Second-year Monitoring Report for the MWRDGC - North Side, Lemont, & LASMA

Priaire Landscape Conversion Sites

Prepared for:

Metropolitan Water Reclamation District of Greater Chicago

100 Erie Street

Chicago, Illinois 60611

December 2005

Prepared by:

Conservation Design Forum

Ecological Restoration and Landscape Architecture

Water Resource and Ecological Engineering

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SECOND-YEAR MONITORING REPORT FOR THE

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CONSERVATION DESIGN FORUM
Project No. 03063.00

Prepared by: _____ Date: _____
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EXECUTIVE SUMMARY

- This report documents restoration activities that occurred during the 2005-growing season at three Metropolitan Water Reclamation District of Greater Chicago facilities, including: North Side Water Reclamation Plant (WRP), Lemont WRP, and LASMA Berm prairie conversion sites. In addition, the report includes methods and results of the second-year vegetation monitoring of these native prairie landscapes.

- Maintenance activities included weed control via mowing and select herbicide applications. These actions were completed by two different maintenance contractors (Natural Resource Management for North Side WRP and Lemont WRP; Conservation Land Stewardship for LASMA Berm). Conservation Design Forum, Inc. worked with the contractors and the site engineers at each facility to coordinate these maintenance activities.

- The results of the vegetation monitoring at North Side WRP and Lemont WRP are typical of native landscape creations that are in their early stages of establishment. Nevertheless, based upon vegetation monitoring results there is a need to overseed (via drill-seeding) prairie grasses into these landscapes; this was completed at Lemont WRP on December 8th, 2005. In early 2006 and when weather conditions allow, this will be completed at North Side WRP.

- It is our opinion that the slope angles at the LASMA berm are steep to the point that soil erosion has and will continue to undermine the establishment of a native prairie landscape. CDF still recommends some type of grassland cover for the site—a landscape that will include a mixture of Eurasian grasses and some native plant species. At a minimum, the District should anticipate the need to remediate areas of severe soil erosion and to mow the vegetation on an annual basis. Although it may be impractical to re-grade the entire berm, CDF recommends that the District consult with US Army Corps of Engineers specifications in regards to levee construction and vegetative cover as one possible approach to what has been attempted to date.

- After just two seasons of growth it is difficult to "rate" the success of a *de novo* prairie landscape—generally, this would be fairer to do so after four or five years of establishment. This being said, however, it is our opinion that the North Side WRP and Lemont WRP landscapes can be assigned a value of 8 on a scale of 1 to 10, and the LASMA berm assigned a value of 2 on this same scale.

- Based upon our observations in 2005, CDF recommends that interpretive signage be designed and installed at North Side WRP and Lemont WRP which will inform District personnel and visitors of the landscape intent. In addition, CDF recommends that the District limit or restrict the use of vehicle traffic and unwarranted mowing across these prairie landscapes.

- CDF recommends that on-going maintenance of the prairie landscapes at North Side WRP and Lemont WRP in the 2006-growing season include continued weed control via select herbicide applications; in addition, it is recommended that a budget be allocated towards a seed collection and dispersal program. Lastly, a burn plan and permit should be secured by a burn contractor in anticipation of a controlled landscape burn in spring 2007 and/or fall 2007 for North Side WRP and Lemont WRP.

INTRODUCTION

PROJECT SITE LOCATIONS AND PURPOSE

In June of 2003, Conservation Design Forum (CDF) was retained by the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) to facilitate the conversion of existing turf to native prairie landscape at three facilities. The three facilities include: North Side Water Reclamation Plant (WRP), located at 3500 West Howard Street, Skokie; Lemont WRP, located at 13 Stephen Street, Lemont; LASMA Berm, located at 7601 South LaGrange Road, Willow Springs. All three project sites are located in Cook County, Illinois, and are owned and operated by the MWRDGC. A plan view of each project site is included on EXHIBITS A thru C.

The purpose of prairie landscape monitoring is to assess vegetation development from year to year in order to make recommendations as to proper land management. The information presented in this report represents the second growing year of the prairie landscape at each of these three sites. Specific monitoring methods and the locations of vegetation monitoring transects are discussed in the Methods section of this report; the monitoring results are presented in the Results and Discussion section.

MAINTENANCE ACTIVITIES CONDUCTED IN 2005

The following is a chronological list of native landscape maintenance activities that were conducted at each project site in the spring, summer, and fall of 2005. [These maintenance activities were documented in several field reports that were submitted to MWRDGC Staff throughout the growing season.] The landscape maintenance contractor for North Side and Lemont WRPs was Natural Resource Management (Beecher, IL), and the contractor for LASMA Berm was Conservation Land Stewardship (Elmhurst, IL).

North Side WRP

- June 2nd: select herbicide application (*Roundup*) for thistles and clover.
- July 20th: select herbicide application (*Roundup*) for thistles and clover.
- November 9th: mowing of the vegetation across the entire prairie landscape via a tractor-mounted brush hog.

Lemont WRP

- May 6th: select herbicide application (*Roundup*) for thistles and other noxious weeds.
- June 30th: select herbicide application (*Roundup*) for thistles and clover.
- November 9th: mowing of the vegetation across the entire prairie landscape via a tractor-mounted brush hog.
- December 8th: drill-seed prairie grasses at 8 pounds per acre across the prairie landscape (Big Bluestem Grass, 3 pounds; Little Bluestem Grass, 2 pounds; Indian Grass, 3 pounds). [See APPENDIX I for contractor's verification of seed purchase.]

LASMA Berm

- May 18th: select herbicide application (4:1 *Garlon*:glyphostate) for thistles and other noxious weeds.
- June 8th: select herbicide application (4:1 *Garlon*:glyphostate) for thistles and other noxious weeds.
- June 23rd-July 8th: with the exception of the unfinished biosolids test plots, the vegetation across the prairie landscape was mowed via a tractor-mounted brush

hog; steeper slopes were mowed by hand via weed-whackers.

- September 27th: with the exception of the unfinished biosolids test plots, the vegetation across the prairie landscape was mowed via a tractor-mounted brush hog. No hand mowing was done, however, and so areas too steep to be mowed via a tractor were not mowed.
- October 26th: hand-broadcast prairie seed and cover crop over recently-completed biosolids test plots; drill-seeded top of berm. [*As noted in our field reports, some areas were not finish-graded to the point of seeding. Uneven grades, debris piles, and rocks that were apparent from a visual inspection of the site, especially on the ends of the berm and in the biosolids test areas, will impact seed germination and hinder future mow maintenance*.]

Overall, these maintenance activities were performed in a timely and professional manner by the staff of Natural Resource Management and Conservation Land Stewardship. Photographs included at the back of the report depict many of these activities. Select weed control and vegetation mowing are standard maintenance activities that were anticipated in the 2005-growing season. The results of the vegetation monitoring in September suggested a need to overseed common prairie grasses into the landscapes at North Side and Lemont. These maintenance activities are explained in more detail under the Results and Discussion section.

MONITORING METHODS

Although there are many ways to monitor *de novo* ("from scratch") restorations and measure their performance, the approach utilized in this project emphasizes vegetation development and floristic quality assessment (FQA) methods. In summary, the vegetation is sampled along transect lines established within representative portions of each project site; 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 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.

Transect locations at each of the three project sites are described below and their approximate locations are depicted on EXHIBITS A thru C.

North Side WRP

Transect 1 is located in the northeastern corner of the WRP (see EXHIBIT A-2). The transect begins at the southeastern end of the prairie and is oriented 315° NW. The first quadrat is placed 10 paces in from the prairie/lawn boarder; subsequent quadrats are placed at 5-pace intervals along the transect line. A total of 10 quadrats are sampled along the transect.
Transect 2 is located in the southwestern portion of the WRP (see EXHIBIT A-1). The transect begins at the southeastern end of the prairie and is oriented 315° NW. The first quadrat is placed 10 paces in from the prairie/lawn boarder; subsequent quadrats are placed at 20-pace intervals along the transect line. A total of 10 quadrats are sampled along the transect.

Lemont WPR

Transect 1 is located in the western portion of the WRP (see EXHIBIT B). The transect begins at the northwestern corner of the prairie and is oriented 135° SE. The first quadrat is placed at the prairie/lawn boarder; subsequent quadrats are placed at 10-pace intervals along the transect line. A total of 10 quadrats are sampled along the transect.
Transect 2 is located in the southern portion of the WRP (see EXHIBIT B). The transect begins at the southwestern corner of the prairie and is oriented 30° NE. The first quadrat is placed at the prairie/lawn boarder; subsequent quadrats are placed at 10-pace intervals along the transect line. A total of 10 quadrats are sampled along the transect.

LASMA Berm

A grid transect was deployed at the LASMA Berm so that quadrats were sampled on the north-facing slope, top of berm, and the south-facing slope (see EXHIBIT C). Starting at the northern end of the berm, quadrats were placed randomly on each berm habitat (i.e., north face, top, south face). One quadrat was placed in each habitat at 100-pace intervals along the berm. A total of three (3) quadrats were placed in each habitat north of the gravel access road, and a total of four (4) quadrats were placed in each habitat south of the access road (see EXHIBIT C). **Transect 1** includes 7 quadrats that comprise the north-facing slope; **Transect 2** includes 7 quadrats that comprise the top of berm; **Transect 3** includes 7 quadrats that comprise the south-facing slope. [*It should be noted that although the placement of all quadrats was random, there was a conscious attempt to exclude sampling within the unfinished biosolids test plots.*]

All vegetation is sampled using a 0.25m^2 quadrat. 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. COVER/ABUNDANCE NUMBERS

COVER/ ABUNDANCE NO.	APPROXIMATE COVER
1	1 to few stems present; species occupies only 1 quarter of quadrat
2	Few to several stems or clumps; species occupies 1 to 2 quarters of quadrat
3	Species occupies 2 to 3 quarters of quadrat with notable coverage in each occupied quarter
4	Species occupies 3 to 4 quarters of quadrat with regular cover throughout
5	Species dominates the entire quadrat

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 22nd (Lemont and LASMA) and September 23rd (North Side), 2005, and was performed by Kenneth Johnson. Photographs taken during the calendar year of the various maintenance activities are included at the back of the report. Refer to EXHIBITS A thru C for plan views of the three project sites.

GENERAL PLANT INVENTORIES AND FQA DATA

The results of the plant inventories and associated FQA data for each of the three project sites are presented in APPENDIX II. Table 2 on the following page 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) at each site. The two bottom rows are the native Mean C and FQI values. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004.

TABLE 2. GENERAL PLANT INVENTORIES & FQA SUMMARY

FQA Data	North Side WRP		Lemont WRP		LASMA Berm	
	2004	2005	2004	2005	2004	2005
NS (% TS)	33 (44%)	27 (44%)	46 (50%)	57 (53%)	22 (46%)	30 (54%)
Native Mean C	1.7	2.4	1.7	2.1	2.3	2.0
Native FQI	10	13	12	16	11	11

North Side WRP and Lemont WRP

- Based upon these data and general site observations noted throughout the 2005-growing season, the prairie landscape at North Side WRP and Lemont WRP are developing in a satisfactory manner.
- Frequently encountered species noted during the meander/inventory in September at these two project sites included perennial forbs such as Hairy Aster, Yellow Coneflower, and Common Dandelion.
- In general, however, prairie grasses are scarce or non-existent, in particular Big Bluestem Grass, Little Bluestem Grass, and Indian Grass. As a result, it was recommended that seed of these three prairie grasses be drilled into the landscapes to ensure that they will be present in future years.
- Select weed control (for thistles, clovers, and other targeted weeds) was effective at keeping these weeds in check and/or eliminating them from the landscape. Due to the extreme drought conditions during the growing season, there was no need to mow the vegetation during the spring and summer; the landscapes were mowed, however, in November as preparation for drill-seeding.
- At North Side WRP it has been noted that vehicles have driven over the prairie landscape; also, the northeastern "tail" of the prairie landscape (see EXHIBIT A-2) has been mowed down.

A seed mix of Big Bluestem Grass (3 pounds per acre), Little Bluestem Grass (2 pounds per acre), and Indian Grass (3 pounds per acre) was drilled into the landscape at Lemont WRP on December 8th (see APPENDIX I). In regards to the last bullet item above, the District should decide the need, if any, to restrict use of vehicles from driving over the native prairie landscape. In areas where vehicle impacts are allowed and/or unwarranted mowing takes place, the intended prairie vegetation will not establish and develop as originally intended.

LASMA Berm

The establishment of prairie landscape at the LASMA Berm site has been less than satisfactory and FQA values have gone down or are the same as last year. The dominant vegetation includes three weeds, namely, Lamb's Quarters, Burning Bush, and Barnyard Grass. Although many of the seeded prairie species were noted during the monitoring event in September, generally they are found as scattered individuals.

The steep slopes at this site were identified early on as a potential problem for the establishment of a prairie landscape. By spring 2005, soil erosion had occurred in many areas across the berm. These areas were not repaired, which exacerbated the problem of an effective mow maintenance regime at this site. In short, without an effective means to mow the vegetation, weeds such as Lamb's Quarters and Burning Bush grow tall and rank by late summer, suppressing and shading-out most other plant species; in addition, these annual weeds do little to hold the soil in place. Lastly, it should be noted that in summer and fall 2005, the entire top of the berm was driven on by trucks and bulldozers as the biosolids test plots were graded. By mid-October, the test plots were complete; in late October, these areas were hand-seeded with the original prairie seed mix and the top of the berm (where a tractor can be driven safely) was drill-seeded. [*It should be noted that some areas were not finish-graded to the point of seeding. Uneven grades, debris piles, and rocks that were apparent from a visual inspection of the site, especially on the ends of the berm and in the biosolids test areas, will impact seed germination and hinder future mow maintenance*.]

TRANSECT SAMPLING AND FQA DATA

The results of the straight-line transects are presented in APPENDIX III. As stated above, each transect runs through a representative portion of the prairie landscape at each project site (see EXHIBITS A thru C). Transect sampling helps to quantify the vegetation changes and native landscape development. A comparison of floristic values between the transect and the quadrat level data is useful to understand the uniformity of native species establishment. The data are presented separately for each of the three project sites. A photograph was taken to document the landscape appearance at the beginning of each transect line (see photographs included at the back of report).

North Side WRP

Table 3 below presents a summary of the data collected for each transect at the North Side WRP project site. The aggregate transect data are presented separately from the average quadrat data. The number of native taxa (NT) is given, along with the native Mean C, and the native FQI. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004.

TABLE 3. NORTH SIDE WRP – TRANSECT SUMMARY

TRANSECT	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
	NT	MEAN C	FQI	NT	MEAN C	FQI
T1						
2004	14	2.1	8	3.3	1.6	2.8
2005	15	2.7	10	3.4	2.0	3.8
T2						
2004	11	2.2	7	2.3	1.3	2.2
2005	16	2.7	11	3.6	2.1	4.3

There is a positive trend in FQA values from the 2004 to 2005 data; however, it is very early in native landscape establishment and too soon to draw conclusions from these data.

Tables 4 and 5 on the following page summarize the relative importance values (RIV) for the top 50% of species from each transect. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004. 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. 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.

TABLE 4. NORTH SIDE WRP – TRANSECT 1 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
Aster pilosus (0)	[3.5]	7.7
SOIL	-	7.5
Ratibida pinnata (4)*	[1.0]	7.2
TARAXACUM OFFICINALE	[1.0]	6.7
SETARIA GLAUCA	[2.8]	6.6
ATRIPLEX PATULA	-	5.6
POA PRATENSIS	-	5.6
Echinochloa crusgalli (0)	5.3	5.5
TRIFOLIUM HYBRIDUM	15.0	[4.5]
LOLIUM MULTIFLORUM	14.8	-
Rudbeckia hirta (1)*	8.6	[2.2]
Panicum dichotomiflorum (0)	5.7	-
HIBISCUS TRIONUM	5.1	[3.9]

TABLE 5. NORTH SIDE WRP – TRANSECT 2 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
POA PRATENSIS	[1.9]	8.3
MEDICAGO LUPULINA	[1.9]	7.1
AGROPYRON REPENS	-	7.0
Solidago altissima (1)	[2.8]	5.2
CONVOLVULUS ARVENSIS	[1.4]	4.3
Elymus canadensis (4)*	-	4.3
Ambrosia artemisiifolia (0)	[2.8]	4.2
LACTUCA SERRIOLA	-	3.9
POLYGONUM AVICULARE	-	3.9
TARAXACUM OFFICINALE	[1.4]	3.9
TRIFOLIUM HYBRIDUM	26.5	[2.0]
LOLIUM MULTIFLORUM	21.5	-
Rudbeckia hirta (1)*	9.6	[2.9]

These data underscore the lack of prairie grasses found across the native landscape. Also, it should be noted that the "soil" listed in Table 1 represents barren areas that developed as a result of herbicide use on clovers in conjunction with extreme drought conditions.

Lemont WRP

Table 6 below presents a summary of the data collected for each transect at the Lemont WRP project site. The aggregate transect data are presented separately from the average quadrat data. The number of native taxa (NT) is given, along with the native Mean C, and the native FQI. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004.

TABLE 6. LEMONT WRP – TRANSECT SUMMARY

TRANSECT	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
	NT	MEAN C	FQI	NT	MEAN C	FQI
T1						
2004	15	1.2	5	4.7	1.0	2.3
2005	16	2.0	8	4.8	2.8	6.3
T2						
2004	21	1.5	7	3.9	1.3	2.6
2005	16	2.7	11	4.7	2.4	5.2

As stated for the North Side WRP, there is a positive trend in FQA values from the 2004 to 2005 data; however, it is very early in native landscape establishment and too soon to draw conclusions from these data.

Tables 7 and 8 below summarize the relative importance values (RIV) for the top 50% of species from each transect. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004. 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. 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.

TABLE 7. LEMONT WRP – TRANSECT 1 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
Monarda fistulosa (4)*	[4.5]	14.1
Heliopsis helianthoides (5)*	5.3	8.9
CHENOPODIUM ALBUM	5.3	8.6
Aster novae-angliae (4)*	-	8.1
Elymus canadensis (4)*	[1.1]	7.9
Solidago altissima (1)	[1.1]	7.3
Rudbeckia hirta (1)*	15.2	-
Solanum americanum (0)	11.1	-
Oxalis stricta (0)	8.4	-
Polygonum pensylvanicum (0)	5.7	-

TABLE 8. LEMONT WRP – TRANSECT 2 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
Ratibida pinnata (4)*	[2.2]	9.0
Eupatorium serotinum (0)	[1.5]	8.0
Monarda fistulosa (4)*	[1.5]	7.9
Aster pilosus (0)	[1.5]	6.9
ATRIPLEX PATULA	[1.5]	6.2
TARAXACUM OFFICINALE	8.2	5.8
Solidago canadensis (0)	-	5.2
Solidago altissima (0)	-	4.5
CIRSIUM ARVENSE	8.3	[2.3]
Oxalis stricta (0)	7.5	[1.2]
Rudbeckia hirta (1)*	6.8	[1.2]
POLYGONUM PERSICARIA	6.6	-
Solanum americanum (0)	5.0	-
Eupatorium altissimum (0)	3.9	-
Panicum dichotomiflorum (0)	3.9	-

Again as stated above, these data show the lack of prairie grass establishment at the Lemont WRP site and, therefore, the need to drill-seed prairie grasses into the landscape.

LASMA Berm

Table 9 below presents a summary of the data collected for each transect at the LASMA Berm project site. The aggregate transect data are presented separately from the average quadrat data. The number of native taxa (NT) is given, along with the native Mean C, and the native FQI. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004.

TABLE 9. LASMA BERM – TRANSECT DATA SUMMARY

TRANSECT	TRANSECT DATA SUMMARY			AVE QUADRAT DATA SUMMARY		
	NT	MEAN C	FQI	NT	MEAN C	FQI
T1						
2004	5	0.4	1	2.0	0.3	0.4
2005	5	1.8	4	1.0	1.0	1.3
T2						
2004	6	2.3	6	1.3	1.5	1.7
2005	5	3.4	8	1.9	1.0	1.6
T3						
2004	7	1.7	5	1.4	1.3	1.5
2005	4	2.0	4	0.6	0.6	0.8

Tables 10, 11, and 12 on the following page summarize the relative importance values (RIV) for the top 50% of species from each transect. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004. 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. 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.

TABLE 10. LASMA BERM – TRANSECT 1 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
CHENOPODIUM ALBUM	[3.3]	29.7
KOCHIA SCOPARIA	[3.3]	28.8
Echinochloa crusgalli (0)	27.1	[8.5]
LOLIUM MULTIFLORUM	18.3	-
Panicum dichotomiflorum (0)	10.0	-

TABLE 11. LASMA BERM – TRANSECT 2 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
Echinochloa crusgalli (0)	14.4	25.7
CHENOPODIUM ALBUM	-	18.2
SOIL	-	15.4
LOLIUM MULTIFLORUM	46.7	-

TABLE 12. LASMA BERM – TRANSECT 3 RELATIVE IMPORTANCE VALUES (RIV)

SPECIES (C VALUE)	RIV 2004	RIV 2005
KOCHIA SCOPARIA	-	41.2
CHENOPODIUM ALBUM	-	21.0
SOIL	31.0	[6.6]
Echinochloa crusgalli (0)	18.7	[4.3]
LOLIUM MULTIFLORUM	14.5	-

These data presented in the four tables above indicate that the prairie landscape on the berm is poorly established. The "soil" in Transect 2, on the top of the berm, is the direct result of heavy vehicle traffic in the summer and fall which made it impossible for any vegetation to grow. As mentioned on pages 5 and 6 of the report, the steep slopes make effective mow maintenance impossible and will continue to undermine the establishment of prairie vegetation at this site.

SEEDED SPECIES RECRUITMENT

Alphabetical lists of the native species seeded as part of the initial prairie installation at each of the three project sites 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 2005-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. A summary of these data are presented in Table 13 on the following page. For comparative purposes these same data are presented from the restoration monitoring conducted in 2004, as well as to the initial seeding.

TABLE 13. SEEDED SPECIES RECRUITMENT

	NORTH SIDE WRP		LEMONT WRP		LASMA BERM	
YEAR	NO. SPECIES	MEAN C	NO. SPECIES	MEAN C	NO. SPECIES	MEAN C
Initial Seeding	23	5.3	23	5.3	17	4.7
2004	11	4.4	9	4.2	10	4.5
2005	13	4.3	13	4.5	11	4.4

At North Side WRP, thirteen (13) of the 23 seeded species were recorded during the monitoring event in September of 2005. Two seeded species (Canada Wild Rye, Yellow Coneflower) were in the top 50% RIV. At Lemont WRP, thirteen (13) of the 23 seeded species were recorded during the monitoring event in September of 2005. Five seeded species (New England Aster, Canada Wild Rye, False Sunflower, Wild Bergamot, and Yellow Coneflower) were in the top 50% RIV. At LASMA Berm, eleven (11) of the 17 seeded species were recorded during the monitoring event in September 2005; none of these were in the top 50% RIV in the transect sampling.

Future restoration monitoring should be compared to these data in order to show trends in the establishment of the intended native landscape. With time and proper land management there should be an increase in native species recruitment and quality across all areas of the restoration site. In general, after four (4) full-growing seasons approximately 40% of the seeded species should be recorded in a site inventory—and if so, then the initial seeding should be considered satisfactory. Based upon two growing seasons, approximately 57% of the seeded species are present at North Side WRP and Lemont WRP, and approximately 65% at LASMA berm.

The native Mean W of each project site is summarized in Table 14 below and includes the Mean W of the initial seeding. This information can be used to inform native plant selection in future species enhancement efforts.

TABLE 14. MEAN W VALUES

	NORTH SIDE WRP	LEMONT WRP	LASMA BERM
YEAR	MEAN W	MEAN W	MEAN W
Initial Seeding	2.0	2.0	2.5
2004	1.7	1.0	0.6
2005	1.8	1.5	1.1

SUMMARY AND MANAGEMENT RECOMMENDATIONS

The following bullet items summarize the information presented within this report.

- As presented above, land management activities conducted across these three *de novo* prairie reconstructions during the 2005-growing season included weed control via mowing and spot herbicide applications, and overseeding (at Lemont WRP only).
- The results of the vegetation monitoring at North Side WRP and at Lemont WRP indicated a need to overseed (via drill-seeding) prairie grasses; this was completed at Lemont WRP on December 8th, 2005, but has yet to be done at North Side WRP due to weather conditions. [It is our understanding this will be performed as soon as weather conditions allow early in 2006.]
- It is our opinion that the slope angles at the LASMA berm are steep to the point that soil erosion has and will continue to undermine the ability to establish and manage a native prairie landscape. CDF still recommends some type of grassland cover for the site—a landscape that will include a mixture of Eurasian grasses and some native plant species. At a minimum, the District should anticipate the need to remediate areas of severe soil erosion and to mow the vegetation on an annual basis. Although it may be impractical to re-grade the entire berm, CDF recommends that the District consult US Army Corps of Engineers specifications in regards to levee construction and vegetative cover as one possible approach to what has been attempted to date.
- After just two seasons of growth it is difficult to "rate" the success of a *de novo* prairie landscape—generally, this would be fairer to do so after four or five years of establishment. This being said, however, it is our opinion that the North Side WRP and Lemont WRP landscapes can be assigned a value of 8 on a scale of 1 to 10, and the LASMA berm assigned a value of 2 on this same scale.
- CDF recommends that interpretive signage be designed and installed at North Side WRP and Lemont WPR which will inform District personnel and visitors of the landscape intent.
- CDF recommends that the District limit or restrict the use of vehicle traffic and unwarranted mowing across these prairie landscapes.

CDF recommends that on-going management activities for the 2006-growing season at North Side WRP and Lemont WRP include continued weed control via spot herbicide applications; in addition, it is recommended that a budget be allocated towards a seed collection and dispersal program. Lastly, a burn plan and permit should be secured by a burn contractor in anticipation of a controlled landscape burn in spring 2007 and/or fall 2007 for North Side WRP and Lemont WRP.

Having just completed their second growing year, it should be emphasized that these landscape re-constructions are very young. As part of our educational outreach walk-through with District staff in September, we had the opportunity to visit the Blenz Prairie restoration at Camp Sagawa near Lemont WRP. It was informative to see first-hand what a *de novo* prairie re-construction can look like after twenty-five years of dedicated management. There is no reason why the prairie conversion landscapes at these and other District sites cannot resemble the Blenz Prairie in years to come.

GENERAL REFERENCES

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

Conservation Design Forum. December 2004. First-year Monitoring Report for the MWRDGC – North Side, Lemont, and LASMA Prairie Landscape Conversion Sites. Elmhurst, IL.

Conservation Design Forum. April 2004. Native Landscape Installation Summary Report MWRDGC North Side, Lemont and LASMA Berm Sites. Elmhurst, IL.

Conservation Design Forum. 2003. MWRDGC Natural Landscape Assessment Report. Elmhurst, IL.

Swink, F. and G. Wilhelm. 1994. Plants of the Chicago Region, 4th edition. Indiana Academy of Science. Indianapolis, Indiana.

Taft, J., G. Wilhelm, D. Ladd, and L. Masters. 1997. Floristic Quality Assessment for Vegetation in Illinois: A Method for Assessing Vegetation Integrity. Erigenia 14, pp. 3-95.

Wilhelm, G. and L. Masters. 1999. Floristic Quality Assessment and Computer Applications. Conservation Research Institute. Elmhurst, IL.

APPENDIX I

PRAIRIE GRASSES USED IN OVERSEEDING

The information shown on the following page documents the actual plant species and seed quantities purchased and installed for the drill-seeding at Lemont WRP. Seed was installed on December 8th, 2005. This same mix is to be drill-seeded at North Side WRP in early 2006 when weather conditions allow.

APPENDIX II

VEGETATION INVENTORIES & 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. Each 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: **North Side WRP – Prairie Landscapes**
Locale: Skokie, IL
Date: September 23, 2005
By: Conservation Design Forum (K Johnson)

Section 1. Summary Tables

FLORISTIC QUALITY DATA						
27 NATIVE SPECIES	Native	27	43.5%	Adventive	35	56.5%
62 Total Species	Tree	0	0.0%	Tree	2	3.2%
2.4 NATIVE MEAN C	Shrub	0	0.0%	Shrub	0	0.0%
1.0 W/Adventives	W-Vine	0	0.0%	W-Vine	0	0.0%
12.5 NATIVE FQI	H-Vine	0	0.0%	H-Vine	0	0.0%
8.3 W/Adventives	P-Forb	15	24.2%	P-Forb	10	16.1%
1.8 NATIVE MEAN W	B-Forb	2	3.2%	B-Forb	6	9.7%
2.2 W/Adventives	A-Forb	3	4.8%	A-Forb	10	16.1%
AVG: Fac. Upland (+)	P-Grass	5	8.1%	P-Grass	5	8.1%
	A-Grass	1	1.6%	A-Grass	2	3.2%
	P-Sedge	1	1.6%	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
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
ASTSIS	3	Aster simplex	-5	OBL	Nt P-Forb	PANICLED ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BARVUL	0	BARBAREA VULGARIS	0	FAC	Ad B-Forb	YELLOW ROCKET
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
BRANIG	0	BRASSICA NIGRA	5	UPL	Ad A-Forb	BLACK MUSTARD
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
CICINT	0	CICHORIUM INTYBUS	5	UPL	Ad P-Forb	CHICORY
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
CORLAN	5	Coreopsis lanceolata	3	FACU	Nt P-Forb	SAND COREOPSIS
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
DIGISC	0	DIGITARIA ISCHAEMUM	3	FACU	Ad A-Grass	SMOOTH CRAB GRASS
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERIANS	0	Erigeron annuus	1	FAC-	Nt B-Forb	ANNUAL FLEABANE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt A-Forb	HORSEWEED
EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt P-Forb	TALL BONESET
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
EUPSUP	0	Euphorbia supina	4	FACU-	Nt A-Forb	SPOTTED CREEPING SPURGE
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
HIBTRI	0	HIBISCUS TRIONUM	5	UPL	Ad A-Forb	FLOWER-OF-AN-HOUR
HYPPER	0	HYPERICUM PERFORATUM	5	UPL	Ad P-Forb	COMMON ST. JOHN'S WORT
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad B-Forb	PRICKLY LETTUCE
LEPCAM	0	LEPIDIUM CAMPESTRE	5	UPL	Ad B-Forb	FIELD CRESS
MEDLUP	0	MEDICAGO LUPULINA	1	FAC-	Ad A-Forb	BLACK MEDICK
MELALB	0	MELILOTUS ALBA	3	FACU	Ad B-Forb	WHITE SWEET CLOVER
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
MORALB	0	MORUS ALBA	0	FAC	Ad Tree	WHITE MULBERRY
OENBIE	0	Oenothera biennis	3	FACU	Nt B-Forb	COMMON EVENING PRIMROSE
OXASTR	0	Oxalis stricta	5	UPL	Nt P-Forb	COMMON WOOD SORREL
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PHLPRA	0	PHLEUM PRATENSE	3	FACU	Ad P-Grass	TIMOTHY
PLALAN	0	PLANTAGO LANCEOLATA	0	FAC	Ad P-Forb	ENGLISH PLANTAIN

PLAMAJ	0	PLANTAGO MAJOR	-1	FAC+	Ad P-Forb	COMMON PLANTAIN
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POLAVI	0	POLYGONUM AVICULARE	1	FAC-	Ad A-Forb	COMMON KNOTWEED
POLCON	0	POLYGONUM CONVOLVULUS	1	FAC-	Ad A-Forb	BLACK BINDWEED
POROLE	0	PORTULACA OLERACEA	1	FAC-	Ad A-Forb	PURSLANE
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt P-Forb	BLACK-EYED SUSAN
RUMCRI	0	RUMEX CRISPUS	-1	FAC+	Ad P-Forb	CURLY DOCK
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad A-Grass	YELLOW FOXTAIL
SILINI	5	Silphium integrifolium	5	UPL	Nt P-Forb	ROSIN WEED
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLGRN	3	Solidago graminifolia nuttallii	0	[FAC]	Nt P-Forb	HAIRY GRASS-LEAVED GOLDENROD
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad A-Forb	STORE-FRONT SOW THISTLE
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
THLARV	0	THLASPI ARVENSE	5	UPL	Ad A-Forb	PENNY CRESS
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

Site: **Lemont WRP – Prairie Landscapes**
Locale: Lemont, IL
Date: September 22, 2005
By: Conservation Design Forum (K Johnson)

Section 1. Summary Tables

FLORISTIC QUALITY DATA		Native			Adventive		
57 NATIVE SPECIES							
107 Total Species	Tree	4	3.7%		Tree	4	3.7%
2.1 NATIVE MEAN C	Shrub	2	1.9%		Shrub	2	1.9%
1.1 W/Adventives	W-Vine	0	0.0%		W-Vine	1	0.9%
15.9 NATIVE FQI	H-Vine	1	0.9%		H-Vine	0	0.0%
11.6 W/Adventives	P-Forb	26	24.3%		P-Forb	10	9.3%
1.5 NATIVE MEAN W	B-Forb	4	3.7%		B-Forb	13	12.1%
2.1 W/Adventives	A-Forb	12	11.2%		A-Forb	12	11.2%
AVG: Fac. Upland (+)	P-Grass	4	3.7%		P-Grass	5	4.7%
	A-Grass	3	2.8%		A-Grass	3	2.8%
	P-Sedge	1	0.9%		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
AILALT	0	AILANTHUS ALTISSIMA	5	UPL	Ad Tree	TREE OF HEAVEN
ALLPET	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
AMAHYB	0	Amaranthus hybridus	5	UPL	Nt A-Forb	GREEN AMARANTH
AMAPOW	0	AMARANTHUS POWELLII	5	UPL	Ad A-Forb	TALL AMARANTH
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ARCMIN	0	ARCTIUM MINUS	5	UPL	Ad B-Forb	COMMON BURDOCK
ARIOLI	0	Aristida oligantha	5	UPL	Nt A-Grass	PLAINS THREE-AWN GRASS
ARTVUL	0	ARTEMISIA VULGARIS	5	UPL	Ad P-Forb	MUGWORT
ASCSYR	0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
ASTERI	5	Aster ericoides	4	FACU-	Nt P-Forb	HEATH ASTER
ASTLAE	9	Aster laevis	5	UPL	Nt P-Forb	SMOOTH BLUE 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
ASTSAS	5	Aster sagittifolius	5	UPL	Nt P-Forb	ARROW-LEAVED ASTER
ASTSAD	2	Aster sagittifolius drummondii	3	[FACU]	Nt P-Forb	DRUMMOND'S ASTER
ASTSIS	3	Aster simplex	-5	OBL	Nt P-Forb	PANICLED ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BARVUL	0	BARBAREA VULGARIS	0	FAC	Ad B-Forb	YELLOW ROCKET
BIDPOL	3	Bidens polylepis	-3	FACW	Nt A-Forb	BUR MARIGOLD
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
BROTEC	0	BROMUS TECTORUM	5	UPL	Ad A-Grass	DOWNY BROME
CARNUT	0	CARDUUS NUTANS	5	UPL	Ad B-Forb	MUSK THISTLE
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
CORLAN	5	Coreopsis lanceolata	3	FACU	Nt P-Forb	SAND COREOPSIS
CYPESC	0	Cyperus esculentus	-1	[FAC+]	Nt P-Sedge	FIELD NUT SEDGE
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
DIGSAS	0	DIGITARIA SANGUINALIS	3	FACU	Ad A-Grass	HAIRY CRAB GRASS
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
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERIANS	0	Erigeron annuus	1	FAC-	Nt B-Forb	ANNUAL FLEABANE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt A-Forb	HORSEWEED

EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt P-Forb	TALL BONESET
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
EUPSUP	0	Euphorbia supina	4	FACU-	Nt A-Forb	SPOTTED CREEPING SPURGE
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
GAUBIP	2	Gaura biennis pitcheri	4	FACU-	Nt B-Forb	COMMON GAURA
HELANN	0	HELIANTHUS ANNUUS	1	FAC-	Ad A-Forb	GARDEN SUNFLOWER
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
LACCAN	2	Lactuca canadensis	2	FACU+	Nt B-Forb	WILD LETTUCE
LACSAL	0	LACTUCA SALIGNA	3	FACU	Ad B-Forb	WILLOW LETTUCE
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad B-Forb	PRICKLY LETTUCE
LEOCAR	0	LEONURUS CARDIACA	5	UPL	Ad P-Forb	MOTHERWORT
LEPCAM	0	LEPIDIUM CAMPESTRE	5	UPL	Ad B-Forb	FIELD CRESS
LEPVIR	0	Lepidium virginicum	4	FACU-	Nt A-Forb	COMMON PEPPERCRESS
LONMAA	0	LONICERA MAACKII	5	UPL	Ad Shrub	AMUR HONEYSUCKLE
MALNEG	0	MALVA NEGLECTA	5	UPL	Ad B-Forb	COMMON MALLOW
MEDLUP	0	MEDICAGO LUPULINA	1	FAC-	Ad A-Forb	BLACK MEDICK
MEDSAT	0	MEDICAGO SATIVA	5	UPL	Ad P-Forb	ALFALFA
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
OXASTR	0	Oxalis stricta	5	UPL	Nt P-Forb	COMMON WOOD SORREL
PANCAP	1	Panicum capillare	0	FAC	Nt A-Grass	OLD WITCH GRASS
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PHYSUB	0	Physalis subglabrata	5	UPL	Nt P-Forb	TALL GROUND CHERRY
PHYAME	1	Phytolacca americana	1	FAC-	Nt P-Forb	POKEWEED
PLAMAJ	0	PLANTAGO MAJOR	-1	FAC+	Ad P-Forb	COMMON PLANTAIN
PLARUG	0	Plantago rugelii	0	FAC	Nt A-Forb	RED-STALKED PLANTAIN
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POLAVI	0	POLYGONUM AVICULARE	1	FAC-	Ad A-Forb	COMMON KNOTWEED
POLCON	0	POLYGONUM CONVOLVULUS	1	FAC-	Ad A-Forb	BLACK BINDWEED
POLLAP	0	Polygonum lapathifolium	-4	FACW+	Nt A-Forb	HEARTSEASE
POLPEN	0	Polygonum pensylvanicum	-4	FACW+	Nt A-Forb	PINKWEED
POLPUN	6	Polygonum punctatum	-5	OBL	Nt A-Forb	SMARTWEED
POLSCN	1	Polygonum scandens	0	FAC	Nt H-Vine	CLIMBING FALSE BUCKWHEAT
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
POTNOR	0	Potentilla norvegica	0	FAC	Nt A-Forb	NORWAY CINQUEFOIL
PRUSER	1	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
PRUVIR	3	Prunus virginiana	3	[FACU]	Nt Shrub	CHOKE CHERRY
PYCVIR	5	Pycnanthemum virginianum	-4	FACW+	Nt P-Forb	COMMON MOUNTAIN MINT
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
ROBPSE	0	ROBINIA PSEUDOACACIA	4	FACU-	Ad Tree	BLACK LOCUST
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt P-Forb	BLACK-EYED SUSAN
RUMCRI	0	RUMEX CRISPUS	-1	FAC+	Ad P-Forb	CURLY DOCK
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad A-Grass	YELLOW FOXTAIL
SILINI	5	Silphium integrifolium	5	UPL	Nt P-Forb	ROSIN WEED
SOLAME	0	Solanum americanum	4	FACU-	Nt A-Forb	BLACK NIGHTSHADE
SOLDUL	0	SOLANUM DULCAMARA	0	FAC	Ad W-Vine	BITTERSWEET NIGHTSHADE
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLCAN	1	Solidago canadensis	3	FACU	Nt P-Forb	CANADA GOLDENROD
SOLGRN	3	Solidago graminifolia nuttallii	0	[FAC]	Nt P-Forb	HAIRY GRASS-LEAVED GOLDENROD
SOLSEM	0	SOLIDAGO SEMPERVIRENS	3	[FACU]	Ad P-Forb	SEASIDE GOLDENROD
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad A-Forb	STORE-FRONT SOW THISTLE
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
SUADEP	0	SUAEDA DEPRESSA	-3	FACW	Ad A-Forb	SEA BLITE
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
THLARV	0	THLASPI ARVENSE	5	UPL	Ad A-Forb	PENNY CRESS
ULMAME	3	Ulmus americana	-2	FACW-	Nt Tree	AMERICAN ELM
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
VIOSOR	3	Viola sororia	1	FAC-	Nt P-Forb	COMMON BLUE VIOLET

Site: **LASMA Berm – Prairie Landscape**
Locale: Willow Springs, IL
Date: September 22, 2005
By: Conservation Design Forum (K Johnson)

Section 1. Summary Tables

FLORISTIC QUALITY DATA						
30 NATIVE SPECIES	Native	30	53.6%	Adventive	26	46.4%
56 Total Species	Tree	5	8.9%	Tree	0	0.0%
2.0 NATIVE MEAN C	Shrub	0	0.0%	Shrub	1	1.8%
1.1 W/Adventives	W-Vine	0	0.0%	W-Vine	0	0.0%
11.1 NATIVE FQI	H-Vine	0	0.0%	H-Vine	0	0.0%
8.2 W/Adventives	P-Forb	14	25.0%	P-Forb	3	5.4%
1.1 NATIVE MEAN W	B-Forb	0	0.0%	B-Forb	6	10.7%
1.7 W/Adventives	A-Forb	4	7.1%	A-Forb	12	21.4%
AVG: Faculative (-)	P-Grass	5	8.9%	P-Grass	1	1.8%
	A-Grass	2	3.6%	A-Grass	3	5.4%
	P-Sedge	0	0.0%	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
ACESAI	0	Acer saccharinum	-3	FACW	Nt Tree	SILVER MAPLE
ACNTAM	0	ACNIDA TAMARISCINA	-3	FACW	Ad A-Forb	WESTERN WATER HEMP
AGRALA	0	AGROSTIS ALBA	-3	FACW	Ad P-Grass	REDTOP
AMAALB	0	AMARANTHUS ALBUS	3	FACU	Ad A-Forb	TUMBLEWEED
AMARET	0	AMARANTHUS RETROFLEXUS	2	FACU+	Ad A-Forb	ROUGH AMARANTH
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ARCMIN	0	ARCTIUM MINUS	5	UPL	Ad B-Forb	COMMON BURDOCK
ASCSYR	0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
ASTLAT	4	Aster lateriflorus	-2	FACW-	Nt P-Forb	SIDE-FLOWERING 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
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
BRANIG	0	BRASSICA NIGRA	5	UPL	Ad A-Forb	BLACK MUSTARD
CARNUT	0	CARDUUS NUTANS	5	UPL	Ad B-Forb	MUSK THISTLE
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
COSBIP	0	COSMOS BIPINNATUS	-2	FACW-	Ad A-Forb	COMMON COSMOS
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt A-Forb	HORSEWEED
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt Tree	GREEN ASH
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
KOCSCO	0	KOCHIA SCOPARIA	4	FACU-	Ad A-Forb	BURNING BUSH
LACSAL	0	LACTUCA SALIGNA	3	FACU	Ad B-Forb	WILLOW LETTUCE
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad B-Forb	PRICKLY LETTUCE
LOLMUL	0	LOLIUM MULTIFLORUM	5	UPL	Ad A-Grass	ITALIAN RYE GRASS
MALNEG	0	MALVA NEGLECTA	5	UPL	Ad B-Forb	COMMON MALLOW
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
PANDII	0	Panicum dichotomiflorum	-2	FACW-	Nt A-Grass	KNEE GRASS
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PHYSUB	0	Physalis subglabrata	5	UPL	Nt P-Forb	TALL GROUND CHERRY
PHYAME	1	Phytolacca americana	1	FAC-	Nt P-Forb	POKEWEED
POLLAP	0	Polygonum lapathifolium	-4	FACW+	Nt A-Forb	HEARTSEASE
POLPER	0	POLYGONUM PERSICARIA	1	[FAC-]	Ad A-Forb	LADY'S THUMB
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER

RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt P-Forb	BLACK-EYED SUSAN
RUMCRI	0	RUMEX CRISPUS	-1	FAC+	Ad P-Forb	CURLY DOCK
SETVER	0	SETARIA VERTICILLATA	3	FACU	Ad A-Grass	BRISTLY FOXTAIL
SETVIM	0	SETARIA VIRIDIS MAJOR	5	UPL	Ad A-Grass	GIANT GREEN FOXTAIL
SOLAME	0	Solanum americanum	4	FACU-	Nt A-Forb	BLACK NIGHTSHADE
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLCAN	1	Solidago canadensis	3	FACU	Nt P-Forb	CANADA GOLDENROD
SONASP	0	SONCHUS ASPER	3	[FACU]	Ad A-Forb	SPINY SOW THISTLE
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad A-Forb	STORE-FRONT SOW THISTLE
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
ULMAME	3	Ulmus americana	-2	FACW-	Nt Tree	AMERICAN ELM

APPENDIX III

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, calculated in the same manner described above. 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: **North Side WRP – Transect 1**
Locale: Skokie, IL
Date: September 23, 2005
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	1.0	1.4	3	8	0.5	1.4
2	1.7	0.6	2.9	1.8	0.0	1.5	3	8	1.5	2.0
3	2.0	0.6	2.8	1.5	3.5	3.0	2	7	2.1	2.4
4	1.3	0.6	2.3	1.5	2.7	2.6	3	7	2.2	2.2
5	2.0	1.3	4.0	3.3	0.5	1.2	4	6	1.4	1.5
6	1.8	0.9	4.0	2.8	1.0	0.8	5	10	2.2	1.7
7	5.0	2.0	10.0	6.3	5.0	3.2	4	10	2.9	2.2
8	2.3	1.5	4.5	3.7	2.8	2.5	4	6	3.2	2.4
9	3.3	1.4	6.5	4.3	1.8	1.6	4	9	2.3	2.2
10	0.5	0.1	0.7	0.4	2.5	2.4	2	7	2.1	2.0
AVG	2.0	0.9	3.8	2.6	2.1	2.0	3.4	7.8		
STD	1.4	0.6	2.9	1.9	1.5	0.8	1.0	1.5		

SECTION 2

C	NUMBER	
0	5	
1	2	
2	0	0 to 3
3	1	53.3%
4	3	
5	3	
6	0	4 to 7
7	0	40.0%
8	1	
9	0	8 to 10
10	0	6.7%

15	NATIVE SPECIES
31	TOTAL SPECIES
2.7	NATIVE MEAN C
1.3	W/Adventives
10.3	NATIVE FQI
7.2	W/Adventives
2.2	NATIVE MEAN W
2.4	W/Adventives

Native	15	48.4%	Adventive	16	51.6%
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	8	25.8%	P-Forb	3	9.7%
B-Forb	1	3.2%	B-Forb	1	3.2%
A-Forb	2	6.5%	A-Forb	6	19.4%
P-Grass	3	9.7%	P-Grass	4	12.9%
A-Grass	1	3.2%	A-Grass	2	6.5%
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	23	26	29.5	29.5	29.5
Ad P-Forb	13	14	16.7	15.9	16.3
Ad A-Forb	12	13	15.4	14.8	15.1
Ad P-Grass	10	11	12.8	12.5	12.7
Ad A-Grass	7	9	9.0	10.2	9.6
Nt A-Grass	4	6	5.1	6.8	6.0
Nt P-Grass	3	3	3.8	3.4	3.6
Nt A-Forb	3	3	3.8	3.4	3.6
Ad B-Forb	2	2	2.6	2.3	2.4
Nt B-Forb	1	1	1.3	1.1	1.2

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Aster pilosus	0	FACU+	6	8	7.3	8.2	7.7
SOIL	0		4	10	4.9	10.2	7.5
Ratibida pinnata	4	UPL	6	7	7.3	7.1	7.2
TARAXACUM OFFICINALE	0	FACU	6	6	7.3	6.1	6.7
SETARIA GLAUCA	0	FAC	5	7	6.1	7.1	6.6
ATRIPLEX PATULA	0	FACW-	5	5	6.1	5.1	5.6
POA PRATENSIS	0	FAC-	5	5	6.1	5.1	5.6
Echinochloa crusgalli	0	FACW	4	6	4.9	6.1	5.5
TRIFOLIUM HYBRIDUM	0	FAC-	4	4	4.9	4.1	4.5
CIRSIUM ARVENSE	0	UPL	3	4	3.7	4.1	3.9
HIBISCUS TRIONUM	0	UPL	3	4	3.7	4.1	3.9
AGROPYRON REPENS	0	FACU	3	3	3.7	3.1	3.4
Aster novae-angliae	4	FACW	3	3	3.7	3.1	3.4
CIRSIUM VULGARE	0	FACU-	2	2	2.4	2.0	2.2
DIGITARIA ISCHAEMUM	0	FACU	2	2	2.4	2.0	2.2
Echinacea purpurea	3	UPL	2	2	2.4	2.0	2.2
Euphorbia supina	0	FACU-	2	2	2.4	2.0	2.2
Rudbeckia hirta	1	FACU	2	2	2.4	2.0	2.2
Solidago altissima	1	FACU	2	2	2.4	2.0	2.2
FESTUCA ELATIOR	0	FACU+	1	2	1.2	2.0	1.6
Ambrosia artemisiifolia elatior	0	FACU	1	1	1.2	1.0	1.1
Bouteloua curtipendula	8	UPL	1	1	1.2	1.0	1.1
BRASSICA NIGRA	0	UPL	1	1	1.2	1.0	1.1
Coreopsis lanceolata	5	FACU	1	1	1.2	1.0	1.1
DACTYLIS GLOMERATA	0	FACU	1	1	1.2	1.0	1.1
Elymus canadensis	4	FAC-	1	1	1.2	1.0	1.1
Erigeron annuus	0	FAC-	1	1	1.2	1.0	1.1
Heliopsis helianthoides	5	UPL	1	1	1.2	1.0	1.1
Panicum virgatum	5	FAC+	1	1	1.2	1.0	1.1
POLYGONUM AVICULARE	0	FAC-	1	1	1.2	1.0	1.1
PORTULACA OLERACEA	0	FAC-	1	1	1.2	1.0	1.1
SONCHUS OLERACEUS	0	[UPL]	1	1	1.2	1.0	1.1
			82	98			

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
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA

BRANIG	0	BRASSICA NIGRA	5	UPL	Ad A-Forb	BLACK MUSTARD
CIRARV	0	CIRSIUM ARVENSE	5	UPL	Ad P-Forb	FIELD THISTLE
CIRVUL	0	CIRSIUM VULGARE	4	FACU-	Ad B-Forb	BULL THISTLE
CORLAN	5	Coreopsis lanceolata	3	FACU	Nt P-Forb	SAND COREOPSIS
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad P-Grass	ORCHARD GRASS
DIGISC	0	DIGITARIA ISCHAEMUM	3	FACU	Ad A-Grass	SMOOTH CRAB GRASS
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERIANS	0	Erigeron annuus	1	FAC-	Nt B-Forb	ANNUAL FLEABANE
EUPSUP	0	Euphorbia supina	4	FACU-	Nt A-Forb	SPOTTED CREEPING SPURGE
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad P-Grass	TALL FESCUE
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
HIBTRI	0	HIBISCUS TRIONUM	5	UPL	Ad A-Forb	FLOWER-OF-AN-HOUR
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POLAVI	0	POLYGONUM AVICULARE	1	FAC-	Ad A-Forb	COMMON KNOTWEED
POROLE	0	PORTULACA OLERACEA	1	FAC-	Ad A-Forb	PURSLANE
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt P-Forb	BLACK-EYED SUSAN
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad A-Grass	YELLOW FOXTAIL
SOIL	0	SOIL	0	nil	nil	SOIL
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad A-Forb	STORE-FRONT SOW THISTLE
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
TRIHYB	0	TRIFOLIUM HYBRIDUM	1	FAC-	Ad P-Forb	ALSIKE CLOVER

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
ASTPIL	2
ATRPAT	1
ECHCRU	2
EUPSUP	1
HIBTRI	1
POAPRA	1
POROLE	1
TAROFF	1

>

QUAD	2
ACRONYM	COVER
ATRPAT	1
BRANIG	1
DIGISC	1
ECHCRU	2
EUPSUP	1
HIBTRI	2
PANVIR	1
POLAVI	1

>

QUAD	3
ACRONYM	COVER
ASTPIL	1
DACGLO	1
FESELA	2
POAPRA	1
RATPIN	1
SOIL	3
SONOLE	1
TAROFF	1

>

QUAD	4
ACRONYM	COVER
ASTPIL	1
ATRPAT	1
CIRVUL	1
ERIANS	1
HIBTRI	1
RATPIN	1
SOIL	3
TAROFF	1

>

QUAD	5
ACRONYM	COVER
ASTNOV	1
CIRARV	1
ECHCRU	1
ECHPUR	1
SETGLA	2
SOIL	2
SOLALT	1

>

QUAD	6
ACRONYM	COVER
AGRREP	1
AMBARE	1
ASTNOV	1
ATRPAT	1
ECHCRU	1
POAPRA	1
RATPIN	1
RUDHIR	1
SETGLA	1
TRIHYB	1

>

QUAD	7
ACRONYM	COVER
AGRREP	1
BOUCUR	1
CIRVUL	1
DIGISC	1
ECHPUR	1
HELHEL	1
POAPRA	1
RATPIN	2
SETGLA	1
TRIHYB	1

>

QUAD	8
ACRONYM	COVER
ASTPIL	1
ELYCAN	1
POAPRA	1
RATPIN	1
SOIL	2
SOLALT	1
TAROFF	1

>

QUAD	9
ACRONYM	COVER
ASTNOV	1
ASTPIL	2
ATRPAT	1
CIRARV	1
CORLAN	1
RATPIN	1
SETGLA	1
TAROFF	1
TRIHYB	1

>

QUAD	10
ACRONYM	COVER
AGRREP	1
ASTPIL	1
CIRARV	2
RUDHIR	1
SETGLA	2
TAROFF	1
TRIHYB	1

Site: **North Side WRP – Transect 2**
Locale: Skokie, IL
Date: September 23, 2005
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	3.5	2.3	7.0	5.7	1.0	1.0	4	6	0.5	1.2
2	2.5	0.7	3.5	1.9	0.0	1.4	2	7	1.3	1.4
3	1.0	0.2	1.0	0.4	3.0	1.7	1	6	1.8	2.1
4	0.5	0.1	0.7	0.4	2.5	3.3	2	8	1.7	2.2
5	2.7	0.7	4.6	2.3	-0.3	1.6	3	12	1.4	1.8
6	0.0	0.0	0.0	0.0	2.0	0.6	3	9	1.4	1.4
7	1.0	0.6	2.0	1.5	2.5	2.0	4	7	2.1	1.6
8	3.6	1.8	8.0	5.7	1.8	2.2	5	10	2.6	2.3
9	2.8	1.3	6.3	4.2	3.4	2.7	5	11	3.0	2.5
10	3.7	1.9	9.8	6.9	3.9	2.5	7	14	3.6	2.6
AVG	2.1	1.0	4.3	2.9	2.0	1.9	3.6	9.0		
STD	1.4	0.8	3.4	2.5	1.4	0.8	1.8	2.7		

SECTION 2

C	NUMBER	
0	5	
1	2	
2	0	0 to 3
3	2	56.3%
4	3	
5	3	
6	0	4 to 7
7	0	37.5%
8	1	
9	0	8 to 10
10	0	6.3%

16	NATIVE SPECIES
36	TOTAL SPECIES
2.7	NATIVE MEAN C
1.2	W/Adventives
10.8	NATIVE FQI
7.2	W/Adventives
2.3	NATIVE MEAN W
2.2	W/Adventives

Native	16	44.4%	Adventive	20	55.6%
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	10	27.8%	P-Forb	7	19.4%
B-Forb	0	0.0%	B-Forb	3	8.3%
A-Forb	3	8.3%	A-Forb	5	13.9%
P-Grass	3	8.3%	P-Grass	4	11.1%
A-Grass	0	0.0%	A-Grass	1	2.8%
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
Nt P-Forb	24	28	26.7	23.7	25.2
Ad P-Grass	14	27	15.6	22.9	19.2
Ad A-Forb	16	20	17.8	16.9	17.4
Ad P-Forb	16	18	17.8	15.3	16.5
Nt P-Grass	7	8	7.8	6.8	7.3
Nt A-Forb	5	8	5.6	6.8	6.2
Ad B-Forb	6	6	6.7	5.1	5.9
Ad A-Grass	2	3	2.2	2.5	2.4

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
POA PRATENSIS	0	FAC-	5	13	5.6	11.0	8.3
MEDICAGO LUPULINA	0	FAC-	6	9	6.7	7.6	7.1
AGROPYRON REPENS	0	FACU	5	10	5.6	8.5	7.0
Solidago altissima	1	FACU	4	7	4.4	5.9	5.2
CONVOLVULUS ARVENSIS	0	UPL	4	5	4.4	4.2	4.3
Elymus canadensis	4	FAC-	4	5	4.4	4.2	4.3
Ambrosia artemisiifolia elatior	0	FACU	3	6	3.3	5.1	4.2
LACTUCA SERRIOLA	0	FAC	4	4	4.4	3.4	3.9
POLYGONUM AVICULARE	0	FAC-	4	4	4.4	3.4	3.9
TARAXACUM OFFICINALE	0	FACU	4	4	4.4	3.4	3.9
Aster novae-angliae	4	FACW	3	4	3.3	3.4	3.4
ATRIPLEX PATULA	0	FACW-	3	4	3.3	3.4	3.4
Aster pilosus	0	FACU+	3	3	3.3	2.5	2.9
Ratibida pinnata	4	UPL	3	3	3.3	2.5	2.9
Rudbeckia hirta	1	FACU	3	3	3.3	2.5	2.9
PLANTAGO MAJOR	0	FAC+	2	3	2.2	2.5	2.4
SETARIA GLAUCA	0	FAC	2	3	2.2	2.5	2.4
CHENOPODIUM ALBUM	0	FAC-	2	2	2.2	1.7	2.0
CIRSIUM ARVENSE	0	UPL	2	2	2.2	1.7	2.0
Coreopsis lanceolata	5	FACU	2	2	2.2	1.7	2.0
DACTYLIS GLOMERATA	0	FACU	2	2	2.2	1.7	2.0
FESTUCA ELATIOR	0	FACU+	2	2	2.2	1.7	2.0
Heliopsis helianthoides	5	UPL	2	2	2.2	1.7	2.0
Oxalis stricta	0	UPL	2	2	2.2	1.7	2.0
Panicum virgatum	5	FAC+	2	2	2.2	1.7	2.0
TRIFOLIUM HYBRIDUM	0	FAC-	2	2	2.2	1.7	2.0
Aster simplex	3	OBL	1	1	1.1	0.8	1.0
Bouteloua curtipendula	8	UPL	1	1	1.1	0.8	1.0
CIRSIUM VULGARE	0	FACU-	1	1	1.1	0.8	1.0
DAUCUS CAROTA	0	UPL	1	1	1.1	0.8	1.0
Echinacea purpurea	3	UPL	1	1	1.1	0.8	1.0
Erigeron canadensis	0	FAC-	1	1	1.1	0.8	1.0
Lepidium virginicum	0	FACU-	1	1	1.1	0.8	1.0
PLANTAGO LANCEOLATA	0	FAC	1	1	1.1	0.8	1.0
SONCHUS OLERACEUS	0	[UPL]	1	1	1.1	0.8	1.0
TRIFOLIUM PRATENSE	0	UPL	1	1	1.1	0.8	1.0
			90	118			

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
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER

ASTSIS	3	Aster simplex	-5	OBL	Nt	P-Forb	PANICLED ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad	A-Forb	COMMON ORACH
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt	P-Grass	SIDE-OATS GRAMA
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
CORLAN	5	Coreopsis lanceolata	3	FACU	Nt	P-Forb	SAND COREOPSIS
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad	P-Grass	ORCHARD GRASS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad	B-Forb	QUEEN ANNE'S LACE
ECHPUR	3	Echinacea purpurea	5	UPL	Nt	P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ELYCAN	4	Elymus canadensis	1	FAC-	Nt	P-Grass	CANADA WILD RYE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt	A-Forb	HORSEWEED
FESELA	0	FESTUCA ELATIOR	2	FACU+	Ad	P-Grass	TALL FESCUE
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt	P-Forb	FALSE SUNFLOWER
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad	B-Forb	PRICKLY LETTUCE
LEPVIR	0	Lepidium virginicum	4	FACU-	Nt	A-Forb	COMMON PEPPERCRESS
MEDLUP	0	MEDICAGO LUPULINA	1	FAC-	Ad	A-Forb	BLACK MEDICK
OXASTR	0	Oxalis stricta	5	UPL	Nt	P-Forb	COMMON WOOD SORREL
PANVIR	5	Panicum virgatum	-1	FAC+	Nt	P-Grass	SWITCH GRASS
PLALAN	0	PLANTAGO LANCEOLATA	0	FAC	Ad	P-Forb	ENGLISH PLANTAIN
PLAMAJ	0	PLANTAGO MAJOR	-1	FAC+	Ad	P-Forb	COMMON PLANTAIN
POAPRA	0	POA PRATENSIS	1	FAC-	Ad	P-Grass	KENTUCKY BLUE GRASS
POLAVI	0	POLYGONUM AVICULARE	1	FAC-	Ad	A-Forb	COMMON KNOTWEED
RATPIN	4	Ratibida pinnata	5	UPL	Nt	P-Forb	YELLOW CONEFLOWER
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt	P-Forb	BLACK-EYED SUSAN
SETGLA	0	SETARIA GLAUCA	0	FAC	Ad	A-Grass	YELLOW FOXTAIL
SOLALT	1	Solidago altissima	3	FACU	Nt	P-Forb	TALL GOLDENROD
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad	A-Forb	STORE-FRONT SOW THISTLE
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad	P-Forb	COMMON DANDELION
TRIHYB	0	TRIFOLIUM HYBRIDUM	1	FAC-	Ad	P-Forb	ALSIKE CLOVER
TRIPRA	0	TRIFOLIUM PRATENSE	5	UPL	Ad	P-Forb	RED CLOVER

TRANSECT STRING

ACRONYM	COVER
ASTNOV	2
MEDLUP	1
PANVIR	1
POAPRA	2
RATPIN	1
RUDHIR	1

>

QUAD 2

ACRONYM	COVER
ASTNOV	1
DACGLO	1
FESELA	1
POAPRA	4
SOLALT	2
TAROFF	1
TRIHYB	1

>

QUAD 3

ACRONYM	COVER
DACGLO	1
FESELA	1
PLALAN	1
POAPRA	2
POLAVI	1
SOLALT	2

>

QUAD 4

ACRONYM	COVER
AGRREP	1
ASTPIL	1
CIRVUL	1
CONARV	1
DAUCAR	1
MEDLUP	2
RUDHIR	1
TAROFF	1

>

QUAD 5

ACRONYM	COVER
AGRREP	2
ASTSIS	1
CHEALB	1
CIRARV	1
CONARV	1
ELYCAN	1
LACSER	1
MEDLUP	1
PLAMAJ	1
POAPRA	3
SOLALT	2
SONOLE	1

>

QUAD 6

ACRONYM	COVER
AMBARE	2
ASTPIL	1
ATRPAT	1
ERICAN	1
LACSER	1
MEDLUP	2
PLAMAJ	2
POLAVI	1
SETGLA	2

>

QUAD 7

ACRONYM	COVER
AGRREP	3
AMBARE	2
ASTPIL	1
CHEALB	1
ELYCAN	1
LACSER	1
LEPVIR	1

>

QUAD 8

ACRONYM	COVER
AGRREP	2
ASTNOV	1
CONARV	1
ECHPUR	1
HELHEL	1
MEDLUP	2
PANVIR	1
POAPRA	2
RUDHIR	1
TAROFF	1

>

QUAD 9

ACRONYM	COVER
AGRREP	2
ATRPAT	2
CIRARV	1
CONARV	2
CORLAN	1
ELYCAN	1
OXASTR	1
POLAVI	1
RATPIN	1
SOLALT	1
TRIHYB	1

>

QUAD 10

ACRONYM	COVER
AMBARE	2
ATRPAT	1
BOUCUR	1
CORLAN	1
ELYCAN	2
HELHEL	1
LACSER	1
MEDLUP	1
OXASTR	1
POLAVI	1
RATPIN	1
SETGLA	1
TAROFF	1
TRIPRA	1

Site: **Lemont WRP – Transect 1**
Locale: Lemont, IL
Date: September 22, 2005
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	3.3	2.2	6.5	5.3	4.0	3.3	4	6	3.2	2.4
2	2.0	1.0	2.8	2.0	2.5	1.5	2	4	2.5	2.1
3	4.5	3.4	11.0	9.5	1.0	1.4	6	8	1.9	1.7
4	2.3	2.3	6.0	6.0	2.3	2.3	7	7	2.4	2.6
5	3.0	2.0	6.0	4.9	4.0	4.0	4	6	2.8	2.9
6	2.6	1.9	5.8	4.9	2.0	2.3	5	7	2.7	2.8
7	3.0	3.0	7.3	7.3	2.0	2.0	6	6	1.8	1.9
8	2.6	2.6	6.8	6.8	1.4	1.4	7	7	1.7	1.5
9	3.6	2.6	8.0	6.8	1.8	1.1	5	7	2.4	1.3
10	1.5	0.6	2.1	1.3	4.0	1.4	2	5	2.9	1.3
AVG	2.8	2.1	6.3	5.5	2.5	2.1	4.8	6.3		
STD	0.8	0.8	2.5	2.4	1.1	0.9	1.8	1.2		

SECTION 2

C	NUMBER	
0	7	
1	2	
2	0	0 to 3
3	1	62.5%
4	4	
5	1	
6	1	4 to 7
7	0	37.5%
8	0	
9	0	8 to 10
10	0	0.0%

16	NATIVE SPECIES
24	TOTAL SPECIES
2.0	NATIVE MEAN C
1.3	W/Adventives
8.0	NATIVE FQI
6.5	W/Adventives
1.8	NATIVE MEAN W
1.9	W/Adventives

Native	16	66.7%	Adventive	8	33.3%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	1	4.2%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	1	4.2%	H-Vine	0	0.0%
P-Forb	9	37.5%	P-Forb	2	8.3%
B-Forb	1	4.2%	B-Forb	3	12.5%
A-Forb	4	16.7%	A-Forb	2	8.3%
P-Grass	1	4.2%	P-Grass	0	0.0%
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	36	57	57.1	58.8	58.0
Ad A-Forb	7	13	11.1	13.4	12.3
Nt P-Grass	6	6	9.5	6.2	7.9
Ad B-Forb	4	9	6.3	9.3	7.8
Nt A-Forb	4	6	6.3	6.2	6.3
Ad P-Forb	3	3	4.8	3.1	3.9
Nt H-Vine	1	1	1.6	1.0	1.3
Nt B-Forb	1	1	1.6	1.0	1.3
Ad Shrub	1	1	1.6	1.0	1.3

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Monarda fistulosa	4	FACU	8	15	12.7	15.5	14.1
Heliopsis helianthoides	5	UPL	6	8	9.5	8.2	8.9
CHENOPODIUM ALBUM	0	FAC-	5	9	7.9	9.3	8.6
Aster novae-angliae	4	FACW	5	8	7.9	8.2	8.1
Elymus canadensis	4	FAC-	6	6	9.5	6.2	7.9
Solidago altissima	1	FACU	4	8	6.3	8.2	7.3
Ratibida pinnata	4	UPL	4	5	6.3	5.2	5.8
Aster pilosus	0	FACU+	3	6	4.8	6.2	5.5
LACTUCA SERRIOLA	0	FAC	2	6	3.2	6.2	4.7
Echinacea purpurea	3	UPL	3	3	4.8	3.1	3.9
ATRIPLEX PATULA	0	FACW-	2	4	3.2	4.1	3.6
Eupatorium altissimum	0	[FACU]	2	3	3.2	3.1	3.1
SOLIDAGO SEMPERVIRENS	0	[FACU]	2	2	3.2	2.1	2.6
Ambrosia artemisiifolia elatior	0	FACU	1	3	1.6	3.1	2.3
LACTUCA SALIGNA	0	FACU	1	2	1.6	2.1	1.8
CIRSIUM VULGARE	0	FACU-	1	1	1.6	1.0	1.3
Eupatorium serotinum	0	FAC+	1	1	1.6	1.0	1.3
LEONURUS CARDIACA	0	UPL	1	1	1.6	1.0	1.3
Lepidium virginicum	0	FACU-	1	1	1.6	1.0	1.3
Oenothera biennis	0	FACU	1	1	1.6	1.0	1.3
Polygonum punctatum	6	OBL	1	1	1.6	1.0	1.3
Polygonum scandens	1	FAC	1	1	1.6	1.0	1.3
Potentilla norvegica	0	FAC	1	1	1.6	1.0	1.3
RHAMNUS CATHARTICA	0	FACU	1	1	1.6	1.0	1.3
			63	97			

SECTION 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
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
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
CIRVUL	0	CIRSIUM VULGARE	4	FACU-	Ad B-Forb	BULL THISTLE
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
EUPALT	0	Eupatorium altissimum	3	[FACU]	Nt P-Forb	TALL BONESET
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
LACSAL	0	LACTUCA SALIGNA	3	FACU	Ad B-Forb	WILLOW LETTUCE
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad B-Forb	PRICKLY LETTUCE
LEOCAR	0	LEONURUS CARDIACA	5	UPL	Ad P-Forb	MOTHERWORT
LEPVIR	0	Lepidium virginicum	4	FACU-	Nt A-Forb	COMMON PEPPERCRESS
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
OENBIE	0	Oenothera biennis	3	FACU	Nt B-Forb	COMMON EVENING PRIMROSE
POLPUN	6	Polygonum punctatum	-5	OBL	Nt A-Forb	SMARTWEED

POLSCN	1	Polygonum scandens	0	FAC	Nt H-Vine	CLIMBING FALSE BUCKWHEAT
POTNOR	0	Potentilla norvegica	0	FAC	Nt A-Forb	NORWAY CINQUEFOIL
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLSEM	0	SOLIDAGO SEMPERVIRENS	3	[FACU]	Ad P-Forb	SEASIDE GOLDENROD

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
AMBARE	3
CHEALB	2
HELHEL	2
LACSAL	2
MONFIS	1
RATPIN	1

>

QUAD	2
ACRONYM	COVER
CHEALB	3
ELYCAN	1
LACSER	3
LEPVIR	1

>

QUAD	3
ACRONYM	COVER
ASTNOV	1
CHEALB	1
CIRVUL	1
ELYCAN	1
HELHEL	2
MONFIS	2
POLPUN	1
RATPIN	1

>

QUAD	4
ACRONYM	COVER
ASTPIL	3
ECHPUR	1
ELYCAN	1
MONFIS	2
POLSCN	1
POTNOR	1
RATPIN	2

>

QUAD	5
ACRONYM	COVER
ECHPUR	1
LEOCAR	1
MONFIS	2
RATPIN	1
SOLALT	2
SOLSEM	1

>

QUAD	6
ACRONYM	COVER
ASTNOV	2
ASTPIL	1
EUPALT	2
HELHEL	1
MONFIS	2
RHACAT	1
SOLSEM	1

>

QUAD	7
ACRONYM	COVER
ASTNOV	2
ELYCAN	1
EUPALT	1
HELHEL	1
MONFIS	3
SOLALT	1

>

QUAD	8
ACRONYM	COVER
ASTNOV	2
ASTPIL	2
ELYCAN	1
EUPSEM	1
HELHEL	1
MONFIS	2
SOLALT	2

>

QUAD	9
ACRONYM	COVER
ASTNOV	1
ATRPAT	1
CHEALB	2
ELYCAN	1
HELHEL	1
MONFIS	1
SOLALT	3

>

QUAD	10
ACRONYM	COVER
ATRPAT	3
CHEALB	1
ECHPUR	1
LACSER	3
OENBIE	1

Site: **Lemont WRP – Transect 2**
Locale: Lemont, IL
Date: September 22, 2005
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	2.6	2.6	5.8	5.8	2.8	2.8	5	5	2.8	2.7
2	2.8	1.8	6.3	4.9	2.8	2.6	5	8	2.0	2.3
3	1.8	1.0	4.0	3.0	0.4	1.6	5	9	2.2	2.4
4	3.0	2.1	6.7	5.7	3.4	3.0	5	7	1.8	2.1
5	2.9	2.3	8.1	7.3	1.8	1.8	8	10	2.7	2.7
6	1.3	0.8	2.5	2.0	3.0	3.3	4	6	2.1	2.0
7	3.0	1.5	6.0	4.2	1.5	1.0	4	8	2.7	2.1
8	2.7	0.8	4.6	2.5	3.7	2.1	3	10	2.2	1.4
9	2.4	1.5	5.4	4.2	1.4	1.1	5	8	2.2	1.5
10	1.7	1.0	2.9	2.2	1.7	1.2	3	5	1.5	1.2
AVG	2.4	1.5	5.2	4.2	2.2	2.1	4.7	7.6		
STD	0.6	0.6	1.7	1.7	1.0	0.8	1.4	1.8		

SECTION 2

C	NUMBER	
0	3	
1	3	
2	0	0 to 3
3	3	56.3%
4	4	
5	3	
6	0	4 to 7
7	0	43.8%
8	0	
9	0	8 to 10
10	0	0.0%

16	NATIVE SPECIES
29	TOTAL SPECIES
2.7	NATIVE MEAN C
1.5	W/Adventives
10.8	NATIVE FQI
8.0	W/Adventives
2.0	NATIVE MEAN W
2.1	W/Adventives

Native	16	55.2%	Adventive	13	44.8%
Tree	1	3.4%	Tree	1	3.4%
Shrub	0	0.0%	Shrub	1	3.4%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	12	41.4%	P-Forb	3	10.3%
B-Forb	0	0.0%	B-Forb	3	10.3%
A-Forb	1	3.4%	A-Forb	3	10.3%
P-Grass	2	6.9%	P-Grass	2	6.9%
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	41	58	53.9	59.2	56.6
Ad A-Forb	8	12	10.5	12.2	11.4
Ad P-Forb	8	8	10.5	8.2	9.3
Ad P-Grass	6	7	7.9	7.1	7.5
Ad B-Forb	5	5	6.6	5.1	5.8
Nt P-Grass	4	4	5.3	4.1	4.7
Nt A-Forb	1	1	1.3	1.0	1.2
Nt Tree	1	1	1.3	1.0	1.2
Ad Shrub	1	1	1.3	1.0	1.2
Ad Tree	1	1	1.3	1.0	1.2

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Ratibida pinnata	4	UPL	6	10	7.9	10.2	9.0
Eupatorium serotinum	0	FAC+	6	8	7.9	8.2	8.0
Monarda fistulosa	4	FACU	5	9	6.6	9.2	7.9
Aster pilosus	0	FACU+	5	7	6.6	7.1	6.9
ATRIPLEX PATULA	0	FACW-	4	7	5.3	7.1	6.2
TARAXACUM OFFICINALE	0	FACU	5	5	6.6	5.1	5.8
Solidago canadensis	1	FACU	4	5	5.3	5.1	5.2
Solidago altissima	1	FACU	3	5	3.9	5.1	4.5
POA PRATENSIS	0	FAC-	3	4	3.9	4.1	4.0
AGROPYRON REPENS	0	FACU	3	3	3.9	3.1	3.5
Aster novae-angliae	4	FACW	3	3	3.9	3.1	3.5
CHENOPODIUM ALBUM	0	FAC-	3	3	3.9	3.1	3.5
Echinacea purpurea	3	UPL	3	3	3.9	3.1	3.5
Elymus canadensis	4	FAC-	3	3	3.9	3.1	3.5
LACTUCA SERRIOLA	0	FAC	3	3	3.9	3.1	3.5
Aster ericoides	5	FACU-	2	3	2.6	3.1	2.8
Heliopsis helianthoides	5	UPL	2	3	2.6	3.1	2.8
CIRSIUM ARVENSE	0	UPL	2	2	2.6	2.0	2.3
SONCHUS OLERACEUS	0	[UPL]	1	2	1.3	2.0	1.7
Bidens polylepis	3	FACW	1	1	1.3	1.0	1.2
CIRSIUM VULGARE	0	FACU-	1	1	1.3	1.0	1.2
LACTUCA SALIGNA	0	FACU	1	1	1.3	1.0	1.2
MORUS ALBA	0	FAC	1	1	1.3	1.0	1.2
Oxalis stricta	0	UPL	1	1	1.3	1.0	1.2
RHAMNUS CATHARTICA	0	FACU	1	1	1.3	1.0	1.2
Rudbeckia hirta	1	FACU	1	1	1.3	1.0	1.2
SOLIDAGO SEMPERVIRENS	0	[FACU]	1	1	1.3	1.0	1.2
Sorghastrum nutans	5	FACU+	1	1	1.3	1.0	1.2
Ulmus americana	3	FACW-	1	1	1.3	1.0	1.2
			76	98			

SECTION 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
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
ATRPAT	0	ATRIPLEX PATULA	-2	FACW-	Ad A-Forb	COMMON ORACH
BIDPOL	3	Bidens polylepis	-3	FACW	Nt A-Forb	BUR MARIGOLD
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
ECHPUR	3	Echinacea purpurea	5	UPL	Nt P-Forb	BROAD-LEAVED PURPLE CONEFLOWER

ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
EUPSEM	0	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
LACSAL	0	LACTUCA SALIGNA	3	FACU	Ad B-Forb	WILLOW LETTUCE
LACSER	0	LACTUCA SERRIOLA	0	FAC	Ad B-Forb	PRICKLY LETTUCE
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
MORALB	0	MORUS ALBA	0	FAC	Ad Tree	WHITE MULBERRY
OXASTR	0	Oxalis stricta	5	UPL	Nt P-Forb	COMMON WOOD SORREL
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
RUDHIR	1	Rudbeckia hirta	3	FACU	Nt P-Forb	BLACK-EYED SUSAN
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLCAN	1	Solidago canadensis	3	FACU	Nt P-Forb	CANADA GOLDENROD
SOLSEM	0	SOLIDAGO SEMPERVIRENS	3	[FACU]	Ad P-Forb	SEASIDE GOLDENROD
SONOLE	0	SONCHUS OLERACEUS	5	[UPL]	Ad A-Forb	STORE-FRONT SOW THISTLE
SORNUT	5	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
ULMAME	3	Ulmus americana	-2	FACW-	Nt Tree	AMERICAN ELM

TRANSECT STRING
>

QUAD	1
ACRONYM	COVER
ASTPIL	1
EUPSEM	1
HELHEL	2
MONFIS	2
RATPIN	1

>

QUAD	2
ACRONYM	COVER
ASTERI	2
EUPSEM	1
MONFIS	1
POAPRA	1
RATPIN	2
SOLCAN	1
SOLSEM	1
TAROFF	1

>

QUAD	3
ACRONYM	COVER
ASTNOV	1
ASTPIL	1
CIRARV	1
CIRVUL	1
ELYCAN	1
EUPSEM	2
LACSER	1
RHACAT	1
SOLCAN	2

>

QUAD	4
ACRONYM	COVER
ASTPIL	3
HELHEL	1
LACSAL	1
POAPRA	1
RATPIN	1
SOLALT	3
SORNUT	1

>

QUAD	5
ACRONYM	COVER
ASTNOV	1
ASTPIL	1
ECHPUR	1
ELYCAN	1
MONFIS	2
POAPRA	2
RATPIN	1
SOLCAN	1
TAROFF	1
ULMAME	1

>

QUAD	6
ACRONYM	COVER
AGRREP	1
CIRARV	1
EUPSEM	2
OXASTR	1
RATPIN	3
SOLCAN	1

>

QUAD	7
ACRONYM	COVER
ATRPAT	1
BIDPOL	1
CHEALB	1
ELYCAN	1
LACSER	1
RATPIN	2
SOLALT	1
TAROFF	1

>

QUAD	8
ACRONYM	COVER
AGRREP	1
ATRPAT	1
CHEALB	1
ECHPUR	1
LACSER	1
MONFIS	2
MORALB	1
RUDHIR	1
SONOLE	2
TAROFF	1

>

QUAD	9
ACRONYM	COVER
AGRREP	1
ASTNOV	1
ATRPAT	2
CHEALB	1
ECHPUR	1
EUPSEM	1
MONFIS	2
SOLALT	1

>

QUAD	10
ACRONYM	COVER
ASTERI	1
ASTPIL	1
ATRPAT	3
EUPSEM	1
TAROFF	1

Site: **LASMA Berm – Transect 1**
Locale: Willow Springs, IL
Date: September 22, 2005
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	2.0	3.0	1	2	1.5	2.7
2	4.0	2.0	4.0	2.8	1.0	2.5	1	2	1.0	3.0
3	0.0	0.0	0.0	0.0	0.0	3.5	0	2	0.3	3.0
4	0.0	0.0	0.0	0.0	0.0	3.0	0	2	-1.0	2.4
5	0.0	0.0	0.0	0.0	-3.0	0.7	1	3	-0.7	1.8
6	0.0	0.0	0.0	0.0	1.0	1.7	1	3	-0.3	1.1
7	3.0	2.3	5.2	4.5	1.0	1.0	3	4	1.0	1.3
AVG	1.0	0.6	1.3	1.0	0.3	2.2	1.0	2.6		
STD	1.7	1.0	2.3	1.9	1.6	1.1	1.0	0.8		

SECTION 2

C	NUMBER	
0	3	
1	0	
2	0	0 to 3
3	0	60.0%
4	1	
5	1	
6	0	4 to 7
7	0	40.0%
8	0	
9	0	8 to 10
10	0	0.0%

5	NATIVE SPECIES
10	TOTAL SPECIES
1.8	NATIVE MEAN C
0.9	W/Adventives
4.0	NATIVE FQI
2.8	W/Adventives
1.2	NATIVE MEAN W
2.2	W/Adventives

Native	5	50.0%	Adventive	5	50.0%
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	2	20.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	1	10.0%	A-Forb	3	30.0%
P-Grass	1	10.0%	P-Grass	0	0.0%
A-Grass	1	10.0%	A-Grass	2	20.0%
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
Ad A-Forb	9	38	50.0	74.5	62.3
Ad A-Grass	2	4	11.1	7.8	9.5
Nt A-Grass	2	3	11.1	5.9	8.5
Nt P-Grass	2	3	11.1	5.9	8.5
Nt P-Forb	2	2	11.1	3.9	7.5
Nt A-Forb	1	1	5.6	2.0	3.8

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
CHENOPODIUM ALBUM	0	FAC-	4	19	22.2	37.3	29.7
KOCHIA SCOPARIA	0	FACU-	4	18	22.2	35.3	28.8
Echinochloa crusgalli	0	FACW	2	3	11.1	5.9	8.5
Elymus canadensis	4	FAC-	2	3	11.1	5.9	8.5
SETARIA VERTICILLATA	0	FACU	1	2	5.6	3.9	4.7
SETARIA VIRIDIS MAJOR	0	UPL	1	2	5.6	3.9	4.7
AMARANTHUS ALBUS	0	FACU	1	1	5.6	2.0	3.8
Aster pilosus	0	FACU+	1	1	5.6	2.0	3.8
Erigeron canadensis	0	FAC-	1	1	5.6	2.0	3.8
Heliopsis helianthoides	5	UPL	1	1	5.6	2.0	3.8
			18	51			

SECTION 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AMAALB	0	AMARANTHUS ALBUS	3	FACU	Ad A-Forb	TUMBLEWEED
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
ERICAN	0	Erigeron canadensis	1	FAC-	Nt A-Forb	HORSEWEED
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
KOCSCO	0	KOCHIA SCOPARIA	4	FACU-	Ad A-Forb	BURNING BUSH
SETVER	0	SETARIA VERTICILLATA	3	FACU	Ad A-Grass	BRISTLY FOXTAIL
SETVIM	0	SETARIA VIRIDIS MAJOR	5	UPL	Ad A-Grass	GIANT GREEN FOXTAIL

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
ASTPIL	1
KOCSCO	5

>

QUAD	2
ACRONYM	COVER
ELYCAN	1
KOCSCO	5

>

QUAD	3
ACRONYM	COVER
AMAALB	1
KOCSCO	5

>

QUAD	4
ACRONYM	COVER
CHEALB	5
SETVIM	2

>

QUAD	5
ACRONYM	COVER
CHEALB	5
ECHCRU	1
KOCSCO	3

>

QUAD	6
ACRONYM	COVER
CHEALB	5
ERICAN	1
SETVER	2

>

QUAD	7
ACRONYM	COVER
CHEALB	4
ECHCRU	2
ELYCAN	2
HELHEL	1

Site: **LASMA Berm – Transect 2**
Locale: Willow Springs, IL
Date: September 22, 2005
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	-3.0	-0.5	1	2	-3.0	-1.7
2	0.0	0.0	0.0	0.0	-3.0	-3.0	1	1	-3.0	-0.9
3	0.0	0.0	0.0	0.0	-3.0	0.7	1	3	-1.7	-0.4
4	4.0	2.7	5.7	4.6	1.0	1.0	2	3	-0.8	0.8
5	0.0	0.0	0.0	0.0	-0.5	0.7	2	3	0.6	1.2
6	1.7	1.0	2.9	2.2	1.3	2.0	3	5	0.3	1.3
7	1.3	0.7	2.3	1.6	0.0	1.3	3	6	0.7	1.7
AVG	1.0	0.6	1.6	1.2	-1.0	0.3	1.9	3.3		
STD	1.5	1.0	2.2	1.8	1.9	1.6	0.9	1.7		

SECTION 2

C	NUMBER	
0	2	
1	0	
2	0	0 to 3
3	0	40.0%
4	1	
5	1	
6	0	4 to 7
7	0	40.0%
8	1	
9	0	8 to 10
10	0	20.0%

5 NATIVE SPECIES
10 TOTAL SPECIES
3.4 NATIVE MEAN C
1.7 W/Adventives
7.6 NATIVE FQI
5.4 W/Adventives
2.0 NATIVE MEAN W
2.5 W/Adventives

Native	5	50.0%	Adventive	5	50.0%
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	2	20.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	4	40.0%
P-Grass	2	20.0%	P-Grass	0	0.0%
A-Grass	1	10.0%	A-Grass	1	10.0%
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
Ad A-Forb	9	22	39.1	47.8	43.5
Nt A-Grass	7	14	30.4	30.4	30.4
Nt P-Forb	4	6	17.4	13.0	15.2
Nt P-Grass	2	2	8.7	4.3	6.5
Ad A-Grass	1	2	4.3	4.3	4.3

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Echinochloa crusgalli	0	FACW	7	14	26.9	24.6	25.7
CHENOPODIUM ALBUM	0	FAC-	4	12	15.4	21.1	18.2
SOIL	0		3	11	11.5	19.3	15.4
Aster pilosus	0	FACU+	3	5	11.5	8.8	10.2
KOCHIA SCOPARIA	0	FACU-	2	5	7.7	8.8	8.2
AMARANTHUS ALBUS	0	FACU	2	4	7.7	7.0	7.4
SETARIA VIRIDIS MAJOR	0	UPL	1	2	3.8	3.5	3.7
AMARANTHUS RETROFLEXUS	0	FACU+	1	1	3.8	1.8	2.8
Bouteloua curtipendula	8	UPL	1	1	3.8	1.8	2.8
Elymus canadensis	4	FAC-	1	1	3.8	1.8	2.8
Heliopsis helianthoides	5	UPL	1	1	3.8	1.8	2.8
			26	57			

SECTION 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AMAALB	0	AMARANTHUS ALBUS	3	FACU	Ad A-Forb	TUMBLEWEED
AMARET	0	AMARANTHUS RETROFLEXUS	2	FACU+	Ad A-Forb	ROUGH AMARANTH
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
BOUCUR	8	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
HELHEL	5	Heliopsis helianthoides	5	UPL	Nt P-Forb	FALSE SUNFLOWER
KOCSCO	0	KOCHIA SCOPARIA	4	FACU-	Ad A-Forb	BURNING BUSH
SETVIM	0	SETARIA VIRIDIS MAJOR	5	UPL	Ad A-Grass	GIANT GREEN FOXTAIL
SOIL	0	SOIL	0	nil	nil	SOIL

TRANSECT STRING

>

QUAD 1

ACRONYM	COVER
AMARET	1
ECHCRU	1
SOIL	4

>

QUAD 2

ACRONYM	COVER
ECHCRU	2
SOIL	4

>

QUAD 3

ACRONYM	COVER
CHEALB	1
ECHCRU	4
KOCSCO	3

>

QUAD 4

ACRONYM	COVER
BOUCUR	1
CHEALB	4
ECHCRU	3

>

QUAD 5

ACRONYM	COVER
AMAALB	3
ASTPIL	2
ECHCRU	1
SOIL	3

>

QUAD 6

ACRONYM	COVER
ASTPIL	1
CHEALB	4
ECHCRU	1
HELHEL	1
SETVIM	2

>

QUAD 7

ACRONYM	COVER
AMAALB	1
ASTPIL	2
CHEALB	3
ECHCRU	2
ELYCAN	1
KOCSCO	2

Site: **LASMA Berm – Transect 3**
Locale: Willow Springs, IL
Date: September 22, 2005
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	0.0	4.0	0	1	0.0	4.0
2	0.0	0.0	0.0	0.0	0.0	4.0	0	1	-1.0	2.9
3	0.0	0.0	0.0	0.0	-3.0	0.7	1	3	-0.3	2.4
4	0.0	0.0	0.0	0.0	2.0	2.7	1	3	-0.3	2.1
5	0.0	0.0	0.0	0.0	0.0	3.0	0	2	1.3	2.6
6	4.0	2.0	5.7	4.0	2.0	2.3	2	4	0.7	3.1
7	0.0	0.0	0.0	0.0	0.0	4.0	0	1	1.0	3.1
AVG	0.6	0.3	0.8	0.6	0.1	2.9	0.6	2.1		
STD	1.5	0.8	2.1	1.5	1.7	1.2	0.8	1.2		

SECTION 2

C	NUMBER	
0	2	
1	0	
2	0	0 to 3
3	0	50.0%
4	2	
5	0	
6	0	4 to 7
7	0	50.0%
8	0	
9	0	8 to 10
10	0	0.0%

4	NATIVE SPECIES
9	TOTAL SPECIES
2.0	NATIVE MEAN C
0.9	W/Adventives
4.0	NATIVE FQI
2.7	W/Adventives
0.8	NATIVE MEAN W
2.1	W/Adventives

Native	4	44.4%	Adventive	5	55.6%
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	2	22.2%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	3	33.3%
P-Grass	1	11.1%	P-Grass	0	0.0%
A-Grass	1	11.1%	A-Grass	2	22.2%
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 A-Forb	9	33	60.0	82.5	71.3
Nt P-Forb	2	2	13.3	5.0	9.2
Ad A-Grass	2	2	13.3	5.0	9.2
Nt P-Grass	1	2	6.7	5.0	5.8
Nt A-Grass	1	1	6.7	2.5	4.6

SECTION 3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
KOCHIA SCOPARIA	0	FACU-	5	22	31.3	51.2	41.2
CHENOPODIUM ALBUM	0	FAC-	3	10	18.8	23.3	21.0
SOIL	0		1	3	6.3	7.0	6.6
Elymus canadensis	4	FAC-	1	2	6.3	4.7	5.5
AMARANTHUS ALBUS	0	FACU	1	1	6.3	2.3	4.3
Aster pilosus	0	FACU+	1	1	6.3	2.3	4.3
Echinochloa crusgalli	0	FACW	1	1	6.3	2.3	4.3
Monarda fistulosa	4	FACU	1	1	6.3	2.3	4.3
SETARIA VERTICILLATA	0	FACU	1	1	6.3	2.3	4.3
SETARIA VIRIDIS MAJOR	0	UPL	1	1	6.3	2.3	4.3
			16	43			

SECTION 4

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AMAALB	0	AMARANTHUS ALBUS	3	FACU	Ad A-Forb	TUMBLEWEED
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
CHEALB	0	CHENOPODIUM ALBUM	1	FAC-	Ad A-Forb	LAMB'S QUARTERS
ECHCRU	0	Echinochloa crusgalli	-3	FACW	Nt A-Grass	BARNYARD GRASS
ELYCAN	4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE
KOCSCO	0	KOCHIA SCOPARIA	4	FACU-	Ad A-Forb	BURNING BUSH
MONFIS	4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
SETVER	0	SETARIA VERTICILLATA	3	FACU	Ad A-Grass	BRISTLY FOXTAIL
SETVIM	0	SETARIA VIRIDIS MAJOR	5	UPL	Ad A-Grass	GIANT GREEN FOXTAIL
SOIL	0	SOIL	0	nil	nil	SOIL

TRANSECT STRING

>

QUAD	1
ACRONYM	COVER
KOCSCO	5

>

QUAD	2
ACRONYM	COVER
KOCSCO	5

>

QUAD	3
ACRONYM	COVER
CHEALB	2
ECHCRU	1
KOCSCO	4

>

QUAD	4
ACRONYM	COVER
AMAALB	1
ASTPIL	1
SETVER	1
SOIL	3

>

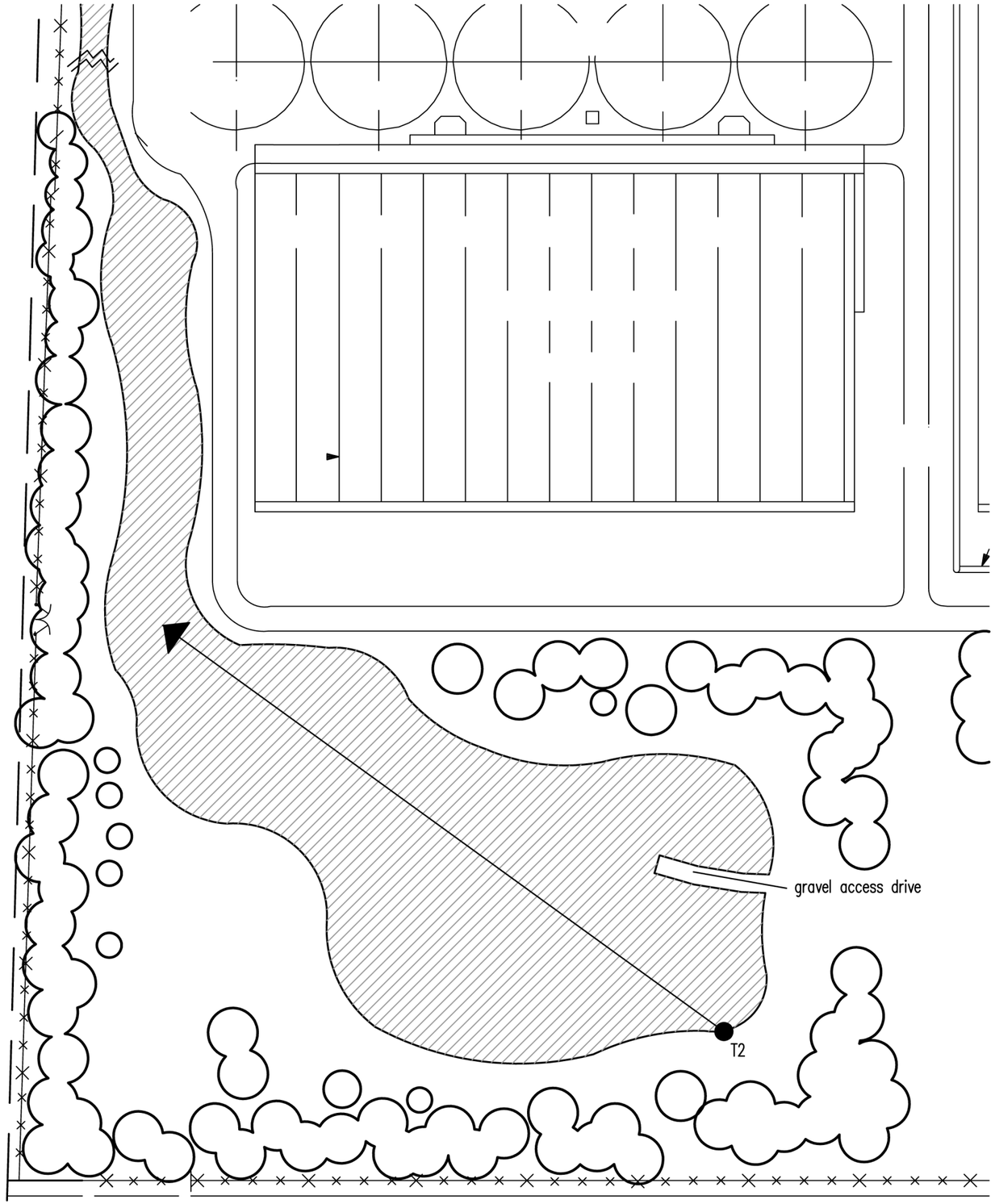
QUAD	5
ACRONYM	COVER
CHEALB	5
SETVIM	1

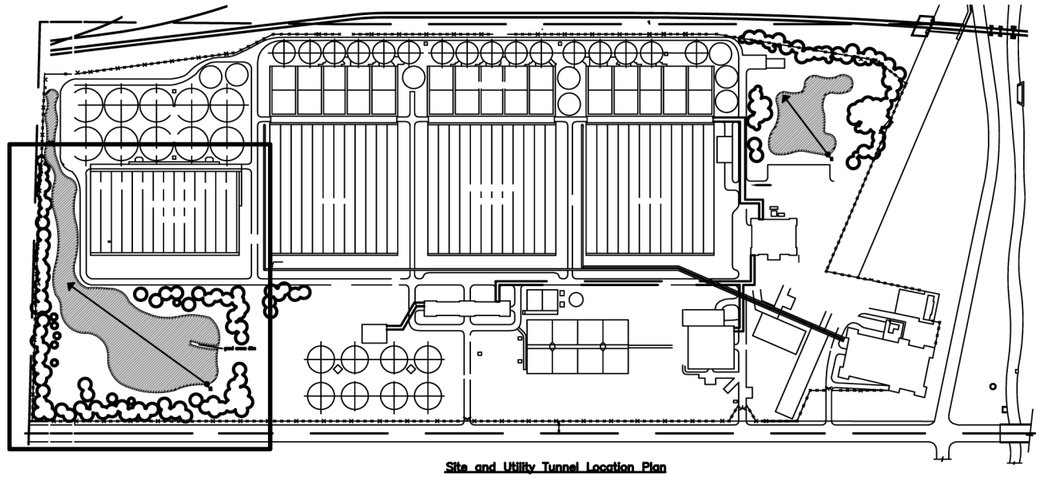
>

QUAD	6
ACRONYM	COVER
CHEALB	3
ELYCAN	2
KOCSCO	3
MONFIS	1

>

QUAD	7
ACRONYM	COVER
KOCSCO	5





Site and Utility Tunnel Location Plan

Key

Prairie landscape

Existing treeline

Vegetation monitoring transect

GENERAL NOTES:

1. This plan provides a general conceptual layout of the prairie landscape; all measurements and dimensions are approximate.

2. The north edge of the prairie seeding area extends approximately 100' beyond the depiction on this sheet; see smaller overall site plan for exact location.

N
W E
S

0 50 100 200

Scale 1"=100'-0"

Conservation Design Forum
375 West First Street
Elmhurst, Illinois 60126
630.559.2000 Phone
630.559.2030 Fax
www.cdfinc.com

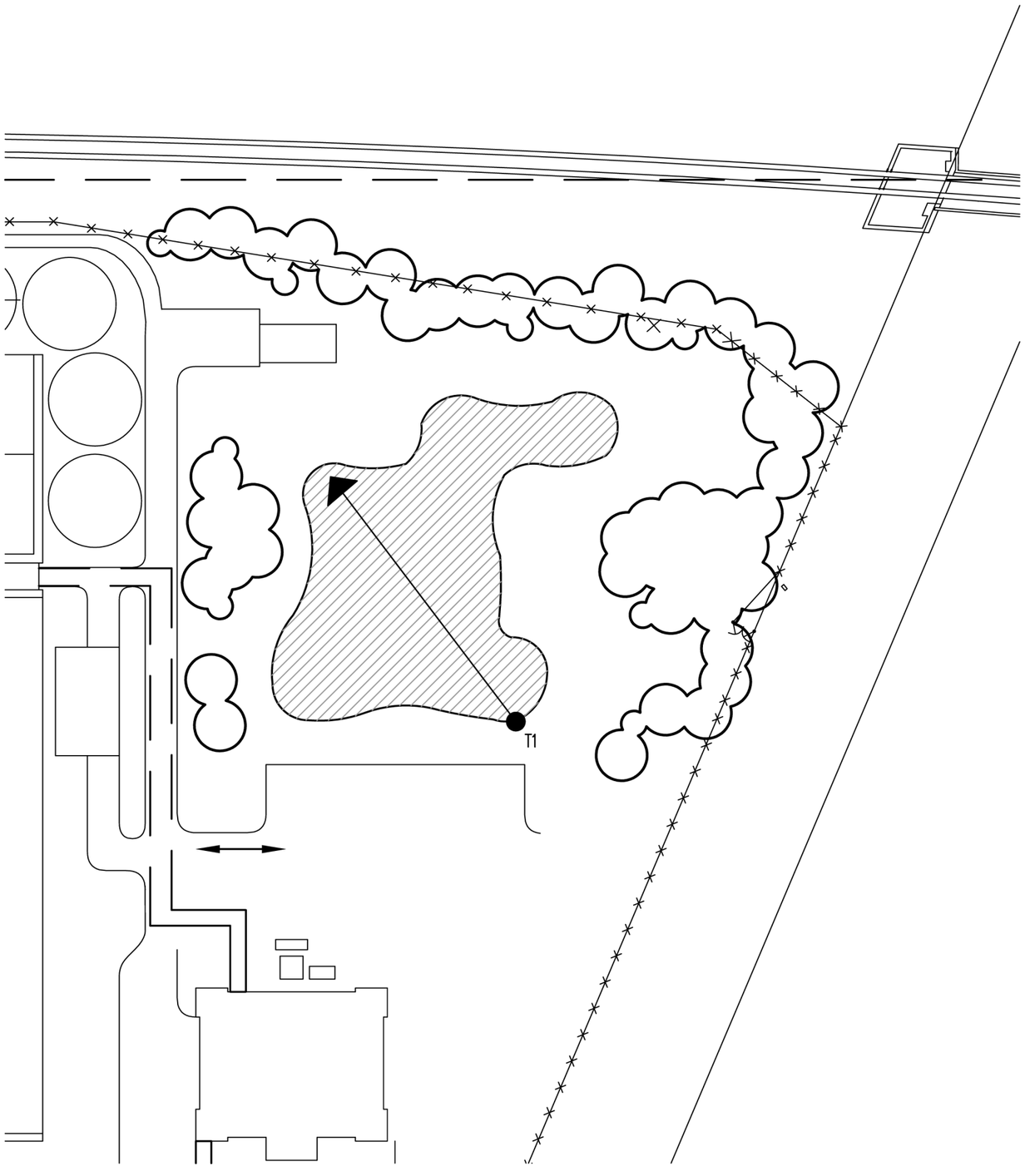
Client:
Metropolitan Water Reclamation District of Greater Chicago
100 E. Erie Street
Chicago, IL 60611

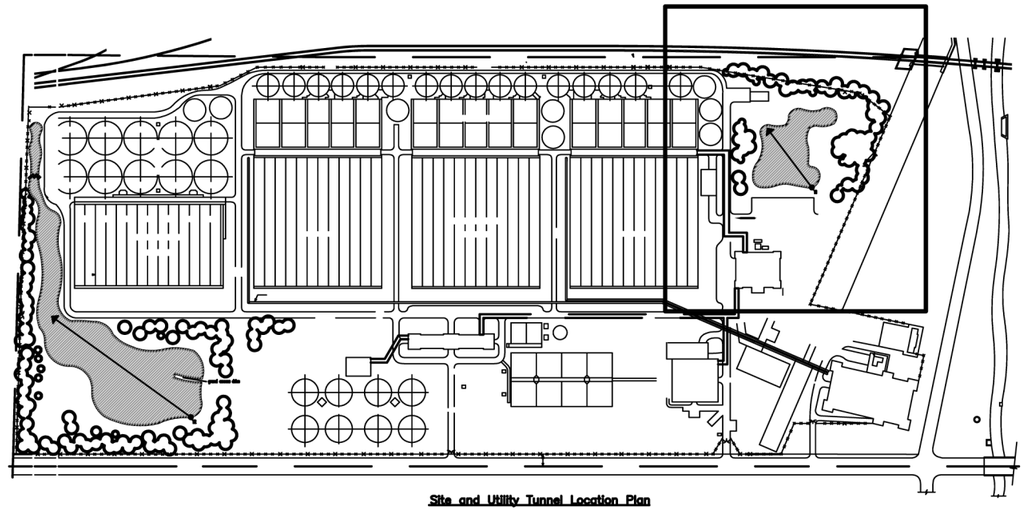
Exhibit A-1
North Side WRP Native Landscape Areas

Issue/Revision

Status 100%
Drwn by: SM
Chkd by: KJ

Date December 2005
Job No. 03063.00





Site and Utility Tunnel Location Plan

Key

Prairie landscape

Existing treeline

Vegetation monitoring transect

GENERAL NOTE:
1. This plan provides a general conceptual layout of the prairie landscape; all measurements and dimensions are approximate.

N
W E
S

0 50 100 200

Scale 1"=100'-0"

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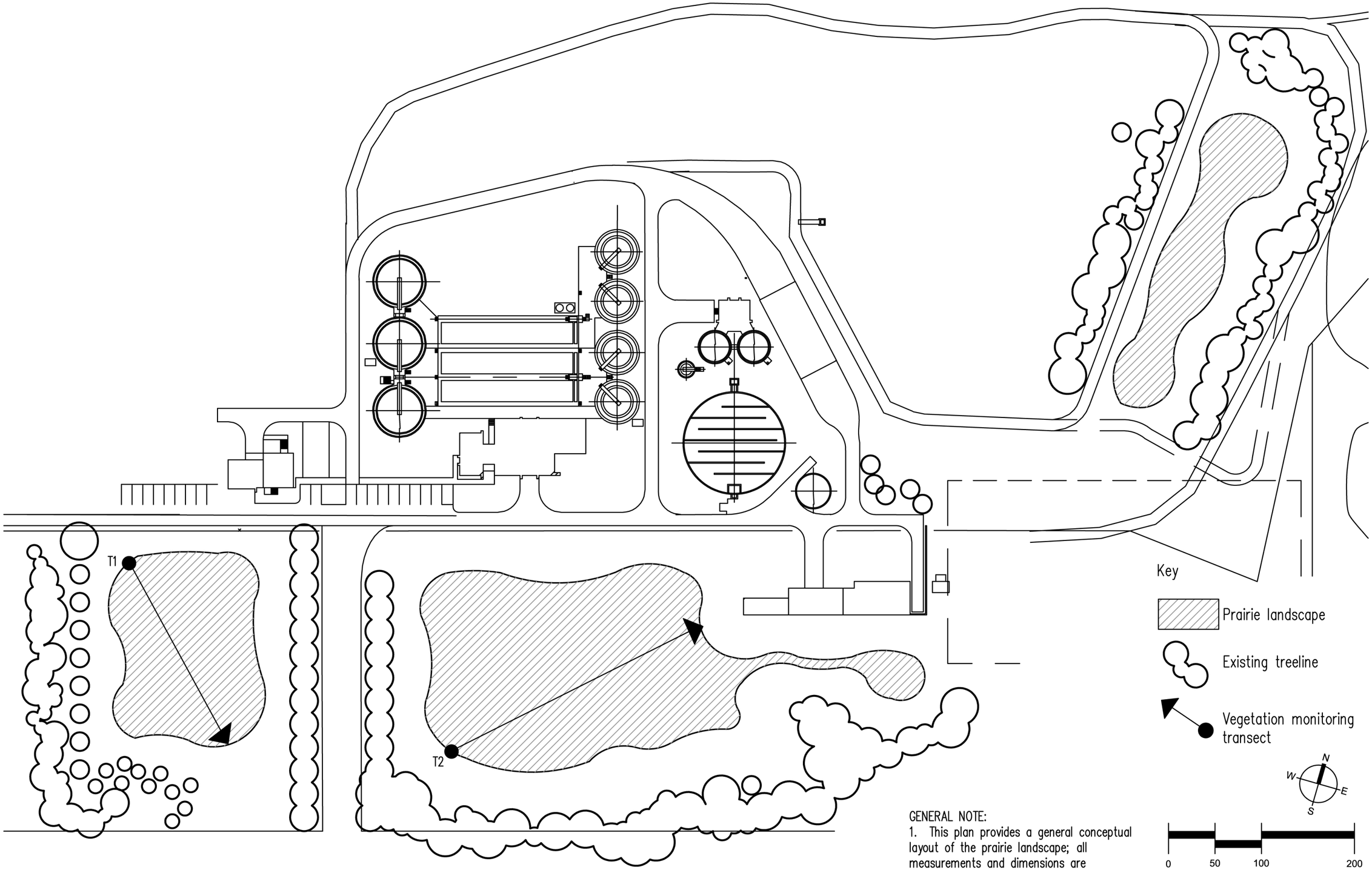
Exhibit A-2
North Side WRP Native Landscape Areas

Issue/Revision

Status 100%
Drwn by: SM
Chkd by: KJ

Date December 2005
Job No. 03063.00



GENERAL NOTE:
1. This plan provides a general conceptual layout of the prairie landscape; all measurements and dimensions are approximate.

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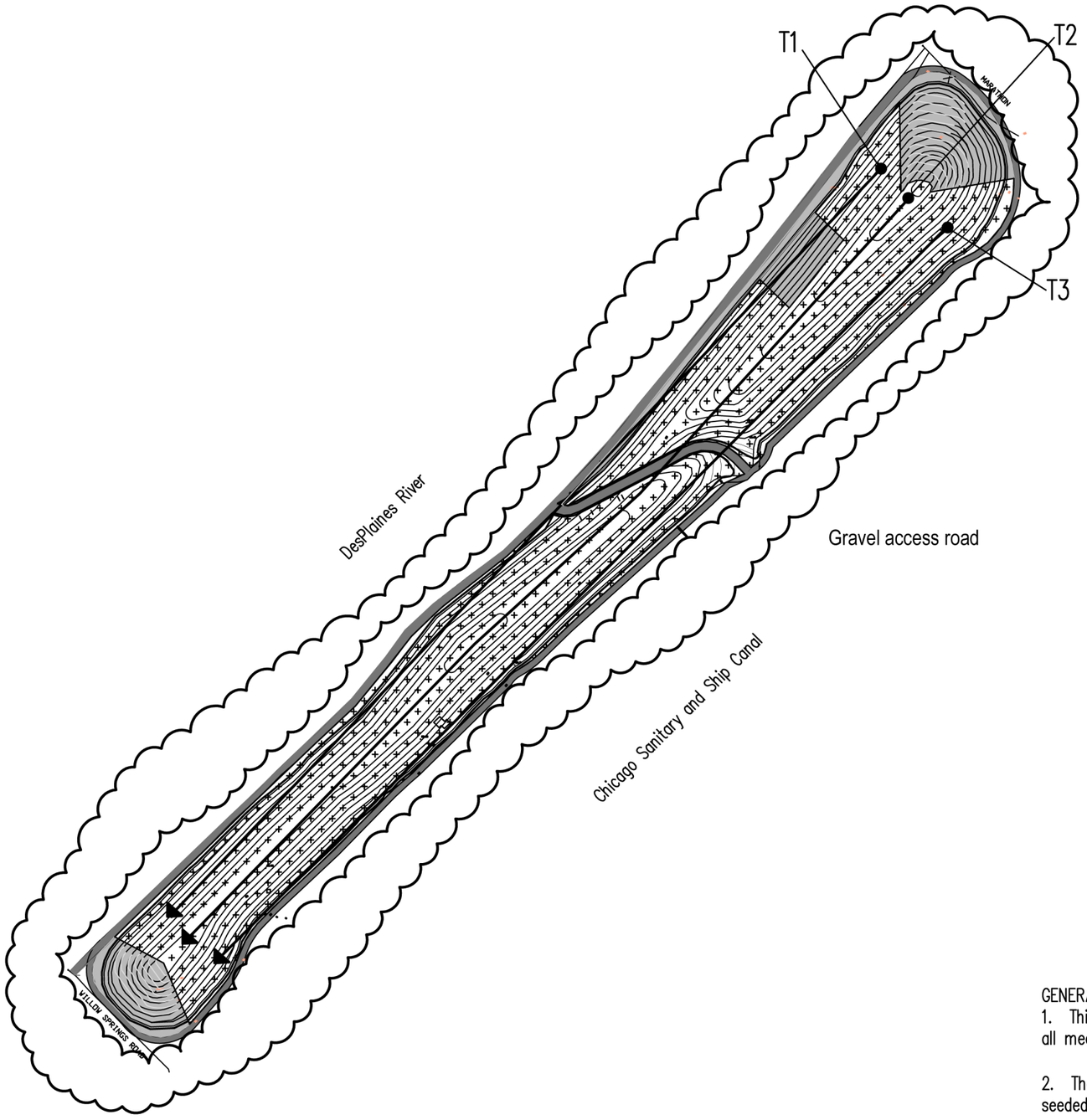
Exhibit B
Lemont WRP Native Landscape Areas

Issue/Revision

Status	Drwn by: SM
100%	Chkd by: KJ
Date	Job No.
December 2005	03063.00



Key

- Prairie landscape
- Biosolids test plots
- Existing treeline
- Gravel roadway
- Vegetation monitoring transect
- Quadrat Location (schematic)

GENERAL NOTES:

1. This plan provides a general conceptual layout of the prairie landscape; all measurements and dimensions are approximate.

2. The three (3) biosolids test plots are yet to be finish-graded or seeded with prairie species.

N
W E
S

0 125 250 500

Scale 1"=250'-0"

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100 E. Erie Street
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Exhibit C
LASMA Berm Native Landscape Area

Issue/Revision

Status	Drwn by: SM
100%	Chkd by: KJ
Date	Job No.
December 2005	03063.00

APPENDIX IV

SEEDED SPECIES RECRUITMENT

Each of the three tables on the following pages represents an alphabetical list of the native species that were seeded as part of the prairie landscape installation in April 2004. Each species is listed along with its C value (in parenthesis). If the species was recorded from the site during the 2005-monitoring event in September it is indicated with a "Y", and if not it is indicated with an "N"; the columns to the right summarize the RIV of each species if recorded during the transect sampling. If a species was in the top 50% RIV for a transect it is indicated in **bold** typeface. For comparative purposes these same data from the 2004-monitoring event are included in the tables.

The North Side WRP prairie installation seed list is identical to that of Lemont WRP; six (6) common prairie grasses and seventeen (17) common prairie forbs were seeded at these two sites. The same six prairie grasses were used at the LASMA Berm; however, only eleven (11) forbs were included in the prairie installation seed mix. See the report for more information.

TABLE A. NORTH SIDE WRP SEEDED SPECIES

SPECIES (C VALUE)	RELATIVE IMPORTANCE VALUE (RIV)			
	TRANSECT 1		TRANSECT 2	
	2004	2005	2004	2005
Andropogon gerardii (5)Y	1.0	-	-	-
Andropogon scoparius (5)N	-	-	-	-
Aster novae-angliae (4)Y	2.0	3.4	1.4	3.4
Astragalus canadensis (10)N	-	-	-	-
Bouteloua curtipendula (8)Y	-	1.1	-	1.0
Coreopsis lanceolata (5)Y	1.0	1.1	1.4	2.0
Desmodium canadense (4)N	-	-	-	-
Echinacea purpurea (3)Y	3.1	2.2	-	1.0
***Elymus canadensis** (4)Y*	-	1.1	-	**4.3**
Eryngium yuccifolium (9)N	-	-	-	-
Heliopsis helianthoides (5)Y	2.0	1.1	2.8	2.0
Lespedeza capitata (4)N	-	-	-	-
Monarda fistulosa (4)Y	-	-	2.8	-
Panicum virgatum (5)Y	-	1.1	-	2.0
Penstemon digitalis (4)N	-	-	-	-
Petalostemum purpureum (9)N	-	-	-	-
Pycnanthemum virginianum (5)N	-	-	-	-
***Ratibida pinnata** (4)Y*	1.0	**7.2**	1.4	2.9
Rudbeckia hirta (1)Y	8.6	2.2	9.6	2.9
Silphium integrifolium (5)Y	-	-	-	-
Sorghastrum nutans (5)Y	-	-	-	-
Veronicastrum virginianum (7)N	-	-	-	-
Zizia aurea (7)N	-	-	-	-

TABLE B. LEMONT WRP SEEDED SPECIES

SPECIES (C VALUE)	RELATIVE IMPORTANCE VALUE (RIV)			
	TRANSECT 1		TRANSECT 2	
	2004	2005	2004	2005
Andropogon gerardii (5)N	-	-	-	-
Andropogon scoparius (5)N	-	-	-	-
***Aster novae-angliae** (4)Y*	-	**8.1**	1.1	3.5
Astragalus canadensis (10)N	-	-	-	-
Bouteloua curtipendula (8)Y	-	-	1.1	-
Coreopsis lanceolata (5)Y	-	-	-	-
Desmodium canadense (4)N	-	-	-	-
Echinacea purpurea (3)Y	1.1	3.9	2.2	3.5
***Elymus canadensis** (4)Y*	1.1	**7.9**	-	3.5
Eryngium yuccifolium (9)N	-	-	-	-
***Heliopsis helianthoides** (5)Y*	5.3	**8.9**	3.7	2.8
Lespedeza capitata (4)N	-	-	-	-
***Monarda fistulosa** (4)Y*	4.5	**14.1**	1.5	**7.9**
Panicum virgatum (5)Y	-	-	-	-
Penstemon digitalis (4)N	-	-	-	-
Petalostemum purpureum (9)N	-	-	-	-
Pycnanthemum virginianum (5)Y	-	-	-	-
***Ratibida pinnata** (4)Y*	-	5.8	2.2	**9.0**
Rudbeckia hirta (1)Y	15.2	-	6.8	1.2
Silphium integrifolium (5)Y	-	-	-	-
Sorghastrum nutans (5)Y	-	-	-	1.2
Veronicastrum virginianum (7)N	-	-	-	-
Zizia aurea (7)N	-	-	-	-

TABLE C. LASMA BERM SEEDED SPECIES

SPECIES (C VALUE)	RELATIVE IMPORTANCE VALUE (RIV)					
	TRANSECT 1		TRANSECT 2		TRANSECT 3	
	2004	2005	2004	2005	2004	2005
Andropogon gerardii (5)Y	-	-	-	-	-	-
Andropogon scoparius (5)N	-	-	-	-	-	-
Aster novae-angliae (4)Y	-	-	3.7	-	-	-
Astragalus canadensis (10)N	-	-	-	-	-	-
Bouteloua curtipendula (8)Y	-	-	-	2.8	-	-
Desmodium canadense (4)N	-	-	-	-	-	-
Echinacea purpurea (3)Y	-	-	-	-	-	-
Elymus canadensis (4)Y	-	8.5	3.7	2.8	3.2	5.5
Heliopsis helianthoides (5)Y	-	3.8	-	2.8	3.2	-
Lespedeza capitata (4)N	-	-	-	-	-	-
Monarda fistulosa (4)Y	-	-	3.7	-	-	4.3
Panicum virgatum (5)Y	-	-	-	-	-	-
Ratibida pinnata (4)Y	-	-	-	-	-	-
Rudbeckia hirta (1)Y	-	-	-	-	3.2	-
Silphium integrifolium (5)N	-	-	-	-	-	-
Solidago graminifolia (4)N	-	-	-	-	-	-
Sorghastrum nutans (5)Y	-	-	-	-	-	-

PHOTOGRAPHS

The photographs on the following several pages were taken during the 2005-calendar year at all three project sites. The last four pages include photographs taken during the site walk-throughs in September, as well as selected images of prairie grasses and wildflowers that were seeded at these sites—some of which are present, others of which will be seen as these native landscape re-creations mature over the next few years.

June 2, 2005

August 22, 2005

Above Select herbicide application.

Below Herbicide die-back.

September 23, 2005

September 23, 2005

Above Transcript 1.

Below Transcript 2.

September 30, 2005

September 30, 2005

Above District and CDF staff during site walk-through.

Below Prairie landscape.

April 25, 2005

August 23, 2005

Above Springtime view of prairie landscape.

Below Herbicide kill and prairie plants in late summer.

September 22, 2005

September 22, 2005

Above Transect 1.

Below Transect 2.

September 30, 2005

December 8, 2005

Above New England Aster.

Below District and CDF staff during site walk-through.

December 8, 2005

December 8, 2005

Above Drill seeding prairie grasses.

Below Drill seeding prairie grasses.

April 25, 2005

April 25, 2005

Above Severe soil erosion.

Below Severe soil erosion.

June 8 2005

June 8, 2005

Above Top of berm during biosolids test plots construction.

Below Biosolids test plots on north-facing slope.

June 29, 2005

September 22, 2005

Above Mowed vegetation.

Below Transect 2.

October 26, 2005

October 26, 2005

Above Hand-seeding "finished" biosolids test plots.

Below Drill-seeding top of berm.

October 26, 2005

November 3, 2005

Above Debris left from construction of biosolids test plots.

Below Drill-seeding pattern down the end of berm.

Native Prairie Landscape Site Walk - Photos
September 30, 2005

Lemont WRP

Native Prairie Landscape Site Walk - Photos
September 30, 2005

North Side WRP

Common Prairie Plants - Grasses

Switch Grass
Panicum virgatum

Big Bluestem Grass
Andropogon gerardii

Little Bluestem Grass
Andropogon scoparius

Side-oats Grama
Bouteloua curtipendula

Indian Grass
Sorghastrum nutans

Common Prairie Plants - Flowering Forbs

New England Aster
Aster novae-angliae

Purple Coneflower
Echinacea purpurea

False Sunflower
Heliopsis helianthoides

Wild Bergamot
Monarda fistulosa

Yellow Coneflower
Ratibida pinnata

Black-eyed Susan
Rudbeckia hirta

Culver's Root
Veronicastrum virginicum