7	3.8	3.3	4	7	2.2	2.6
9	4.5	1.3	6.4	3.4	0.5	2.1	2	7	1.7	2.5
10	0.0	0.0	0.0	0.0	1.0	2.0	3	7	0.7	2.1
AVG	3.3	2.2	6.7	5.5	1.7	2.0	4.3	6.7		
STD	1.5	1.2	2.9	2.6	1.2	0.9	1.3	1.4		

Section 2

C	NUMBER	
0	8	
1	4	
2	0	0 to 3
3	0	46.2%
4	3	
5	9	
6	0	4 to 7
7	0	46.2%
8	0	
9	2	8 to 10
10	0	7.7%

26	NATIVE SPECIES
35	TOTAL SPECIES
3.0	NATIVE MEAN C
2.3	W/Adventives
15.5	NATIVE FQI
13.4	W/Adventives
1.8	NATIVE MEAN W
2.0	W/Adventives

Native	26	74.3%	Adventive	9	25.7%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	16	45.7%	P-Forb	2	5.7%
B-Forb	2	5.7%	B-Forb	3	8.6%
A-Forb	4	11.4%	A-Forb	0	0.0%
P-Grass	4	11.4%	P-Grass	3	8.6%
A-Grass	0	0.0%	A-Grass	1	2.9%
P-Sedge	0	0.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Forb	28	52	41.8	40.6	41.2
Nt P-Grass	9	26	13.4	20.3	16.9
Ad P-Grass	10	24	14.9	18.8	16.8
Ad B-Forb	6	9	9.0	7.0	8.0
Ad A-Grass	4	5	6.0	3.9	4.9
Ad P-Forb	4	5	6.0	3.9	4.9
Nt A-Forb	4	5	6.0	3.9	4.9
Nt B-Forb	2	2	3.0	1.6	2.3

Section 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Panicum virgatum	5	FAC+	4	13	6.0	10.2	8.1
AGROPYRON REPENS	0	FACU	4	11	6.0	8.6	7.3
Solidago altissima	1	FACU	4	11	6.0	8.6	7.3
POA PRATENSIS	0	FAC-	4	7	6.0	5.5	5.7
SETARIA GLAUCA	0	FAC	4	5	6.0	3.9	4.9
DAUCUS CAROTA	0	UPL	3	5	4.5	3.9	4.2
Aster pilosus	0	FACU+	3	4	4.5	3.1	3.8
BROMUS INERMIS	0	UPL	2	6	3.0	4.7	3.8
CORONILLA VARIA	0	UPL	3	4	4.5	3.1	3.8
Andropogon gerardii	5	FAC-	2	5	3.0	3.9	3.4
Andropogon scoparius	5	FACU-	2	5	3.0	3.9	3.4
Asclepias verticillata	1	UPL	2	5	3.0	3.9	3.4
Aster ericoides	5	FACU-	2	5	3.0	3.9	3.4
Aster novae-angliae	4	FACW	3	3	4.5	2.3	3.4
Desmodium canadense	4	FAC-	2	5	3.0	3.9	3.4
Helianthus mollis	9	UPL	2	4	3.0	3.1	3.1
Heliopsis helianthoides	5	UPL	2	4	3.0	3.1	3.1
LACTUCA SERRIOLA	0	FAC	2	2	3.0	1.6	2.3
Pycnanthemum virginianum	5	FACW+	1	3	1.5	2.3	1.9
Sorghastrum nutans	5	FACU+	1	3	1.5	2.3	1.9
Ambrosia trifida	0	FAC+	1	2	1.5	1.6	1.5
DIPSACUS LACINIATUS	0	UPL	1	2	1.5	1.6	1.5
Silphium integrifolium	5	UPL	1	2	1.5	1.6	1.5
Ambrosia artemisiifolia elatior	0	FACU	1	1	1.5	0.8	1.1
Convolvulus sepium	1	FAC	1	1	1.5	0.8	1.1
Erigeron annuus	0	FAC-	1	1	1.5	0.8	1.1
Erigeron canadensis	0	FAC-	1	1	1.5	0.8	1.1
Eryngium yuccifolium	9	FAC+	1	1	1.5	0.8	1.1
Eupatorium altissimum	0	[FACU]	1	1	1.5	0.8	1.1
NEPETA CATARIA	0	FAC-	1	1	1.5	0.8	1.1
Oenothera biennis	0	FACU	1	1	1.5	0.8	1.1
Polygonum pensylvanicum	0	FACW+	1	1	1.5	0.8	1.1
Rudbeckia hirta	1	FACU	1	1	1.5	0.8	1.1
Silphium laciniatum	5	UPL	1	1	1.5	0.8	1.1
Solidago rigida	4	FACU-	1	1	1.5	0.8	1.1
			67	128			

Section 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
AMBTRI	0	Ambrosia trifida	-1	FAC+	Nt A-Forb	GIANT RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ANDSCO	5	Andropogon scoparius	4	FACU-	Nt P-Grass	LITTLE BLUESTEM GRASS

ASCVER	1	Asclepias verticillata	5	UPL	Nt	P-Forb	WHORLED MILKWEED
ASTERI	5	Aster ericoides	4	FACU-	Nt	P-Forb	HEATH ASTER
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt	P-Forb	NEW ENGLAND ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt	P-Forb	HAIRY ASTER
BROINE	0	BROMUS INERMIS	5	UPL	Ad	P-Grass	HUNGARIAN BROME
CONSEP	1	Convolvulus sepium	0	FAC	Nt	P-Forb	HEDGE BINDWEED
CORVAR	0	CORONILLA VARIA	5	UPL	Ad	P-Forb	CROWN VETCH
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad	B-Forb	QUEEN ANNE'S LACE
DESCAA	4	Desmodium canadense	1	FAC-	Nt	P-Forb	SHOWY TICK TREFOIL
DIPLAC	0	DIPSACUS LACINIATUS	5	UPL	Ad	B-Forb	CUT-LEAVED TEASEL
ERIANS	0	Erigeron annuus	1	FAC-	Nt	B-Forb	ANNUAL FLEABANE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt	A-Forb	HORSEWEED
ERYYUC	9	Eryngium yuccifolium	-1	FAC+	Nt	P-Forb	RATTLESNAKE MASTER
EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt	P-Forb	TALL BONESET
HELMOL	9	Helianthus mollis	5	UPL	Nt	P-Forb	DOWNY SUNFLOWER
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt	P-Forb	FALSE SUNFLOWER
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad	B-Forb	PRICKLY LETTUCE
NEPCAT	0	NEPETA CATARIA	1	FAC-	Ad	P-Forb	CATNIP
OENBIE	0	Oenothera biennis	3	FACU	Nt	B-Forb	COMMON EVENING PRIMROSE
PANVIR	5	Panicum virgatum	-1	FAC+	Nt	P-Grass	SWITCH GRASS
POAPRA	0	POA PRATENSIS	1	FAC-	Ad	P-Grass	KENTUCKY BLUE GRASS
POLPEN	0	Polygonum pensylvanicum	-4	FACW+	Nt	A-Forb	PINKWEED
PYCVIR	5	Pycnanthemum virginianum	-4	FACW+	Nt	P-Forb	COMMON MOUNTAIN MINT
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt	P-Forb	BLACK-EYED SUSAN
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad	A-Grass	YELLOW FOXTAIL
SILINI	5	Silphium integrifolium	5	UPL	Nt	P-Forb	ROSIN WEED
SILLAC	5	Silphium laciniatum	5	UPL	Nt	P-Forb	COMPASS PLANT
SOLALT	1	Solidago altissima	3	FACU	Nt	P-Forb	TALL GOLDENROD
SOLRIG	4	Solidago rigida	4	FACU-	Nt	P-Forb	STIFF GOLDENROD
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt	P-Grass	INDIAN GRASS

TRANSECT STRING

>	
QUAD	1
ACRONYM	COVER
AMBARE	1
ASTERI	2
HELHEL	1
PANVIR	3
SETGLA	2
SORNUT	3
>	
QUAD	2
ACRONYM	COVER
DESCAA	2
PANVIR	5
PYCVIR	3
SETGLA	1
SOLALT	1
>	
QUAD	3
ACRONYM	COVER
ANDGER	4
ASTPIL	1
CORVAR	1
ERIANS	1
EUPALT	1
PANVIR	2
SOLALT	3
>	
QUAD	4
ACRONYM	COVER
ERYYUC	1
HELMOL	1
POAPRA	1
RUDHIR	1
SOLALT	5
>	
QUAD	5
ACRONYM	COVER
AGRREP	2
ANDGER	1
ASCVER	2
ASTNOV	1
ASTPIL	2
DAUCAR	1
DIPLAC	2
SETGLA	1
SOLALT	2
SOLRIG	1
>	
QUAD	6
ACRONYM	COVER
ASTNOV	1
ASTPIL	1
CONSEP	1
DAUCAR	1
PANVIR	3
POAPRA	2
SILINI	2
>	
QUAD	7
ACRONYM	COVER
AGRREP	3
ANDSCO	2
ASTERI	3
ASTNOV	1
POAPRA	3
SILLAC	1
>	
QUAD	8
ACRONYM	COVER
AGRREP	2
ANDSCO	3
ASCVER	3
CORVAR	1
DESCAA	3
HELHEL	3
SETGLA	1
>	
QUAD	9
ACRONYM	COVER
AGRREP	4
BROINE	2
CORVAR	2
HELMOL	3
LACSER	1
NEPCAT	1
POLPEN	1
>	
QUAD	10
ACRONYM	COVER
AMBTRI	2
BROINE	4
DAUCAR	3
ERICAN	1
LACSER	1
OENBIE	1
POAPRA	1

Site: Blackwell Prairie
Locale: **Transect 4**
Date: September 15, 2010
By: Conservation Design Forum (K Johnson)

Section 1

TRANSECT DATA, QUADRAT

QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	5.0	2.0	7.1	4.5	2.5	2.2	2	5	3.7	3.3
2	0.0	0.0	0.0	0.0	5.0	4.3	1	3	2.8	3.0
3	3.0	1.8	5.2	4.0	1.0	2.6	3	5	2.3	2.8
4	3.0	2.3	5.2	4.5	1.0	1.5	3	4	1.4	2.2
5	5.0	4.0	10.0	8.9	2.3	2.4	4	5	2.0	2.1
6	5.0	4.0	10.0	8.9	2.8	2.4	4	5	2.8	2.7
7	4.8	4.8	11.8	11.8	3.3	3.3	6	6	2.7	2.6
8	5.0	5.0	11.2	11.2	2.0	2.0	5	5	2.4	2.4
9	4.7	4.7	11.4	11.4	1.8	1.8	6	6	2.0	2.0
10	4.9	4.9	12.9	12.9	2.3	2.3	7	7	2.1	2.1
AVG	4.0	3.3	8.5	7.8	2.4	2.5	4.1	5.1		
STD	1.6	1.7	4.0	4.3	1.2	0.8	1.9	1.1		

Section 2

C	NUMBER	
0	2	
1	2	
2	0	0 to 3
3	0	23.5%
4	3	
5	8	
6	0	4 to 7
7	0	64.7%
8	1	
9	1	8 to 10
10	0	11.8%

17	NATIVE SPECIES
24	TOTAL SPECIES
4.2	NATIVE MEAN C
3.0	W/Adventives
17.2	NATIVE FQI
14.5	W/Adventives
2.8	NATIVE MEAN W
2.8	W/Adventives

Native	17	70.8%	Adventive	7	29.2%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	12	50.0%	P-Forb	2	8.3%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	1	4.2%
P-Grass	5	20.8%	P-Grass	2	8.3%
A-Grass	0	0.0%	A-Grass	2	8.3%
P-Sedge	0	0.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Grass	20	55	39.2	45.8	42.5
Nt P-Forb	21	45	41.2	37.5	39.3
Ad P-Grass	5	14	9.8	11.7	10.7
Ad A-Grass	2	3	3.9	2.5	3.2
Ad P-Forb	2	2	3.9	1.7	2.8
Ad A-Forb	1	1	2.0	0.8	1.4

Section 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Sorghastrum nutans	5	FACU+	6	22	11.8	18.3	15.0
Panicum virgatum	5	FAC+	6	17	11.8	14.2	13.0
Silphium integrifolium	5	UPL	4	9	7.8	7.5	7.7
Andropogon gerardii	5	FAC-	4	7	7.8	5.8	6.8
Solidago altissima	1	FACU	3	9	5.9	7.5	6.7
BROMUS INERMIS	0	UPL	2	9	3.9	7.5	5.7
AGROPYRON REPENS	0	FACU	3	5	5.9	4.2	5.0
Andropogon scoparius	5	FACU-	2	6	3.9	5.0	4.5
Silphium terebinthinaceum	5	FACU	2	5	3.9	4.2	4.0
Aster novae-angliae	4	FACW	2	4	3.9	3.3	3.6
Heliopsis helianthoides	5	UPL	2	4	3.9	3.3	3.6
Bouteloua curtipendula	8	UPL	2	3	3.9	2.5	3.2
Monarda fistulosa	4	FACU	2	3	3.9	2.5	3.2
Helianthus mollis	9	UPL	1	3	2.0	2.5	2.2
Silphium laciniatum	5	UPL	1	3	2.0	2.5	2.2
Desmodium canadense	4	FAC-	1	2	2.0	1.7	1.8
SETARIA GLAUCA	0	FAC	1	2	2.0	1.7	1.8
ABUTILON THEOPHRASTI	0	FACU-	1	1	2.0	0.8	1.4
Asclepias verticillata	1	UPL	1	1	2.0	0.8	1.4
CIRSIUM ARVENSE	0	UPL	1	1	2.0	0.8	1.4
Eupatorium serotinum	0	FAC+	1	1	2.0	0.8	1.4
Physalis subglabrata	0	UPL	1	1	2.0	0.8	1.4
SETARIA FABERI	0	FACU+	1	1	2.0	0.8	1.4
TRIFOLIUM HYBRIDUM	0	FAC-	1	1	2.0	0.8	1.4
			51	120			

Section 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ABUTHE	0	ABUTILON THEOPHRASTI	4	FACU-	Ad A-Forb	VELVETLEAF
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ANDSCO	5	Andropogon scoparius	4	FACU-	Nt P-Grass	LITTLE BLUESTEM GRASS
ASCVER	1	Asclepias verticillata	5	UPL	Nt P-Forb	WHORLED MILKWEED
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
BROINE	0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
DESCAA	4	Desmodium canadense	1	FAC-	Nt P-Forb	SHOWY TICK TREFOIL
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
HELMOL	9	Helianthus mollis	5	UPL	Nt P-Forb	DOWNY SUNFLOWER
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PHYSUB	0	Physalis subglabrata	5	UPL	Nt P-Forb	TALL GROUND CHERRY
SETFAB	0	SETARIA FABERI	2	FACU+	Ad A-Grass	GIANT FOXTAIL
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad A-Grass	YELLOW FOXTAIL
SILINI	5	Silphium integrifolium	5	UPL	Nt P-Forb	ROSIN WEED
SILLAC	5	Silphium laciniatum	5	UPL	Nt P-Forb	COMPASS PLANT
SILTER	5	Silphium terebinthinaceum	3	FACU	Nt P-Forb	PRAIRIE DOCK

SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
TRIHYB	0	TRIFOLIUM HYBRIDUM	1	FAC-	Ad P-Forb	ALSIKE CLOVER

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
ABUTHE	1
ANDGER	1
ANDSCO	4
SETFAB	1
SETGLA	2

>

QUAD	2
ACRONYM	COVER
AGRREP	2
BROINE	5
PHYSUB	1

>

QUAD	3
ACRONYM	COVER
ASTNOV	2
BROINE	4
CIRARV	1
MONFIS	1
SOLALT	3

>

QUAD	4
ACRONYM	COVER
AGRREP	2
ASTNOV	2
MONFIS	2
SOLALT	5

>

QUAD	5
ACRONYM	COVER
AGRREP	1
HELMOL	3
PANVIR	3
SOLALT	1
SORNUT	4

>

QUAD	6
ACRONYM	COVER
HELHEL	1
PANVIR	4
SILINI	1
SORNUT	5
TRIHYB	1

>

QUAD	7
ACRONYM	COVER
ANDSCO	2
ASCVER	1
BOUCUR	2
PANVIR	4
SILINI	2
SORNUT	4

>

QUAD	8
ACRONYM	COVER
ANDGER	2
PANVIR	2
SILINI	4
SILTER	2
SORNUT	3

>

QUAD	9
ACRONYM	COVER
ANDGER	2
BOUCUR	1
EUPSEM	1
PANVIR	3
SILLAC	3
SORNUT	3

>

QUAD	10
ACRONYM	COVER
ANDGER	2
DESCAA	2
HELHEL	3
PANVIR	1
SILINI	2
SILTER	3
SORNUT	3

APPENDIX III

TRANSECT RELATIVE IMPORTANCE VALUES

Tables A—D included in this appendix summarize the relative importance values (RIV) for the top 50% of species from each transect. For comparative purposes these same data from past restoration monitoring are included in the tables. Brackets ([ ]) indicate the species was recorded in the sampling but not in the top 50% for that year, and a dash (-) indicates that it was not recorded during the sampling event. Following each native species is its assigned C value (in parenthesis).

Adventive species are in ALL CAPS. Species followed by an asterisk (*) were introduced to the site as part of the initial prairie seed installation in the summer of 2001, and from subsequent reseeding efforts in 2002, 2003, and 2004.

Table A. Transect 1 species relative importance values

TRANSECT 1	RELATIVE IMPORTANCE VALUE									
SPECIES (C VALUE)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
POA PRATENSIS	-	-	[2.8]	[2.3]	-	[3.6]	5.3	[4.8]	[1.7]	15.7
DACTYLUS GLOMERATA	-	-	[2.6]	9.6	[4.4]	[5.1]	[1.3]	5.9	[4.8]	13.8
FESTUCA ELATIOR	[2.0]	7.1	[3.6]	-	[9.4]	-	8.3	[4.8]	8.7	12.1
BROMUS INERMIS	-	-	-	6.1	[3.9]	16.1	[2.6]	5.9	7.9	8.6
Bouteloua curtipendula (8)*	[1.5]	14.8	11.7	19.3	11.9	9.7	11.4	7.4	15.7	[2.5]
LOTUS CORNICULATUS	-	-	-	[1.6]	-	[4.1]	[2.2]	-	7.0	[1.6]
Elymus canadensis (4)*	-	-	-	7.8	13.3	10.9	10.5	11.7	6.5	[4.1]
Heliopsis helianthoides (5)*	-	-	[1.8]	-	-	[3.6]	[4.3]	[2.1]	5.7	[3.6]
MELILOTUS ALBA	[2.0]	22.7	[1.3]	6.1	-	[3.0]	[3.9]	8.0	-	[1.6]
TRIFOLIUM PRATENSE	-	-	8.8	-	[1.8]	-	-	7.4	[3.9]	-
Andropogon gerardii (5)*	-	-	[3.1]	[1.6]	-	[3.6]	[3.0]	6.9	[2.2]	-
Ambrosia artemisiifolia (0)	-	12.3	6.7	6.1	12.6	6.0	6.1	[4.8]	[1.3]	-
CIRSIUM ARVENSE	-	-	-	[3.3]	-	[3.0]	5.6	[3.7]	[4.4]	[7.3]
Andropogon scoparius (5)*	-	[1.6]	[1.3]	[3.9]	[1.8]	[4.7]	5.2	-	[3.5]	[1.6]
Aster pilosus (0)	-	[2.0]	-	[5.5]	[1.8]	6.2	[1.3]	[4.3]	[3.5]	[1.6]
Panicum virgatum (5)*	-	-	[3.1]	[2.3]	[4.4]	5.6	[2.6]	[2.1]	-	[2.1]
HIBISCUS TRIONUM	9.0	[2.0]	8.0	[3.3]	13.5	[1.5]	[1.3]	[1.6]	[2.6]	-
Echinochloa crusgalli (0)	22.1	[5.2]	12.2	-	-	-	-	-	[1.3]	-
SETARIA FABERI	-	[1.6]	5.7	-	[3.2]	-	-	-	-	-
DIGITARIA ISCHAEMUM	24.4	-	-	-	-	-	-	-	-	-

Table B. Transect 2 species relative importance values

TRANSECT 2	RELATIVE IMPORTANCE VALUE									
SPECIES (C VALUE)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
BROMUS INERMIS	11.1	[2.5]	7.9	7.2	10.2	27.9	12.3	23.9	20.1	19.4
Solidāgo altissima (1)	-	[4.4]	4.4	[1.7]	[1.6]	[2.4]	15.7	13.6	20.6	12.6
CORONILLA VARIA	25.5	19.7	14.1	13.2	11.7	14.7	27.4	19.6	17.5	11.5
CIRSIUM ARVENSE	[3.8]	[1.9]	[1.3]	[1.2]	-	-	[1.7]	-	[3.7]	9.5
NEPETA CATARIA	[1.6]	[3.1]	[4.0]	[2.4]	[1.6]	9.4	[3.9]	[6.0]	[3.2]	[3.4]
ALLIARIA PETIOLATA	9.1	6.9	8.8	7.0	-	[1.7]	[3.4]	[3.6]	[1.6]	[3.8]
Aster pilosus (0)	-	-	[4.0]	6.7	[3.2]	[5.8]	[3.4]	[3.6]	[4.2]	-
AGROPYRON REPENS	-	-	-	4.6	10.2	[2.4]	[1.7]	[7.7]	[3.2]	-
Panicum virgatum (5)*	-	5.6	5.3	[2.2]	[3.2]	-	[1.7]	-	-	-
Bouteloua curtipendula (8)*	[2.7]	9.4	4.8	[1.7]	[4.5]	[2.4]	[1.7]	-	-	-
ATRIPLEX PATULA	5.9	-	-	[4.1]	[4.5]	-	[1.7]	[2.4]	-	[1.5]
Ambrosia artemisiifolia (0)	-	[2.5]	[2.6]	[1.7]	6.0	[3.0]	[1.7]	-	-	[1.5]
LACTUCA SERRIOLA	-	-	[3.5]	8.9	5.4	[1.7]	[1.7]	-	-	-
SOIL	[2.1]	11.0	-	-	7.3	-	-	-	-	-
Erigeron canadensis (0)	-	-	-	4.6	[1.6]	[1.7]	-	-	-	-
LEPIDIUM CAMPESTRE	-	-	6.1	-	-	-	-	-	-	-

Table C. Transect 3 species relative importance values

TRANSECT 3	RELATIVE IMPORTANCE VALUE									
SPECIES (C VALUE)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Panicum virgatum (5)*	-	[5.6]	[9.6]	[3.9]	10.7	7.4	8.3	9.8	15.8	8.1
AGROPYRON REPENS	-	-	-	11.7	10.1	10.5	8.0	12.9	14.7	7.3
Solidago altissima (1)	-	-	-	-	-	[2.9]	7.0	7.1	5.4	7.3
POA PRATENSIS	-	[4.9]	12.9	16.7	[4.3]	[5.4]	5.6	[1.8]	[1.5]	5.7
Aster pilosus (0)	[1.3]	-	-	[5.8]	10.1	9.2	[1.2]	6.7	[3.4]	3.8
BROMUS INERMIS	-	-	-	-	-	9.6	-	-	-	3.8
CORONILLA VARIA	-	[1.5]	-	[1.4]	-	7.4	9.9	[1.3]	[4.4]	3.8
Andropogon gerardii (5)*	-	[1.9]	[1.8]	-	[4.3]	[1.4]	[4.3]	9.8	4.9	3.4
Andropogon scoparius (5)*	-	-	-	[1.4]	5.2	6.5	[3.6]	[4.4]	-	3.4
Aster ericoides (5)*	-	-	-	-	[2.1]	-	-	[1.3]	5.9	3.4
Aster novae-angliae (4)*	-	-	-	[2.4]	[1.5]	[4.3]	5.5	[3.6]	[2.9]	3.4
Silphium laciniatum (5)*	-	-	-	-	-	[1.4]	-	[1.3]	5.4	[1.1]
Silphium integrifolium (5)*	-	-	-	[1.4]	-	[4.9]	-	[2.2]	4.9	[1.5]
Sorghastrum nutans (5)*	-	-	[1.8]	-	[1.5]	-	-	[2.7]	4.9	[1.9]
Bouteloua curtipendula (8)*	-	[6.8]	12.4	7.3	8.5	[2.0]	5.2	7.6	[1.5]	-
Ambrosia artemisiifolia (0)	[2.5]	7.2	11.9	7.2	5.2	-	5.0	[1.3]	[2.9]	[1.1]
Ambrosia trifida (0)	-	[6.8]	13.2	[3.9]	7.7	-	[1.2]	-	[1.5]	[1.5]
BROMUS TECTORUM	-	-	-	7.8	[3.1]	-	[1.2]	-	-	-
Solidago canadensis (1)	[1.3]	-	-	[3.4]	5.2	[1.4]	-	-	-	-
SETARIA FABERI	21.9	16.7	[2.3]	[1.4]	-	[1.4]	-	[1.3]	[1.5]	-
Echinochloa crusgalli (0)	21.9	14.0	-	-	-	-	-	-	-	-
Polygonum pensylvanicum (0)	7.7	12.5	-	-	-	[2.5]	-	[1.3]	[1.5]	[1.1]

Table D. Transect 4 species relative importance values

TRANSECT 4	RELATIVE IMPORTANCE VALUE									
SPECIES (C VALUE)	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sorghastrum nutans (5)*	-	[1.8]	[2.4]	11.3	[4.4]	15.4	15.0	8.9	9.3	15.0
Panicum virgatum (5)*	-	5.2	[3.4]	9.4	9.2	12.0	12.7	14.4	16.9	13.0
Andropogon gerardii (5)*	-	[3.0]	7.2	[1.9]	11.4	-	[6.8]	9.7	8.5	6.8
Silphium integrifolium (5)*	-	-	-	-	[3.8]	[5.8]	-	[1.8]	[4.0]	7.7
Solidago altissima (1)	-	-	-	-	[1.6]	[2.8]	-	[4.9]	[1.8]	6.7
BROMUS INERMIS	-	[1.5]	-	-	-	[5.8]	[3.2]	-	-	5.7
Andropogon scoparius (5)*	-	[1.5]	5.6	17.1	12.6	13.6	18.6	13.4	13.8	[4.5]
Bouteloua curtipendula (8)*	-	14.4	7.3	10.3	15.4	8.2	7.3	8.1	8.1	[3.2]
CIRSIUM ARVENSE	-	[3.3]	4.4	[4.1]	-	[1.4]	[4.1]	[3.2]	[1.3]	[1.4]
CHENOPODIUM ALBUM	7.6	-	-	-	-	-	[2.7]	-	-	-
SETARIA FABERI	-	14.7	[3.8]	[1.4]	-	-	[2.7]	[1.8]	[1.3]	[1.4]
ABUTILON THEOPHRASTI	8.3	[2.6]	-	-	-	-	[1.4]	-	-	[1.4]
Heliopsis helianthoides (5)*	-	[2.2]	4.4	[3.3]	[1.6]	[2.8]	[1.4]	[1.4]	[5.4]	[3.6]
AGROPYRON REPENS	-	-	-	[5.7]	5.6	7.7	-	[5.3]	[6.2]	[5.0]
Aster pilosus (0)	-	-	[1.0]	7.5	[4.4]	[2.8]	-	[1.4]	[1.3]	-
Rudbeckia hirta (1)*	[1.1]	4.4	5.8	[3.3]	-	-	-	-	-	-
Echinochloa crusgalli (0)	11.3	7.4	-	-	-	-	-	-	-	-
LOLIUM MULTIFLORUM	14.7	[1.5]	5.0	-	-	-	-	-	-	-
Polygonum pensylvanicum (0)	12.1	-	[1.0]	-	-	[1.9]	-	-	[1.8]	-
SETARIA GLAUCA	[4.5]	6.3	[1.0]	[1.4]	[1.6]	-	-	-	-	[1.8]
LACTUCA SERRIOLA	-	[3.3]	10.5	-	-	-	-	-	-	-

APPENDIX IV

SEEDED SPECIES RECRUITMENT

An alphabetical list of the 37 native species that were seeded as part of the prairie landscape installation in May and June of 2001 is presented in the tables on the following two pages. Transects 1 and 2 are on the first page and Transects 3 and 4 are on the second. Each species is listed along with its C value (in parenthesis). If the species was recorded from the site during the September 2007 monitoring event it is indicated with a "Y", and if not it is indicated with a "N". The columns to the right summarize the RIV of each species if recorded during the transect sampling; these same data from the previous monitoring years are shown for comparison.

Twenty-eight (28) of these 37 seeded species were recorded from the site during the monitoring event in September of 2010. See the report for more information.

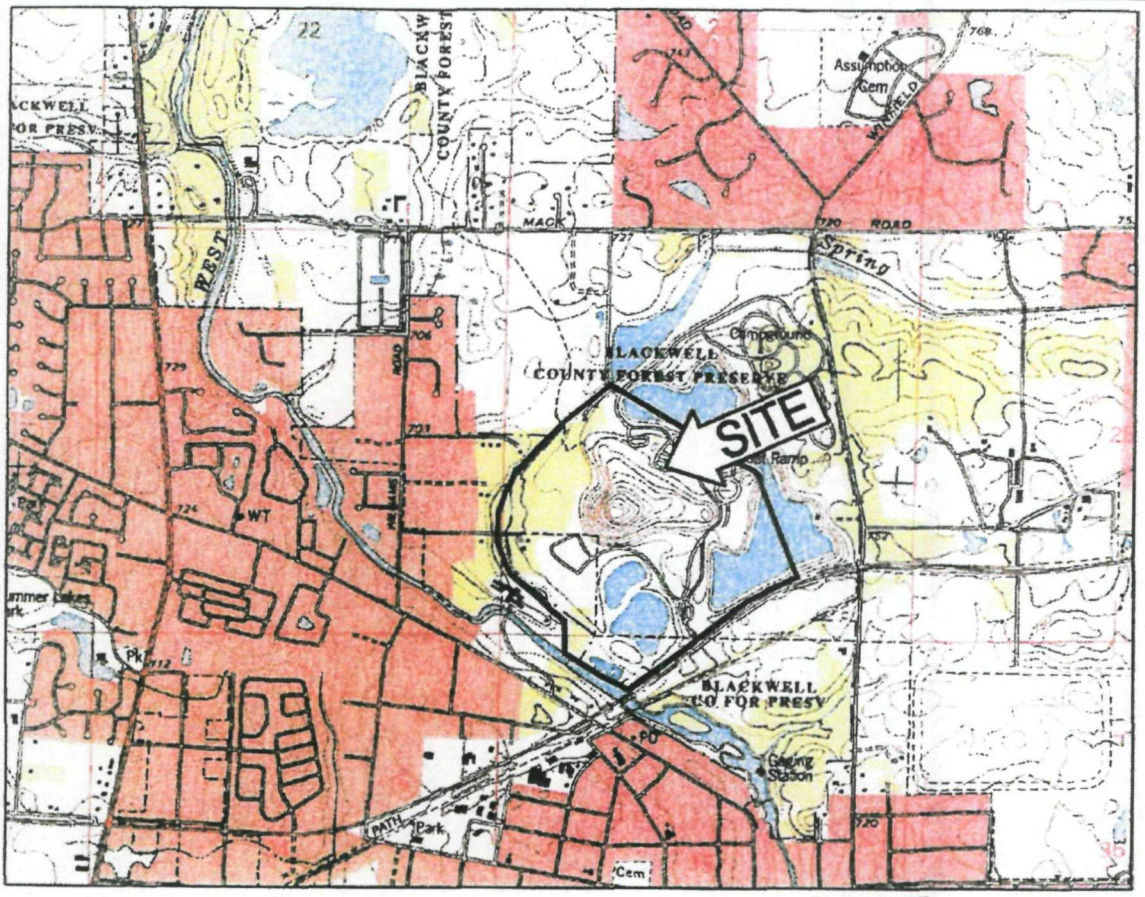
Seeded Species	Relative Importance Values																			
C Value	**Transect 1**										**Transect 2**									
	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
Andropogon gerardii (5)Y	-	-	3.1	1.6	-	3.6	3.0	6.9	2.2	-	-	-	-	1.7	-	-	2.2	-	-	-
Andropogon scoparius (5)Y	-	1.6	1.3	3.9	1.8	4.7	5.2	-	3.5	1.6	-	-	-	1.7	-	-	2.2	-	-	-
Aquilegia canadensis (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster azureus (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster ericoides (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster laevis (9)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster novae-angliae (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.7	-	-	4.2	2.3
Astragalus canadensis (10)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baptisia leucantha (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bouteloua curtipendula (8)Y	1.5	14.8	11.7	19.3	11.9	9.7	11.4	7.4	15.7	2.5	2.7	9.4	4.8	1.7	4.5	2.4	1.7	-	-	-
Coreopsis palmata (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coreopsis tripteris (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Desmodium canadense (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	-
Echinacea purpurea (3)Y	1.5	-	1.3	-	-	-	-	-	-	-	2.1	-	-	-	-	-	-	-	-	-
Elymus canadensis (4)Y	-	-	-	7.8	13.3	10.9	10.5	11.7	6.5	4.1	-	-	-	1.2	1.6	-	-	-	-	-
Eryngium yuccifolium (9)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helianthus mollis (9)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helianthus rigidus (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heliopsis helianthoides (5)Y	-	1.6	1.8	-	-	3.6	4.3	2.1	5.7	3.6	1.6	-	-	-	-	-	-	-	-	-
Lespedeza capitata (4)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liatris spicata (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monarda fistulosa (4)Y	-	-	-	3.9	1.8	-	-	-	1.3	-	1.6	-	1.8	-	-	1.7	3.4	2.4	-	5.7
Panicum virgatum (5)Y	-	-	3.1	2.3	4.4	5.6	2.6	2.1	-	2.1	-	5.6	5.3	2.2	3.2	-	1.7	-	-	-
Parthenium integrifolium (8)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Penstemon digitalis (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petalostemum purpureum (9)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Physostegia virginiana (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnanthemum virginianum (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ratibida pinnata (4)Y	-	-	-	-	-	-	1.3	1.6	-	1.6	-	-	-	1.2	3.2	-	1.7	6.6	1.6	-
Rudbeckia hirta (1)Y	3.5	2.0	-	-	-	-	-	-	-	-	2.1	-	-	1.2	-	-	-	-	-	-
Silphium integrifolium (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silphium laciniatum (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silphium terebinthinaceum (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago graminifolia (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago nemoralis (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago rigida (4)Y	-	-	-	-	-	-	-	-	1.3	-	-	-	-	-	1.6	-	-	-	-	-
Sorghastrum nutans (5)Y	-	-	-	-	-	1.5	2.2	-	1.7	-	1.6	5.0	2.6	1.2	-	-	1.7	-	-	-

Seeded Species	Relative Importance Values																			
C Value	**Transect 3**										**Transect 4**									
	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
Andropogon gerardii (5)Y	-	1.9	1.8	-	4.3	1.4	4.3	9.8	4.9	3.4	-	3.0	7.2	1.9	11.4	-	6.8	9.7	8.5	6.8
Andropogon scoparius (5)Y	-	-	-	1.4	5.2	6.5	3.6	4.4	-	3.4	-	1.5	5.6	17.1	12.6	13.6	18.6	13.4	13.8	4.5
Aquilegia canadensis (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster azureus (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aster ericoides (5)Y	-	-	-	-	-	-	-	1.3	5.9	3.4	-	-	2.4	1.9	-	3.9	2.7	-	4.5	-
Aster laevis (9)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4	-	-	-	-	-
Aster novae-angliae (4)Y	-	-	-	2.4	1.5	4.3	5.5	3.6	2.9	3.4	-	-	2.0	-	3.2	3.3	-	-	1.8	3.6
Astragalus canadensis (10)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Baptisia leucantha (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bouteloua curtipendula (8)Y	-	6.8	12.4	7.3	8.5	2.0	5.2	7.6	1.5	-	-	14.4	7.3	10.3	15.4	8.2	7.3	8.1	8.1	3.2
Coreopsis palmata (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Coreopsis tripteris (5)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.2	-	-
Desmodium canadense (4)Y	-	-	-	-	-	1.4	-	-	2.0	3.4	-	-	-	-	-	1.4	1.4	1.8	-	1.8
Echinacea purpurea (3)Y	-	-	-	-	-	-	-	-	-	-	-	-	3.0	2.8	-	-	-	-	-	-
Elymus canadensis (4)Y	-	1.5	4.5	5.8	-	2.9	1.2	3.1	-	-	-	1.1	3.8	6.0	1.6	-	-	2.2	-	-
Eryngium yuccifolium (9)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Helianthus mollis (9)Y	-	-	-	1.9	2.1	1.4	-	4.4	-	3.1	-	-	1.0	-	-	-	1.8	-	1.8	2.2
Helianthus rigidus (8)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Heliopsis helianthoides (5)Y	-	-	-	-	3.7	1.4	-	1.3	2.9	3.1	-	2.2	4.4	3.3	1.6	2.8	1.4	1.4	5.4	3.6
Lespedeza capitata (4)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Liatris spicata (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Monarda fistulosa (4)Y	-	-	1.4	1.4	-	2.0	-	-	-	-	1.1	-	1.0	-	-	-	1.8	5.0	7.7	3.2
Panicum virgatum (5)Y	-	5.6	9.6	3.9	10.7	7.4	8.3	9.8	15.8	8.1	-	5.2	3.4	9.4	9.2	12.0	12.7	14.4	16.9	13.0
Parthenium integrifolium (8)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	-	-	-
Penstemon digitalis (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petalostemum purpureum (9)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4	1.6	-	-	-	-	-
Physostegia virginiana (6)N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pycnanthemum virginianum (5)Y	-	-	-	-	-	-	-	-	-	1.9	-	-	-	-	-	1.4	1.8	-	-	-
Ratibida pinnata (4)Y	-	-	-	-	-	2.0	-	5.4	2.9	-	-	-	-	-	2.2	4.8	1.8	3.2	1.3	-
Rudbeckia hirta (1)Y	-	-	1.4	-	-	-	3.5	1.3	1.5	1.1	1.1	4.4	5.8	3.3	-	-	-	-	-	-
Silphium integrifolium (5)Y	-	-	-	1.4	-	4.9	-	2.2	4.9	1.5	-	-	-	-	3.8	5.8	-	1.8	4.0	7.7
Silphium laciniatum (5)Y	-	-	-	-	-	1.4	-	1.3	5.4	1.1	-	-	1.0	1.9	1.6	1.9	2.3	4.0	1.3	2.2
Silphium terebinthinaceum (5)Y	-	-	-	-	-	-	1.2	1.3	-	-	-	-	-	-	1.6	1.4	-	-	2.2	4.0
Solidago graminifolia (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago nemoralis (4)Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Solidago rigida (4)Y	-	-	-	-	1.5	1.4	-	1.8	-	1.1	-	-	-	1.9	-	-	1.8	1.8	1.8	-
Sorghastrum nutans (5)Y	-	-	1.8	-	1.5	-	-	2.7	4.9	1.9	-	1.8	2.4	11.3	4.4	15.4	15.0	8.9	9.3	15.0

Exhibits

BLACKWELL LANDFILL PRAIRIE RESTORATION

Warrenville – DuPage County, Illinois



BASE MAP DEVELOPED FROM THE NAPERVILLE, ILLINOIS 7.5 MINUTE U.S.G.S. TOPOGRAPHIC QUADRANGLE MAP DATED: 1993

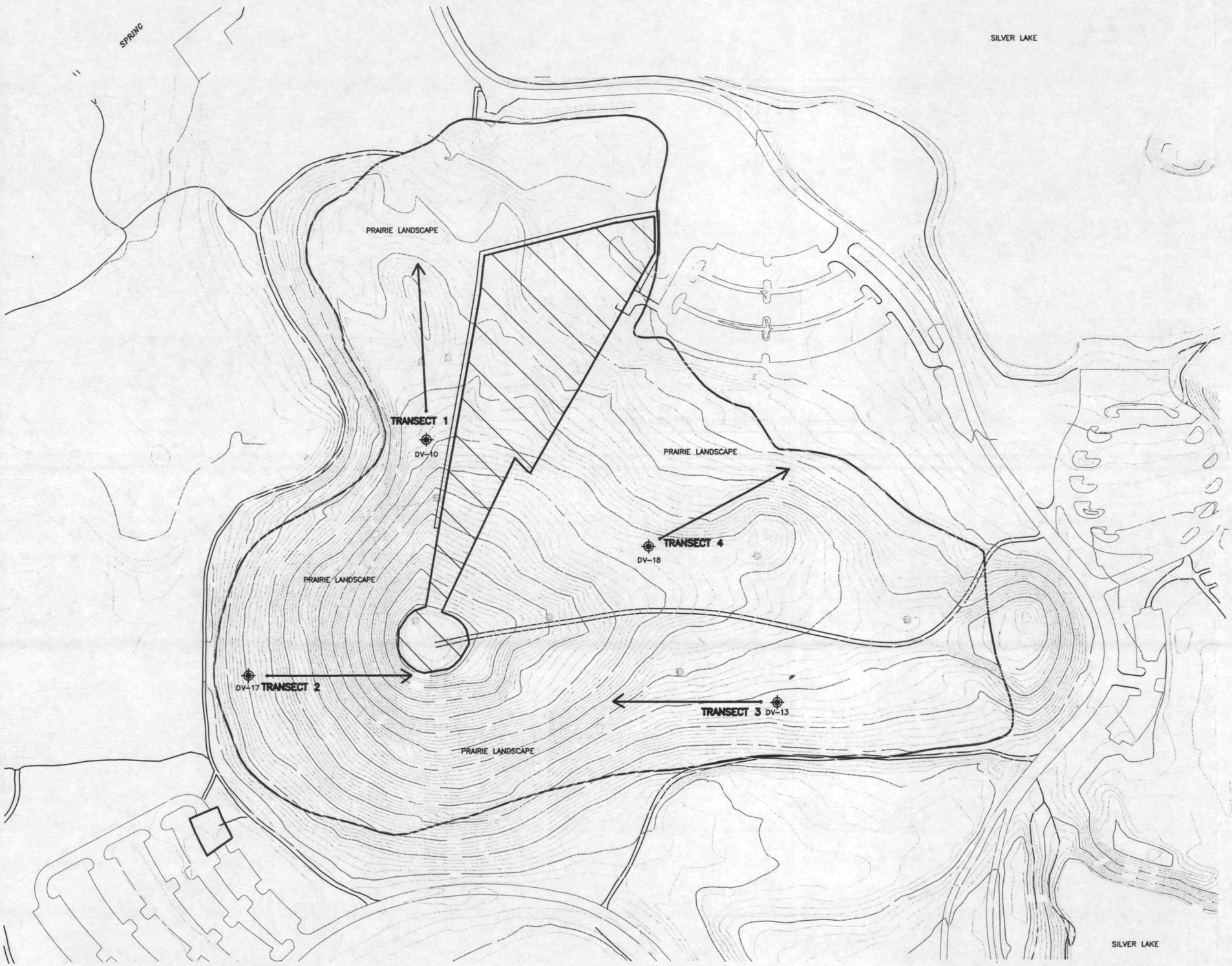
Project Number:
09038.00

Date:
January 2011

Scale:
Not to Scale

EXHIBIT A
PROJECT LOCATION MAP

CONSERVATION DESIGN FORUM



LEGEND

- GAS VENT
- TRANSECT LINES
- TOBOGGAN RUN (OUTSIDE OF PROJECT AREA)
- LEACHATE EXTRACTION WELL
- PROJECT BOUNDARY

N
W E
S

Scale: 1" = 200'

0 100 200 400

Landscape Architecture
Community Planning
Ecological Restoration
Resource Management

375 West First Street
Ephrata, Illinois 60126
630.556.3200 phone
630.556.3202 fax
www.cdf.com

CONSERVATION DESIGN FORUM

Client:
MWH
1700 West Jackson Boulevard
Suite 1900
Chicago, Illinois

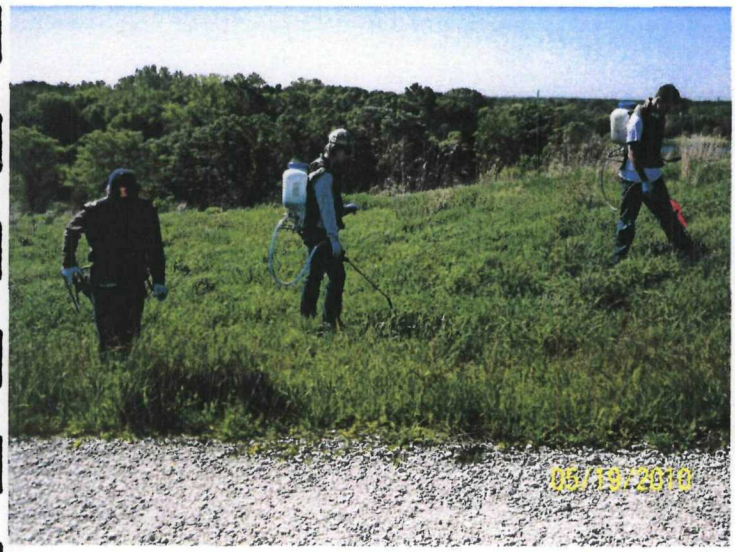
Exhibit B
Blackwell Landfill Prairie Restoration

Date:
January 2011
drawn by HQ
Revisions: JJ

Project Number: 09038.00

1

PHOTOGRAPHS



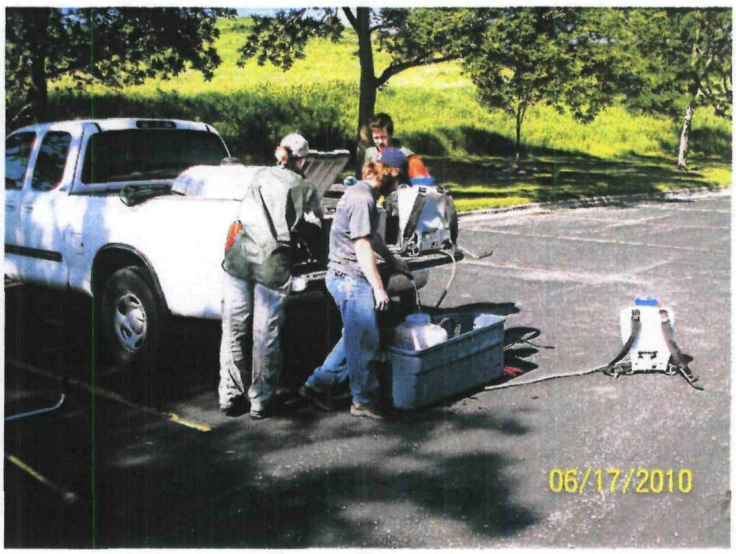


PHOTO SHEET 1

ABOVE: Controlled burn across prairie and post-burn landscape
BELOW: Select weed control; herbicide vehicle with supplies

PHOTO SHEET 2

ABOVE: Select weed control of Bird's Foot Trefoil and Crown Vetch
BELOW: Woody re-spouts (left); mowing around vault in preparation of controlled burn

PHOTO SHEET 3

ABOVE: Transect 1 (left); Transect 2 (right)
BELOW: Transect 3 (left); Transect 4 (right)