

**Forest Preserve District of Will County Properties in the
Vicinity of the Proposed South Suburban Airport:
Baseline User, Wildlife and Habitat Studies (2004)**

Final Report

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**FOREST PRESERVE DISTRICT OF WILL COUNTY PROPERTIES IN THE VICINITY
OF THE PROPOSED SOUTH SUBURBAN AIRPORT:
BASELINE USER, WILDLIFE AND HABITAT STUDIES (2004)**

EXECUTIVE SUMMARY

The Forest Preserve District of Will County (FPDWC) and the Illinois Department of Transportation (IDOT) executed a Memorandum of Agreement (MOA) to establish a methodology to measure and record baseline conditions at Goodenow Grove Nature Preserve, Raccoon Grove Nature Preserve and Monee Reservoir, three properties owned and managed by the FPDWC in northeastern Will County, Illinois. The objectives of the Baseline Study are to establish baseline conditions, to establish monitoring protocols and to develop methodologies for determining impacts attributable to the proposed South Suburban Airport.

The study sites included:

- *Goodenow Grove Nature Preserve* is a 780-acre preserve that was established in 1938. In 1996, 541 acres of the preserve were dedicated as an Illinois Nature Preserve. Goodenow Grove is the southernmost of a series of preserves within the Plum Creek Greenway.
- *Raccoon Grove Nature Preserve* was established in 1937 and is a 210-acre dedicated Illinois Nature Preserve, located west of the airport site and south of Monee. It is the closest preserve to the proposed airport site.
- *Monee Reservoir* is a 195-acre preserve that was established in 1988.

Baseline studies conducted include user/use surveys and habitat monitoring (terrestrial and aquatic). Terrestrial monitoring included amphibian and reptile, avian and vegetation monitoring. Aquatic monitoring included fish and benthic macroinvertebrate monitoring. The methodological approach included the following aspects:

- User/use surveys collected reservation and programs numbers and visitor counts included surveys to gauge user satisfaction and profiles.
- Avian and vegetation methods used are consistent with the Critical Trends Assessment Program (CTAP) developed by the Illinois Department of Natural Resources (IDNR).
- Vegetation monitoring emphasized structural habitat variables in order to provide a context for analysis of trends in animal abundance.
- The Floristic Quality Assessment (FQA) was used as suggested by Swink and Wilhelm (1994) for Chicagoland flora.
- One representative plot was established at each preserve in each of three vegetation communities (forest, grassland and wetland) using the CTAP methodology to ensure sampling of each community type, given the random location of the transects.

User/Use Surveys

Visitors reported strong satisfaction with the environmental and physical conditions at the three preserves. Two out of three visitors reported seeing some type of wildlife during their visit. One out of four visitors believes that the preserve they visited is under-used. The most frequent activities reported were:

- Fishing, 40% of visitors
- Walking/hiking, 28% of visitors
- Picnics, 12% of visitors
- Relaxing/reading/napping, 11% of visitors

Amphibian and Reptile Monitoring

A total of 12 species, seven amphibians and five reptiles, were captured or observed at the combined study sites. The highest species richness was at Goodenow Grove Woodland, with a total of nine species. The remaining sites had five to six species each.

Avian Monitoring

Over the course of monitoring 111 species and 2,015 individuals were identified. Forest dependent species comprised the highest portion (approximately 56%) of habitat dependent species overall, and most were observed in forested habitat at Goodenow Grove or Raccoon Grove. The highest numbers of neotropical migrant species were found in forested habitat in Goodenow Grove and in wetland habitat in Monee Reservoir.

Vegetation Monitoring

A total of 21 forest, 12 grassland and one wetland plots were sampled for an overall total of 34 plots. Six of these were CTAP plots (two forest, three grassland and two wetland). The grassland and wetland CTAP plots (four plots) were only sampled using CTAP methodology; the forested CTAP plots (two plots) were chosen from existing avian/vegetation plots because of their representative quality. Thus a total of 30 avian/vegetation plots were sampled. Floodplain and mesic forest plots were dominated by native trees and shrubs, with minimal numbers of introduced or invasive species. Wetlands were dominated by native perennial forbs, with perennial grasses and sedges also noted. Mesic upland forest plots were dominated by native tree species, but were more likely to contain introduced invasive trees and shrubs in the understory. Grassland plots showed the lower percentages of native species, but were still dominated by native perennial forbs and grasses. Some of these grassland plots were in recovering agricultural fields.

Fish and Benthic Macroinvertebrate Monitoring

Fish and benthic macroinvertebrate samples were collected from historical stream sample sites and were part of a larger dataset gathered largely on private land throughout the vicinity of the proposed airport footprint. Fish species richness and biotic quality were down slightly from previous sampling events. Macroinvertebrate abundance and richness were also lower than previous samples. Low species richness and abundance in these samples precludes drawing any definite conclusions about water quality in the sampled streams.

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INTRODUCTION

BACKGROUND

The Forest Preserve District of Will County (FPDWC) and the Illinois Department of Transportation (IDOT) executed a Memorandum of Agreement (MOA) to establish a methodology to measure and record baseline conditions at Goodenow Grove Nature Preserve, Raccoon Grove Nature Preserve and Monee Reservoir, three properties owned and managed by the FPDWC in northeastern Will County, Illinois. The established methodology will be used to document environmental impacts to the FPDWC properties from the proposed South Suburban Airport (SSA). The proposed SSA will be developed over an extended period of time. Its potential environmental impacts to FPDWC properties are not anticipated to occur until later stages of airport development. The FPDWC and IDOT agreed, through the MOA, to gather data prior to construction and operation of the airport to establish baseline conditions.

The results of this study will be used to define criteria to determine if airport-related impacts occur to FPDWC properties. Identification of these criteria will be a joint effort between IDOT and the FPDWC, utilizing the results of this study to establish benchmarks.

OBJECTIVE

The objectives of this Baseline Study are outlined below:

1. To establish baseline conditions of the number of users, types of uses, wildlife and habitat which might potentially be affected by future airport construction or operations.
2. To identify any existing trends or large scale ecological processes already operating in the region so airport impacts might be more clearly distinguished from other influences.
3. To establish a monitoring protocol and frequency of monitoring.
4. To develop a methodology for determining impacts attributable to the airport

STUDY SITES

Goodenow Grove Nature Preserve – This 780-acre preserve was established in 1938. In 1996, 541 acres of the preserve were dedicated as an Illinois Nature Preserve. Goodenow Grove is the southernmost of a series of preserves within the Plum Creek Greenway. The site includes floodplain forest and woodland, northern flatwoods and savanna communities on adjacent upland. Grasslands are also present, especially in the western part of the site along Route 394. Wetlands, including marsh, sedge meadow and man-made ponds are scattered throughout the preserve. This site is unusual because it provides habitat for species characteristic of both eastern deciduous forests and eastern tallgrass prairie. Public uses include hiking, picnicking, camping, ski

trails, fishing, bird watching, sledding, skating, an environmental education center, education programs, special use permits, scientific monitoring and research programs.

Raccoon Grove Nature Preserve – This preserve was established in 1937 and is a 210-acre dedicated Illinois Nature Preserve, located west of the airport site and south of Monee. It is the closest preserve to the proposed airport site. Natural communities include mesic and dry-mesic upland forest, mesic floodplain forest, a small area of savanna and a small prairie restoration. Its public uses consist of restoration of prairie and savanna habitat, nature walks, bird watching, hiking, picnicking, educational programs, special use permits, scientific monitoring and research programs.

Monee Reservoir – This 195-acre preserve was established in 1988. Its public uses consist of fishing, wildlife observation, picnicking, boating, hiking, ice-skating, snowshoeing, dog sledding, cross-country skiing, special use permits and educational programs.

Exhibit 1, located at the end of this section, shows the locations of all three preserves in relation to the proposed airport boundary.

AREAS OF CONCERN

The FPDWC identified the following specific areas and uses at the above properties that they consider to be particularly sensitive to external impacts:

- The visitor center, concession and rental stand at Monee Reservoir
- Fishing and boating at Monee Reservoir
- Programs and events by others, and facility rentals at Goodenow Grove and Monee Reservoir
- District programs and events at Monee Reservoir and Goodenow Grove
- Camping at Goodenow Grove
- The Plum Creek Nature Center at Goodenow Grove
- Wildlife viewing opportunities at all three preserves
- Changing local and county demographics resulting in changes in needs, supply and demand considerations away from those which resulted in the existing acquisitions, developments and uses at these preserves.
- General use and peaceful enjoyment at the preserves, the sense of isolation and the outdoor experience.
- Use of sites as benchmarks for long-term scientific and ecological studies.

STUDY APPROACH

Baseline studies conducted include:

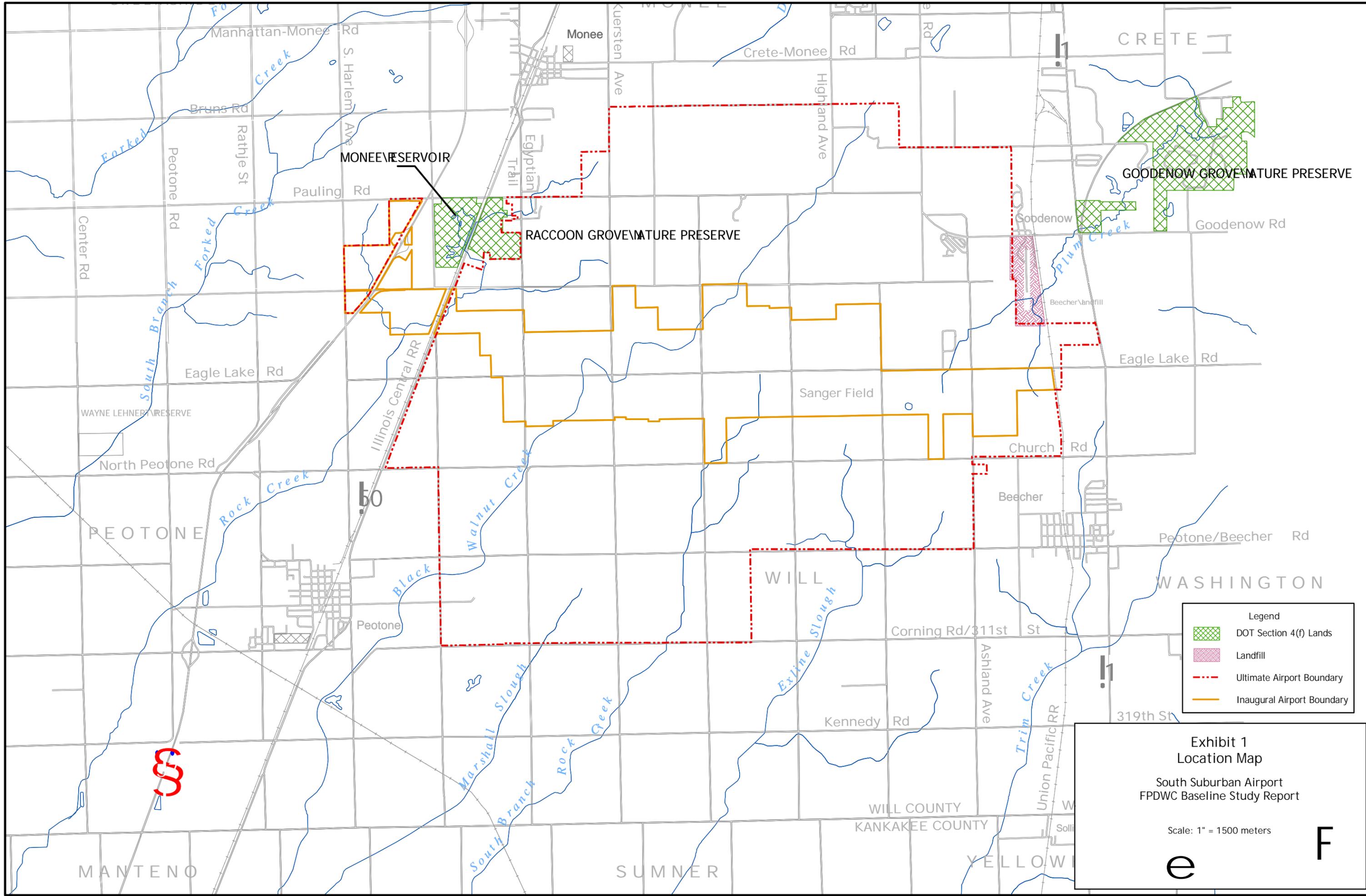
- User/Use Surveys
- Habitat Monitoring
 - Terrestrial Monitoring
 - Amphibian and Reptile Monitoring
 - Avian Monitoring
 - Vegetation Monitoring
 - Aquatic Monitoring
 - Fish Monitoring

- Benthic Macroinvertebrate Monitoring

General approaches regarding methodology and sampling protocols were discussed with IDOT and FPDWC and agreed upon prior to commencing field activities. These approaches included the following:

- Animal assemblages, rather than single species, were the focus of the studies. By monitoring full ranges of selected taxa, species richness and diversity information are available as part of the dataset.
- Avian communities were monitored from April to June to capture the majority of breeding residents and migrants.
- Avian and vegetation methods used are consistent with the Critical Trends Assessment Program (CTAP) developed by the Illinois Department of Natural Resources (IDNR). A baseline was established at each preserve, along an abandoned railroad right-of-way at Goodenow Grove and along roads at Raccoon Grove and Monee Reservoir, which transected the preserves. Transects were located by random numbers along the baselines and plots were established along each transect at distances dictated by habitat type.
- Vegetation monitoring emphasized structural habitat variables in order to provide a context for analysis of trends in animal abundance.
- The Floristic Quality Assessment (FQA) was used as suggested by Swink and Wilhelm (1994) for Chicagoland flora.
- One representative plot was established at each preserve in each of three vegetation communities (forest, grassland and wetland) using the CTAP methodology to ensure sampling of each community type, given the random location of the transects.

Each study category is presented in a separate section including study-specific methodology, field activities, analysis and results.



Legend	
	DOT Section 4(f) Lands
	Landfill
	Ultimate Airport Boundary
	Inaugural Airport Boundary

Exhibit 1
Location Map
 South Suburban Airport
 FPDWC Baseline Study Report

Scale: 1" = 1500 meters

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USER/USE SURVEYS

To determine potential impacts to users or to the use of the FPDWC properties, a number of parameters need to be quantified and measured over time for each preserve. These parameters include:

- Reservation and Programs Numbers
- Visitor Counts
- User Surveys

Information was gathered from logs maintained by the FPDWC, on-site vehicle and visitor counts, comment logs, visitor sign-in sheets and on-site interviews/questionnaires. A sub-consultant, Richard Day Research, Inc., (RDR) was contracted to design the survey instrument and collect all data. IDOT and FPDWC approved the initial sample design and the selection of the sub-consultant.

All exhibits and tables referenced in this section can be found in **Appendix A** at the end of this report.

METHODS

User surveys were implemented at Goodenow Grove Nature Preserve, Raccoon Grove Nature Preserve and Monee Reservoir. Initial, semi-structured interviews with users were conducted on-site. Participants were chosen randomly and asked a series of open-ended questions concerning the quality of their experience at the preserves. Responses to the semi-structured interviews were compiled and analyzed to identify themes important to users at District sites. These responses and identified themes were then used to construct survey questionnaires (see **Exhibit 2** for the survey instruments and results). Another round(s) of semi-structured interviews may be conducted during and post-construction.

While a certain random element was necessary to minimize the sampling bias, seasonal and weekend/week day components were necessary to accurately capture use at District sites. Thus each month one weekend and two week days were sampled. The specific days sampled each month were chosen randomly. A weather threshold was established to avoid biasing the sample due to extreme inclement weather. When extreme inclement weather arose, no sampling was done on that day, but on the next subsequent weekend/week day possible.

Data collection spanned a 12-month period, from June 2004 through May 2005. Dates of data collection are shown in **Table A-1**. A total of 36 days were sampled (12 weekend and 24 week days). Exit interviewers were stationed at all three preserves on all 36 days sampled. Face-to-face interviews were conducted with visitors as they left each preserve. Only adults (age 18 or older) were interviewed. In cases with youth groups (school groups, Boy Scouts, Girl Scouts, etc.) only the group leader was interviewed. Adults in groups were interviewed individually, unless respondents selected one as a proxy. Usually every visitor was approached and requested to complete the survey, however on a few especially busy days at Goodenow Grove and Monee Reservoir, every other visitor was interviewed. Data were weighted in the analysis to correct for such adjustments.

In all, interviews were attempted with 2,310 visitors. Of these, 2,014 completed the survey, representing an 87% response rate. Response rates at all three preserves were relatively consistent (from 85% at Goodenow Grove to 89% at Monee Reservoir). For visitors who refused to be surveyed, interviewers recorded the visitor's gender, approximate age, and whether or not they were alone or part of a group. A comparison of respondents versus refusers showed no meaningful demographic differences among these measures.

The survey focused on the amount of time spent at the preserve, activities, and satisfaction with the physical and environmental conditions at the preserve. Visitors were asked to use a scale of 0-10 in response to a series of questions to rate their satisfaction, with "0" being completely unsatisfied and "10" being completely satisfied. Anyone rating their satisfaction "8" or lower were asked to what they attribute their concerns. Respondents were told that the purpose of the research was to solicit their opinions regarding the FPDWC facility and their experiences at the site. IDOT was not identified as the survey sponsor.

RESULTS

In order to understand the areas from which each preserve draws its visitors, respondents provided their home zip codes. These zip codes were grouped into seven regions for analysis (see **Table A-2**). The majority of visitors to these three preserves come from the immediate local area (41%) and the South Suburbs (34%).

Visitors report strong satisfaction with the environmental and physical conditions at the three preserves (**Exhibit 3**). Average ratings were consistently above 8.5 overall (very positive). Water quality received the lowest scores overall (8.6 on average), primarily from Raccoon Grove visitors (very few cases, most of whom commented on the marsh behind the Preserve) and Monee Reservoir visitors, who tend to attribute their concerns to the muddy/murky condition of the reservoir in general (36%), the amount of algae (34%) or weeds/lily pads (17%). Far fewer cite human impact such as litter/pollution (6%) or the usage of chemicals/weed killer (6%). The few who gave relatively low scores for noise levels (most likely Raccoon Grove visitors) usually cite local road traffic (32%), nearby trains (31%) or other visitors (31%). Only 2% cite excessive noise from air traffic (planes, helicopters).

Those visitors less than "very satisfied" (scores of "8" or lower) with their overall FPDWC experience tend to cite fishing and boating conditions (Monee Reservoir), weather conditions (Goodenow Grove), excessive populations of geese/ducks (Monee Reservoir) and bugs (Goodenow Grove and Raccoon Grove), and issues with the facilities (Raccoon Grove is considered too small and lacking improvements; Goodenow Grove is considered too crowded at times and lacking in recreational improvements for children). Virtually no one reported issues with road traffic (5 cases out of 667) or air traffic (no responses). **Table A-3** shows the sources of lower satisfaction among all sites and for each preserve.

Wildlife Populations

Two out of three visitors reported seeing some type of wildlife during their visit. Of these about one in four (24%) believe that wildlife populations are increasing, while just 4% believe they are decreasing, usually due to natural causes and increased growth and

development in general. Very few attribute declining wildlife populations to increased road traffic. Most visitors to Monee Reservoir (73%) and Goodenow Grove (54%) reported seeing some form of wildlife. However, no more than 8% of visitors at any preserve who saw wildlife believe that these populations are decreasing. **Exhibit 4** shows visitor responses concerning wildlife.

Perceived Usage

One out of four visitors believe that the preserve they visited is under-used, especially those at Raccoon Grove (42%) and Goodenow Grove (41%). Only 17% of those at Monee Reservoir feel this way. Those expressing this opinion tend not to be concerned about any apparent under-usage (84% overall – relatively consistent by preserve). Only 5% feel the level of usage at the preserve they visited that day was excessive. This response came mostly at Monee reservoir (6%), compared to no more than 2% at the other two preserves. About half of these relatively few respondents were concerned about the high number of visitors. Visitor responses concerning perceived usage are shown in **Exhibit 5**.

Activities

Among those visiting the three preserves, the most frequent activities reported during these visits were:

- Fishing – 40% of visitors, virtually all at Monee Reservoir
- Walking/hiking – 28% of visitors, especially at Goodenow Grove and Raccoon Grove
- Picnics – 12% of visitors, especially at Goodenow Grove and Monee Reservoir
- Relaxing/reading/napping – 11% of visitors, consistent across all three preserves
- Walking pets – 9% of visitors, mostly at Goodenow Grove
- Boating – 7% of visitors, all at Monee Reservoir
- Attending FPDWC event/program – 7% of visitors, virtually all at Monee Reservoir
- Nature watching – 5% of visitors, consistent across all three preserves
- Sledding – 5% of visitors, primarily at Goodenow Grove
- All other activities (visiting nature centers, bird watching, biking, cross-country skiing) were mentioned by fewer than 5% overall (1-3% each)

Comparing the most frequent activities by preserve (over the entire 12-month period) half of the Goodenow Grove visitors went there to walk/hike the trails (50%), and one in five to walk their pets (21%). Year-round, 15% picnic and 13% go sledding at this preserve. The only activity reported with any frequency at Raccoon Grove was walking/hiking (56% of visitors). About one in 10 walk their pets (9%) or simply relax/read/nap (13%). Most Monee Reservoir visitors reported fishing (56%), with another 19% going there to walk/hike the trails, and one in 10 either picnicking (10%) or relaxing (11%). **Exhibit 6** shows the most frequent activities overall and at each preserve for all visitors.

Demographic Profiles

Among Goodenow Grove visitors (see **Table A-4**) those most likely to walk the trails with or without their pets tend to live in the local vicinity, though a significant number come from the South Suburbs. Only 3% live elsewhere in Will County. Sledding is most likely

to draw visitors from the South Suburbs (35%), with as many of these visitors coming from the immediate area. One in five comes from Indiana. This activity also tends to draw younger visitors (compared to other activities). Women are more likely to go to Goodenow Grove to picnic or to relax/read. Men are more likely to go there for sledding.

Most Raccoon Grove visitors (see **Table A-5**) go there to walk around the preserve (57% of visitors). These visitors are most likely to live in the immediate area or come from the South Suburbs. Four out of five visitors (81%) are men.

Visitors to Monee Reservoir (see **Table A-6**) go there either to fish or hike along the trails. Fishing draws more visitors from the South Suburbs (43%) than from the immediate area (30%), with 11% coming from Chicago. Few come from elsewhere in Will County. Similarly, those who go boating (without fishing) also tend to come from the South Suburbs. Both of these activities predominantly include men. The other activities (walking/hiking, relaxing, picnicking, etc.) are more often reported by local residents, and by women.

Summary of User Satisfaction

Overall, visitors expressed strong satisfaction with the three FPDWC sites. Those who were less satisfied most often attributed their experience to environmental causes outside of human control (e.g. weather). Very few visitors mentioned road traffic or air traffic as a concern or reason for lower satisfaction. Only two respondents volunteered concerns about the proposed South Suburban Airport and its potential impact on the preserves. Visitors to all preserves came predominantly from the local area (Beecher, Crete, Monee, Peotone and University Park/Park Forest) and the South Suburbs (Chicago suburbs south of the Eisenhower Expressway, with most respondents coming from Chicago Heights, Matteson, Steger and Richton Park).

Total Visitors and Projected Use

The total number of vehicles and people who visited each of the three FPDWC facilities during the 36 randomly-selected days of data collection were tallied and analyzed. These numbers represent a census of every person and vehicle that entered each facility, regardless of whether or not they were asked to be interviewed. Excluded from these data are those who entered the facility on official business, including FPDWC staff and contractors, local and county police/sheriff and Earth Tech and RDR staff. These data also distinguish between those who are considered visitors, meaning that they used the facility for at least five minutes, and “turnaround” non-visitors who entered and almost immediately left the facility (e.g. those who used rest room facilities and left, entered the site simply to make a U-turn, purchased something at the snack bar and left, etc.).

Virtually all visitors (at least 95%) arrive by car at each preserve. Those driving to Goodenow Grove average 3.5 people per vehicle, which is higher than the average number of vehicular occupants at Monee Reservoir (2.0) or Raccoon Grove (1.6). Raccoon Grove has more “turnaround” users (non-visitors) than those who actually stay and utilize the preserve (visitors). Fifty-six percent of the people who enter Raccoon Grove leave immediately or within five minutes, compared to 11% of those entering either Goodenow Grove or Monee Reservoir. Goodenow Grove has the highest

proportion of children (41% of all visitors), compared to Monee Reservoir (24%) and Raccoon Grove (14%).

Actual visitor counts from the entire sampling period were increased by a factor of 10 to calculate the projected total number of visitors annually at each site. This 360-day projection takes into account major holidays (Christmas, Thanksgiving, New Year's, Easter, etc.) when visiting is at a minimum or when facilities are closed. Based on these calculations the projected number of total entrants (visitors and "turnaround" non-visitors) per year at Goodenow Grove is 28,170, at Raccoon Grove is 8,090, and at Monee Reservoir is 53,780. **Tables A-7 – A-15** detail sampled and projected visitor data for each of the three preserves.

TERRESTRIAL MONITORING

AMPHIBIAN AND REPTILE MONITORING

Amphibian sampling was conducted in 2004. The purpose of the sampling was to locate common species and was not considered to be a full inventory. The combined suite of sampling methods noted most types of amphibians present, but not every habitat type present in each preserve was monitored. Some species likely occur elsewhere within the study sites, but are not normally present in the specific locations sampled. The combined suite of methods provides a species list for each specific sample location. Individual methods quantify abundance at those locations. While the study was designed to sample amphibians in and near important breeding sites, incidental reptile captures were also noted. Because most field work took place in the spring and in the vicinity of wetlands, the amphibian list is probably more thorough than the one for reptiles.

Studies centered on known or suspected amphibian breeding wetlands at Goodenow Grove, Raccoon Grove and Monee Reservoir. Woodland and grassland sites were chosen; these are described below. All Exhibits referenced in this section are contained in **Appendix B**. Sites were chosen based on existing knowledge, review of remote sensing data, consultation with Forest Preserve District staff and field reconnaissance.

The Goodenow Grove Woodland site is located in the central portion of the preserve, just north of a parking lot and picnic areas (see **Exhibit 7**). A loop trail bisects an elongate pond; oak woodland and flatwoods around the east half of the pond comprise the study site. This location was also sampled for a short time in 1991 (Mierzwa et al., 1991).

The Goodenow Grove Grassland site is set among a series of ephemeral wetlands in successional fields along Illinois Route 394 (see **Exhibit 7**). The location approximates the one sampled in 1990-91 (Mierzwa et al., 1991).

The Raccoon Grove study plots are in the southeast part of the preserve, centered on the only known palustrine wetland with breeding amphibians within the boundaries (see **Exhibit 8**). This same wetland was sampled in 1994 (TAMS, 1995).

The Monee Reservoir site was sampled in a restored prairie opening north of the parking lot entrance (see **Exhibit 9**). This area is bordered by Ridgeland Avenue on the west and by a ponded section of an un-named tributary flowing into Monee Reservoir (associated with beaver impoundments) on the north and east.

Methods

Methods are modified versions of those described in Heyer et al. (1994), and included drift fences, cover board arrays, frog calls noted during diurnal surveys, larval sampling and visual encounter surveys.

Drift Fences

Drift fences are especially effective for capturing animals that are nocturnal or that are surface active only under very specific weather conditions. The results are easily

quantified as catch per trap night. They are labor intensive to install, and may not capture some larger or more agile species.

At each study wetland a drift fence array was installed 15-meters from the normal early spring wetland edge. The center point of each array was located on a randomly determined compass bearing from the wetland center. One 30-meter long array was installed at each wetland. These were constructed from aluminum flashing embedded several centimeters into the ground, forming a barrier to migrating amphibians. Two pitfall traps were placed at the center point of each array, one on each side of the fence; pairs of funnel traps were located at each end.

Drift fences were opened on April 5, after the onset of amphibian surface activity, and monitored for approximately 45 days. Drift fences were checked every day except when freezing conditions precluded any possibility of movement. Animals were identified and immediately released. Representative examples were photographed for documentation.

Cover Board Arrays

Cover boards have long been used for qualitative amphibian and reptile surveys, and in a few cases the method has been modified to allow quantitative measurements (Fitch, 1992). Cover boards can be an effective means of locating some secretive species, especially certain types of small snakes.

Trapping webs are a specialized application of point transect theory. Point-center distance sampling is often used to monitor visually conspicuous animals such as birds, primates or lizards (Buckland et al., 1993). It has been adapted in the past for use with live-trap sampling of small mammals (Anderson et al., 1983) and pitfall-trap sampling of shrews (Mierzwa, 2002). The current study may be the first use of cover boards with this variant cover board array design.

The web design for the proposed study consisted of eight lines laid out on compass bearings and radiating out from a randomly located center point, with eight cover boards equally spaced along each line, for a total of 64 cover boards per sample site.

Squares of plywood 12 inches by 12 inches (30.5 cm x 30.5 cm) were placed in a standard pattern, with one edge of the array close to the wetland margin. Each cover board was marked with an identifying letter and number combination. The cover board spacing was initially based on estimated short-term movements of animals from the available literature. If numerous animals migrated completely through the web, this could violate one of the assumptions of the method. However, web size is limited by the extent of unbroken habitat at some of the preserves. In an attempt to balance these considerations, spacing between cover boards on each line was three-meters, resulting in a total trapping web radius of 24 meters. This encompassed estimated short-term movements of the majority of the species present while allowing placement within preserve boundaries. Under ideal circumstances a five-meter spacing may have been used; however such a design would have been too large for use at two of the sample sites because of the proximity of roads and trails.

Center points of each web were 25 meters distant from the approximate high-water wetland margin, and on a random compass bearing from the wetland center. Cover boards were checked every day concurrent with drift fence monitoring in April and early

May. Since animals were able to arrive at or depart from cover boards at any time, there was no apparent risk of sampling-related mortality. Animals encountered were measured and photographed to facilitate identification of recaptures.

The advantage of a trapping web design is the ability to calculate density, given a sufficient sample size (Anderson et al., 1983). However, the method remains experimental and untested in the current context. Successful application assumes that all animals present near the center of the web, where cover board density is highest, will be captured; however excessive numbers of recaptures can lead to an overestimate of density.

If density estimation proves to be problematic, then conventional measures of abundance associated with cover board studies (catch per unit effort) may be utilized instead. The success of the method is in the process of being evaluated.

Frog Call Surveys

Frog call surveys are efficient, in the sense that they require only three brief visits to each wetland, utilize no equipment, and do not require capturing animals. Results can be described using call indices, although this is subjective to some extent and can vary among different observers. Thus frog call surveys are a rough measure of relative abundance, with call intensity subject to seasonal timing and specific weather conditions. They are however a very practical method of documenting species presence, including uncommon species difficult to document with other methods.

The initial intent was to use the standard Chicago Wilderness frog call survey protocol, with three nocturnal visits to each wetland. However, nocturnal access to some sample sites remote from roads proved to be problematic. As a result, it was decided to simply note frog calls heard during diurnal visits.

Larval Sampling

Each wetland was sampled once for larvae in mid to late May. Three minnow traps were placed within each wetland sampled, attempting to include a range of habitat type (open water, emergent vegetation and submerged vegetation). Traps were checked each day for three consecutive days. Captured larvae were identified to either genus or species, whichever was practical given growth stage and identifying characteristics

Visual Encounter Surveys

Visual encounter surveys involve systematic scrutiny of terrestrial and wetland habitat, including turning and replacing cover objects, such as fallen logs. These surveys can be conducted in various ways, including time-constrained or area-constrained searches. Although not a specific quantitative element of the present study, incidental observations made while walking to or from sites would fall into this category.

Results

Drift fence captures were noted as captures per trap-night, with a trap night equal to a 24-hour period for each 15-meters of array (the standard length of each roll of aluminum flashing). Trapping web surveys utilizing cover boards may be expressed as density for

species with sufficient sample size, or as captures per trap night with one board for each 24-hour period representing a trap night. Larval survey results include a species list and captures per trap-night for each species or genus. Frog call survey results are expressed as simple presence-absence with qualitative notes on call intensity when appropriate.

Potentially comparable datasets include 1990-1991 drift fence monitoring at two Goodenow Grove locations and a few sites on private land (Mierzwa et al., 1991), 1994 drift fence monitoring at Raccoon Grove (TAMS, 1995), drift fence and time-constrained visual encounter survey data from Thorn Creek Woods and Lower Plum Preserve (Nuzzo and Mierzwa, 2000) and various studies conducted or contracted by the Forest Preserve District of Will County (Mauger, pers. comm.). Additional studies are available but usually have not been quantified in a comparable way.

A total of 12 species, seven amphibians and five reptiles, were captured or observed at the combined study sites (see **Tables B-1 – B-4** in **Appendix B**). The highest species richness was at Goodenow Grove Woodland, with a total of nine species. The remaining sites had five to six species each.

Amphibian movement into ponds took place during a series of rainfall events in mid and late March. Evidence of successful breeding was plentiful; egg masses of at least four amphibian species were observed at various locations. April was unusually dry, with only one rainfall event from April 5 through 16, and with relatively little of that precipitation falling in Will County. As a result, amphibians were unable to leave the immediate vicinity of ponds, or able to move only short distances, for a prolonged period of time. This would have strongly influenced amphibian capture results during the early part of the 2004 study period.

The two woodland sites had, not surprisingly, the greatest abundance of amphibians. At the grassland sites, reptiles dominated in either species richness (Goodenow Grove) or abundance (Monee Reservoir).

Drift fences proved to be the most efficient sampling method at three of the four sample locations, accounting for nine of the 13 species captured and 74.7% of all observations. At one site, Monee Reservoir, cover boards were slightly more effective than drift fences, but this site had a relatively low number of captures.

Cover boards did not add any species beyond those captured or observed by other methods, although they were fairly effective at capturing small snakes. Qualitative methods (frog call, larval and egg mass surveys) did add additional species; Eastern tiger salamanders (*Ambystoma tigrinum*) were noted only as larvae at two sites and Spotted salamanders (*Ambystoma maculatum*) were documented only through egg masses at one location.

Findings at the four sample sites are described below. Note that dry conditions in most of the spring of 2004 certainly affected the ability of amphibians to move on the surface.

Goodenow Grove. The majority of amphibians known to occur on the entire site were documented at one or both sample locations. The species known to occur within the preserve but not noted in 2004 generally occur in habitats other than the ones sampled, or are active later in the season. For example, Green frogs (*Rana clamitans*) are most

common in streams or permanent ponds, and Gray treefrogs (*Hyla versicolor*) breed in May.

Goodenow Grove Woodland. With nine species and 85 individuals documented, this was the richest site of the four sampled. Spring peepers (*Pseudacris crucifer*) were by far the most abundant species at this site, making up more than 62% of all captures. Common garter snakes (*Thamnophis sirtalis*) were also relatively abundant (12.9%), especially for a woodland site. Other species captured in smaller numbers included Blue-spotted salamanders (*Ambystoma laterale*, 10.6%), Western chorus frogs (*Pseudacris triseriata*, 4.7%), and Brown snakes (*Storeria dekayi*, 3.5%). Four additional species: Northern leopard frog (*Rana pipiens*), Bullfrog (*Rana catesbeiana*), Spotted salamander (*Ambystoma maculatum*), and Tiger salamander (*Ambystoma tigrinum*) were present but detected mostly through qualitative means. Northern leopard frogs were heard calling on several occasions and observed more than once, but the other three species were apparently relatively uncommon at this location.

Goodenow Grove Grassland. Six species and 25 individuals were recorded for this location. Western chorus frogs were the most abundant species (44.0%). Smooth green snakes (*Liochlorophis vernalis*) made up 20.0% of captures. Other species were represented by one or two individuals: Spring Peeper, Kirtland's snake (*Clonophis kirtlandii*), Brown snake and Common garter snake. The presence of the Illinois State Threatened Kirtland's snake is noteworthy. At least three other species of snake: Western fox snake (*Elaphe vulpine*), Plains garter snake (*Thamnophis radix*) and Massasauga (*Sistrurus catenatus*) have been reported in other portions of this grassland complex, well to the west and south but never at this precise location.

Raccoon Grove. Six species and 52 individuals were noted at Raccoon Grove. Most of the captures (73.1%) were of Western chorus frogs. Three species previously reported at Raccoon Grove were not observed there in 2004. American toads (*Bufo americanus*) were moderately common here in 1994 but were infrequently encountered at most Will County sites visited in 2004. Green frogs are typically associated with permanent water and would be expected to occur at the semi-permanent sample site only sporadically; and the Blanding's Turtle (*Emydoidea blandingii*) is known from a single 1994 observation.

Monee Reservoir. This site differed from the others sampled in that half of the species, and most of the individuals observed, were snakes. Only three amphibian species, American toads, Western chorus frogs and bullfrogs, were noted. Brown snakes, Plains garter snakes and Common garter snakes were all relatively common. No previous quantitative monitoring is available for Monee Reservoir. A few additional species are thought to occur within the preserve. Dave Mauger (pers. comm.) photo documented a Plains leopard frog (*Rana blairi*) somewhere within the preserve boundary. There have also been reports of Western fox snakes and Northern water snakes (*Nerodia sipedon*) from on-site staff. Although these reports are undocumented, suitable habitat is present. The presence of a few other relatively widespread species is also possible.

AVIAN MONITORING

Methods

Avian communities in Goodenow Grove, Raccoon Grove and Monee Reservoir were monitored from April – June 2004 in order to capture the majority of breeding residents and migrants. Monitoring consisted of three separate sampling events at each preserve from April – June. Each sampling event consisted of two days of monitoring by two field ecologists. The dates of sampling were April 7 and 12, May 17 and 19, and June 7 and 18, 2004.

Methods were designed to be consistent with the Critical Trends Assessment Program (CTAP) (Niven et al., 2002) bird monitoring protocols developed by the IDNR and utilized by the Illinois Natural History Survey (INHS, Niven et al., 2002). These methods are thoroughly tested and will allow comparability of results to other published studies.

The number of bird monitoring plots in any habitat patch was dependant on the size of the patch. Plots were set up prior to sampling and were used for all avian sampling. (These same plots were also used for vegetation monitoring so that avian data and vegetation data overlap spatially.) The center point was permanently marked, using GPS and a 24" length of ½" rebar pounded into the ground and labeled with a stamped metal tag.

Bird monitoring plots (50-meter radius) were placed along transects at 150-meter intervals in forested habitat or 300-meter intervals in grasslands and wetlands. The distance between transects equaled the distance between plots along a transect. The 50-meter plot radius was flagged at four locations corresponding to compass directions north, south, east and west. Sample transects and plots in Goodenow Grove Nature Preserve, Raccoon Grove Nature Preserve and Monee Reservoir are shown in **Exhibits 10 – 12 in Appendix C.**

Sampling began at the first monitoring plot (usually the center point) within a half hour of sunrise. Sampling continued until late morning, depending on weather. Because bird activity can drop off dramatically as the day progresses, the last point count was completed no later than 4 – 4 ½ hours after sunrise.

Fixed radius point counts were conducted for a total of ten minutes with the three, five, six, eight and ten-minute marks identified for purposes of comparison with other data sets. Numbers of individuals seen or heard within the plot radius were recorded by species. In wetlands, a 20-minute tape of ten wetland-dependent species was played following the ten-minute point count. The call of each species was played for one minute, followed by one minute of silence. Any species that responded were recorded. The calls of the following species were included on the tape: Black Rail, Sora Rail, Virginia Rail, King Rail, Least Bittern, American Bittern, Pied-billed Grebe, Common Moorhen, American Coot and Common Snipe.

All species observed, including incidental (off-transect) observations, were noted and recorded. However only species observed within the monitoring parameters (within the 50-meter sample plots and 10-minute point count intervals) were subjected to further analysis.

When applicable, bird species were classified as Area Sensitive Species (ASSp) or Habitat Dependent Species according to CTAP avian protocols, as Federal or State Threatened or Endangered Species, or as Neotropical Migrants. A species' area sensitivity (classified as high, moderate or low) refers to the tolerance of that species to habitat fragmentation. For example, if a species is highly area sensitive then it will require large tracts of habitat for nesting. Habitat Dependent Species are those that can only be found in a particular habitat, i.e. grassland dependent species are those found primarily in grasslands.

Density measures were calculated from point count data for each species and each classification of species by dividing the total for each category by the area of the sample plot (50-meter radius = 7,854 m²). It was not possible to run an analysis of variance (ANOVA) with the number of samples collected during the Baseline Study.

Results

All tables and Exhibits referenced in this section are contained in **Appendix C**. Over the course of monitoring 111 species and 2,015 individuals were identified, including incidental observations. A master species list is presented in **Table C-1**.

Point count surveys (on-transect monitoring within sample parameters) identified 1,097 individuals representing 86 species and 12 taxonomic Orders. This included 33 Area Sensitive Species, 45 Habitat Dependent Species and 33 species of Neotropical Migrants. **Table C-2** details the species observed during point count surveys.

For each habitat, preserve and habitat-within-a-preserve the total number of species, Area Sensitive Species (high, moderate and low), Habitat Dependent Species (forest, grassland and wetland) and Neotropical Migrant species was tallied (see **Table C-3**). Results indicate that wetland habitats had the highest diversity, with wetland habitats at Monee Reservoir having the greatest diversity among the three preserves. Forest dependent species comprised the highest portion (approximately 56%) of Habitat Dependent Species overall, and most were observed in forested habitat at Goodenow Grove or Raccoon Grove Nature Preserves. The highest numbers of neotropical migrant species were found in forested habitat in Goodenow Grove and in wetland habitat in Monee Reservoir.

No threatened or endangered species were observed during point count surveys however one Illinois State Endangered Species, the Northern Harrier (*Circus cyaneus*), was incidentally observed in Goodenow Grove Nature Preserve on April 7, 2004, in the grassland community near monitoring site GA-3 (See **Exhibit 10**).

Density was calculated for each monitoring plot and the mean was used to calculate density for each preserve (see **Table C-4**). Results indicate that Monee Reservoir had the highest overall density with an average of 5.4×10^{-3} birds/m² and 2.0×10^{-3} species/m². Densities were also calculated for each habitat and habitat-within-a-preserve. These results are shown on **Table C-5** and indicate that wetland habitats had the highest densities overall with an average of 6.9×10^{-3} birds/m² and 2.4×10^{-3} species/m².

VEGETATION MONITORING

Methods

Vegetation monitoring was conducted on nine days between June 3 and September 8, 2004, in Goodenow Grove Nature Preserve, Raccoon Grove Nature Preserve and Monee Reservoir. This component of the study emphasized structural habitat variables and is intended to provide context that will facilitate analysis of any trends in animal abundance.

Analysis of the vegetation data followed the CTAP protocols for data analysis for all strata; by quadrat; and by each stratum using the Floristic Quality Assessment (FQA) methodology (Swink and Wilhelm, 1984). The FQA evaluates vegetation at a given site based on a value assigned to each species in the Chicagoland flora. This C value or 'Coefficient of Conservatism' ranges from 0-10. In the FQA system, C values of zero indicate species that are the least conservative and C values of ten, the most conservative.

Eighty-nine percent of native Chicago species have a C value of four or higher and inhabit specialized communities; the remaining 11% have a value of three or less, and are weedy species with no allegiance to any community (Swink and Wilhelm, 1984). The calculation of the collective values at a given site results in a mean C value, the mean C value along with the total number of species at the site are used to calculate the Floristic Quality Index (FQI) value. In general, a mean C value of at least 3.5 or an FQI of 35 or greater indicate that a site has natural area quality. Areas with a mean C of two or less or an FQI value of less than 20 are considered to have no natural quality.

Sampling Protocols

Bird-Plot Vegetation Protocols

The thirty non-CTAP vegetation plot centers overlaid bird plot centers (see **Exhibits 10 – 12** in **Appendix C**). Woody and herbaceous vegetation were sampled within each bird plot. Density and species composition of overstory trees, tree saplings and shrubs were determined, as well as percent cover by dominant herbaceous species. Size ranges by strata and percent cover classes followed the CTAP protocols described below.

At each bird-plot center, overstory trees were sampled using point-quarter methodology (Krebs, 1989). Compass directions were marked during establishment of the bird plots. Distance from plot center to the nearest tree in each quarter was recorded, along with species identification and diameter at breast height (dbh). Tree saplings less than five centimeters dbh and shrubs one-meter or greater in height were surveyed within a five-meter radius plot by tallying number of stems per species. Herbaceous species and woody species less than one-meter high were sampled one-meter from the center point in four one-square-meter quadrats (one per quarter), recording percent cover of 10% or greater.

CTAP-Plot Vegetation Protocols

Six plots in the center of distinct community types at each preserve, i.e. forest, wetland and grassland, were sampled intensively using CTAP vegetation sampling protocols (Carroll et al., 2002).

Establishing Plots

- Forest: Vegetation was sampled in three 50 x 10-meter plots along 50-meter transects that radiated from the bird plot center at randomly selected compass bearings (1° – 360°), starting at a distance of 10 meters from the center point. No two transects were closer together than 53° to avoid overlap.
- Wetland: A 50-meter baseline was established parallel to the long dimension of the wetland along the side of the wetland that was most accessible. A 41-meter transect was run perpendicular to the baseline into the wetland at a randomly selected distance along the baseline. Transects were terminated when they reached open water with less than 30% plant cover or when the opposite end of the wetland was encountered.
- Grassland: A 50-meter baseline was established along the transect line that ran through the center of the bird plot. A 41-meter transect was run perpendicular to the baseline at a randomly selected distance along the baseline. To avoid bias the direction of the 41-meter transect – right or left from the baseline – was selected by a coin toss. If there was not a sufficient amount of habitat on the first transect to run the entire length, then another transect was run from a randomly selected point on the baseline and continued as before. Transects were at least eight meters apart and no closer than four meters from the edge of suitable habitat.
- If a transect ran through a patch of uncharacteristic habitat (garbage, excavations, unnatural soil mounds, etc.) it was relocated by choosing another random azimuth (forest) or random number on the baseline (wetland and grassland). Treefall gaps did not constitute uncharacteristic vegetation. If the transect crossed an interruption in vegetation, such as a stream or path, where more than one quadrat fell within the interruption, the transect was terminated on the closest edge of the interruption and resumed, at the same point along the transect, on the distal side of the path.
- CTAP diagrams depicting the layout of transects, plots and subplots are included at the beginning of **Appendix D**.

Site Documentation

At each CTAP plot the general characteristics of the area around the center point were documented as follows:

- General site characteristics: These included classifications of the vegetation community (based on the Illinois Natural Areas Inventory categories and CTAP classifications); additional plant species; brief notes about any obvious disturbances (within 60 meters of the center point); the general ‘health’ of the community, with comments on visible evidence of disease, insect damage, pollution drought, etc.
- Slope and Aspect: The average slope and aspect of the general area around each transect was recorded, measured in percent. Aspects were measured in

- degrees and azimuths and were always taken facing downhill from the point where slope was measured.
- Photographs: Photos were taken from each plot's center point in the four cardinal directions. The number and direction of each photo was recorded on the respective data sheet for identification.
 - GPS data and transect/plot markers: A global positioning system (GPS) was used to record the exact location of each baseline zero-point, transect zero-point and plot center.

Data Collection

The ground cover of vascular plants was estimated in one-quarter square-meter quadrats along each transect. All herbaceous and woody (<one-meter tall) species rooted inside the quadrat were recorded along with an estimate of cover for each species. To standardize cover estimates, a modified Daubermire method was used (Bailey and Poulton, 1968; Abrams and Hulbert, 1987). Cover classes used were A=<1%; B=1-5%; C=5-25%; D=25-50%; E=50-75%; F=75-95%; and G=95-100%. . Additionally, percent cover estimates were reported for total vascular herbaceous cover, total woody cover (<one-meter tall), total vascular herbaceous and woody cover combined, bare ground, leaf litter and moss cover. Only plants rooted inside the quadrats were counted and, of those, only the portion of each plant that fell naturally within quadrat boundaries. Protocol for determining what vegetation to count came directly from CTAP: "In all cases, vegetation is only counted for individuals that are rooted in the quadrat, and vegetation will only be counted if it covers part of the quadrat while undisturbed. In other words, plants rooted in, but that are bent over so their cover is mostly outside the quadrat, will only be given a cover value based on the foliage that covers the quadrat where it lies naturally."

Forest ground cover was sampled in one-quarter square meter quadrats at an interval of every five meters along the transect, starting at the zero-meter point. A total of 10 quadrats were sampled per transect. Quadrats were placed one-meter from the transect on alternating sides, starting on the left at the zero-meter point.

Wetland and grassland ground cover was sampled in one-quarter square-meter quadrats at an interval of every two meters along the transect, starting two meters from the baseline. A total of 20 quadrats were sampled per site. Quadrats were placed one-meter from the transect on alternating sides, starting on the left at the two-meter point.

Woody plants and vines in the shrub layer were sampled in a subplot centered along each transect. Each stem less than five centimeters dbh and at least one meter tall and rooted in the subplot (counted at ground level) was recorded by species. At least half of the diameter of the stem had to be within the plot in order to be counted.

The forest shrub subplot measured 50 by 4 meters, extending two meters on each side of the transect. Stem counts for each 10-meter interval along the transect were kept separate as well as counts for the zero to one-meter and one to two-meter widths on either side of the transect.

The wetland and grassland shrub subplot total area was 41 by 4 meters, the same as the ground cover sample area. The plot was centered on the transect, extending out

two-meters on either side. Stem counts for the zero to one-meter and one to two-meter widths were kept separate.

Woody plants in the tree layer were sampled within the entire plot area. Stems were recorded by species and by one of nine dbh size classes in centimeters. Dbh classes used were A=5-9.9; B=10-14.9; C=15-19.9; D=20-24.9; E=25-29.9; F=30-39.9; G=40-49.9; H=50-59.9; and \geq 60 centimeters. At least half of the diameter of the stem had to be within the plot in order to be counted. For each forest transect, the tree layer was sampled within a 50 by 10-meter plot centered along each transect. Stem counts in each 10-meter interval were kept separate. For wetland and grassland plots, the tree layer was sampled in a plot equal to the length of the baseline times the length of the longest transect, usually 50 by 41 meters.

A species list was generated by searching the entire plot area and recording every species encountered. Searching, collecting and identifying specimens was limited to 30 minutes. If conditions were unsuitable (i.e., inclement weather or darkness) this step was omitted. For forest plots, a 50 by 10-meter plot was centered on a transect, usually the third. For wetland and grassland plots, the plot was established equal to the length of the baseline times the length of the longest transect, usually 50 by 41 meters.

Results

All tables referenced in this section are contained in Appendix D. A total of 21 forest, nine grassland and six wetland plots were sampled for a total of 36 plots. Seven of those were CTAP plots (two forest, three grassland, two wetland). Two wetland plots, MB-1 at Monee Reservoir and CTAP plot RW-1 at Raccoon Grove were not sampled because of high water conditions throughout the growing season. Analysis of the vegetation data followed the CTAP protocols for data analysis for all strata; by quadrat; and by each stratum using the Floristic Quality Assessment (FQA) methodology (Swink and Wilhelm, 1984). Bird-plot FQA results are found in **Tables D-1.1 – 1.4**. CTAP plot FQA results are found in **Tables D-2.1 – 2.5**.

Dominant Species Percent Cover

The results for all plots by preserve and habitat are found in **Table D-3**.

Bird- Plot Vegetation Analysis

- Herbaceous cover: To determine the average percent cover for each species for each plot, cover values for each quadrat were totaled and divided by four.
- Shrub and sapling cover: To determine the average percent cover for each species for each plot, the total number of individuals per species was divided by the area to get a percent value.
- Trees: Overall tree density and species basal area (BA) were derived from the point-quarter data. Measuring from the center point in each plot quarter, the distance, dbh and species of the nearest tree was recorded. An average tree distance was derived by dividing the total of all distances measured, by four. This value reflects total tree density. The total basal area (BA) of each species was determined using the dbh value for each plot. The mean BA was calculated for each species by dividing the total BA by the number of trees for that species. This value was used to determine cover % values and dominant species for each plot (**Table D-3**).

CTAP Plot Vegetation Analysis

- Herbaceous cover: The total percent cover for each species was determined by combining the cover values for all quadrats; the average percent cover for the dominant species was determined by dividing total percent cover by the total number of quadrats – 30 quadrats per forest plot or 20 quadrats per grassland and wetland plot.
- Shrub and sapling cover: To determine the average percent cover for each species for each plot, the total number of individuals per species was divided by the area to get a percent value.
- Trees: The dbh of each tree was assigned to one of nine dbh value ranges. The total BA of each species was calculated using the average value in each range; the mean BA is determined by dividing the total value by the number of individuals.

Bird-Plot Vegetation Summary

The FQA results are summarized in **Table D-1.1** by transect and in **Table D-3** by plot. Comprehensive FQA reports by transect are found in **Appendix E**. Results for each preserve are discussed below.

Goodenow Grove

Two grassland and two forest transects were randomly selected in Goodenow Grove. Parallel grassland transects GA and GB are located in the open habitats in the northwest corner of the preserve, adjacent to I-394 on the north and west. Vegetation is dominated by grasses, sedges and forbs.

Transect GA

- Plot GA-1 is in a mesic/wet-mesic prairie habitat. Saw-tooth sunflower (*Helianthus grossesserratus*), followed by Red-rooted spike rush (*Eleocharis erythropoda*) and Tall goldenrod (*Solidago altissima*) are the dominant herbaceous species. Eastern cottonwood (*Populus deltoides*), Bur oak (*Quercus macrocarpa*) and Downy hawthorne (*Crataegus mollis*) comprise the tree layer and Sandbar willow (*Salix interior*) comprises the shrub layer.
- Plot GA-2 is in a wet-mesic prairie/sedge meadow habitat. Half of the quadrats had bare ground/leaf litter and indicators of inundation were observed. The adventive grass Redtop (*Agrostis alba*) occurs in every quadrat; Tall goldenrod is also dominant. Two sedge species found in the plot were not identified to species. Eastern cottonwood occurs in the tree layer.
- Plot GA-3 is in a mesic tallgrass prairie/sedge meadow habitat. This plot was sampled using CTAP methodology and is discussed below.

Transect GB

- Plot GB-1 is an old field/degraded mesic prairie habitat dominated by the introduced grasses Kentucky bluegrass (*Poa pratense*) and Redtop. Common blackberry (*Rubus allegheniensis*) averages 31.25% cover in the plot. The native prairie species Prairie sunflower (*Helianthus rigidus*), Mountain mint (*Pycnanthemum virginianum*) and Black-eyed susan (*Rudbeckia hirta*) are each present in one quadrat. Eastern cottonwood occurs in the tree layer. Gray

- dogwood (*Cornus racemosa*) and Common blackberry are dominant in the shrub layer. The introduced species Autumn olive (*Elaeagnus umbellata*) and Multiflora rose (*Rosa multiflora*) are present in the shrub layer.
- Plot GB-2 is in an old-field/degraded mesic prairie habitat. Pale sedge (*Carex granularis*) and Tall goldenrod have the largest percent cover in the herbaceous layer. Cocksbur hawthorn (*Crataegus crus-galli*) is the only species in the tree layer. The introduced species, Autumn olive, is dominant in the shrub layer.
 - Plot GB3 is in a marsh/sedge meadow habitat that is dominated by Tussock sedge (*Carex stricta*). All quadrats had 50% or more cover percentage of litter. The native wetland species Blue-joint grass (*Calamagrostis canadensis*) was present in one quadrat. Green ash (*Fraxinus pennsylvanica* var. *subintegerrima*) is dominant in the tree layer.

Transect GC is located just south of the grassland transects. It extends east/west through forested communities that include mesic upland forest and wet-mesic floodplain forest. There are three stream crossings. The overstory canopy is predominately Red oak (*Quercus rubra*) and White oak (*Quercus alba*). There were no introduced species found in any layer, in any plot. The shrub and sapling layer includes common forest understory species such as Ironwood (*Ostrya virginiana*), Bladdernut (*Staphylea trifolia*), Choke cherry (*Prunus virginiana*), and Black haw (*Viburnum prunifolium*). The disturbance-tolerant native forb Black snakeroot (*Sanicula gregaria*) is dominant in the herbaceous layer in every plot; other disturbance increasers such as White snakeroot (*Eupatorium rugosum*); Honewort (*Cryptotaenea canadensis*); and Enchanter's nightshade (*Circea lutetiana* var. *canadensis*) were also common.

- Plot GC-1 is a mesic forest plot at the west end of the GC transect. The plot is less than 50 meters south of a forest/grassland edge. The tree canopy is dominated by Red oak. Downy hawthorn and Common blackberry are dominant in the shrub layer. Black snakeroot and Honewort are the dominant ground cover; these forbs are considered indicators of past grazing disturbance.
- Plot GC-2 is a mesic upland forest habitat on a terrace edge above an adjacent wet-mesic floodplain forest habitat. White oak is dominant in the tree layer. Black cherry (*Prunus serotina*) was the only species in the shrub layer. The herbaceous layer was dominated by Black snakeroot (31.25%). Four other native forbs had an average percent cover of 18.75: Woodland knotweed (*Polygonum virginianum*), White snakeroot, Honewort and Enchanter's nightshade.
- Plot GC-3 is in mesic upland forest habitat on the west face of a steep slope. The overstory canopy is dominated by Red oak and the understory is predominately Ironwood. Tree density is the second highest on the GC transect (average tree distance 2.51-meters). The shrub and sapling layer is dominated by Ironwood and Bladdernut. Black snakeroot and Rue anemone (*Anemonella thalictroides*) are dominant in the herbaceous layer.
- Plot GC-4 is in a wet-mesic floodplain forest adjacent to the Plum Creek channel at the point of a meander bend. Trees are widely spaced (average tree distance 11.45 meters) and several large downed trees are scattered within the plot. Bur Oak (*Quercus macrocarpa*) is dominant in the tree layer and Bladdernut is

- dominant in the shrub layer. Three common forbs comprise the largest percent cover (18.75% each) in the ground cover: Wild ginger (*Asarum canadensis*), Wood nettle (*Laportea canadensis*) and Black Snakeroot.
- Plot GC-5 is in a mesic upland forest habitat, but ends 20 meters east of a wet-mesic floodplain forest edge. Tree density is the third highest (average tree distance 2.92 meters). Ironwood is the dominant species in the tree and shrub layer. Black Snakeroot is dominant in every quadrat of the herbaceous layer.
 - Plot GC-6 is in a mesic upland forest habitat dominated by Red oak. There are large diameter White and Bur oaks adjacent to the plot. The plot itself is very shaded. Tree and shrub density is the highest of all plots. The tree average distance is 1.93-meters; total shrub count is 65 (82.8% cover). Black Haw is the dominant shrub (47 each, 60% cover) and Black snakeroot is dominant in the herbaceous layer.

Transect GD is located in a small, discontinuous forest unit northeast of the intersection of Goodenow Road and I-394. The dominant tree species are Red, White and Bur oak. The dense shrub layer, dominated by thorny species such as Wild gooseberry (*Ribes missouriense*), is an indicator of past grazing disturbance. None of the oak species that dominate in the overstory canopy are found in the shrub layer. Of all Goodenow Grove forest transects, this transect has the highest percentage of invasive shrubs, such as Arrowwood viburnum (*Viburnum dentatum*), Honeysuckle (*Lonicera* sp.) and Multiflora rose in the herbaceous and shrub layer. The invasive introduced forb, Garlic mustard (*Alliaria petiolata*), is present in the herbaceous layer.

- Plot GD-1 is in degraded mesic upland forest habitat. Green ash and White oak are dominant in the tree layer. Average tree distance is 3.53 meters. The dense shrub layer is comprised of nine species and dominated by the introduced Arrowwood shrub and Green ash saplings.
- Plot GD-2 is in degraded mesic upland forest habitat. White oak is dominant in the tree layer. Average tree distance was the highest in this plot (4.61 meters). There are 11 species in the dense shrub layer. The introduced Arrowwood is the dominant shrub species, followed by Downy hawthorn saplings and Common blackberry. Wild gooseberry and the introduced shrub Amur honeysuckle (*Lonicera maackii*) have the highest percent cover in the herbaceous layer.
- Plot GD-3 is in degraded mesic upland forest habitat. Bur oak is the dominant tree. This plot had the highest tree density; the average tree distance is 1.74 meter. The shrub layer is dominated by wild gooseberry. The herbaceous layer is composed of the common, prickly and unpalatable species that increase under grazing disturbance. The dominant species is White avens (*Geum canadense*) followed by Stickseed (*Hackelia virginiana*), Tall agrimony (*Agrimonia gryposepala*) and Enchanter's nightshade (*Circea lutetiana* var. *canadensis*).
- Plot GD-4 is in a degraded mesic upland forest. White oak is the dominant tree species. Average tree distance is 2.51 meter. Wild gooseberry is dominant in the shrub layer. The herbaceous layer is dominated by Amur honeysuckle. Other introduced species include Coralberry (*Symphoricarpos orbiculatus*) in the herbaceous layer and Multiflora rose in the shrub layer.

Raccoon Grove

Two parallel forest transects, RA and RB, cut north/south across the center of Raccoon Grove. The habitat is primarily mesic upland forest with some patches of wet-mesic upland forest, wet-mesic floodplain forest and northern flatwoods habitat. Both transects cross the Rock Creek channel.

Transect RA

- Plot RA-1 is in a mesic upland forest habitat with a mixed canopy of Oak species and Sugar maple (*Acer saccharum*) and an understory canopy of Ironwood trees. Average tree distance was 2.66 meters. Black cherry saplings are dominant in the shrub layer. There is a dense herbaceous layer dominated by Wild geranium (*Geranium maculatum*) and Black snakeroot, both common survivors of past grazing disturbance.
- Plot RA2 is a mesic upland forest habitat dominated by Sugar Maple in the tree and shrub layer. Average tree distance was 4.54 meters. Only two native forbs were found in the herbaceous sample; one quarter to three-quarters of each quadrat was unvegetated.
- Plot RA-3 is south of the Rock Creek channel on a low terrace, and is also adjacent to a private property boundary east of the plot. The habitat is wet-mesic floodplain forest. The tree layer is dominated by Ironwood and the average distance is 5.25 meters, the highest value of all Raccoon Grove plots. The shrub layer is dominated by Downy hawthorn. There is a dense herbaceous layer dominated by Wild ginger and May apple (*Podophyllum peltatum*). The introduced, invasive forb, Garlic mustard, was present in one quadrat.
- Plot RA-4 is in a mesic upland forest habitat with a sparse tree and shrub layer. Black walnut (*Juglans nigra*) had the largest basal area. Average tree distance was 3.58 meters which is the median value for the Raccoon Grove plots. There is a rich herbaceous layer consisting of 12 species of native forbs, sedges and vines. Wild geranium occurred in all plots and Nodding wild onion (*Allium cernuum*) in three. No invasive species were recorded.
- Plot RA-5 is located in a wet-mesic upland forest habitat that is dominated by Black haw and Shagbark hickory (*Carya ovata*) in the tree layer. Average tree distance is 3.06 meters. Three-quarters of the ground cover was bare ground/leaf litter. The herbaceous layer includes four forb species, one vine and one tree species. Multiflora rose occurs in the shrub layer.
- Plot RA-6 is in a northern flatwoods habitat dominated by Swamp white oak (*Quercus bicolor*) in the tree layer. The average tree distance is 2.86 meters. The shrub layer is dominated by Shagbark hickory and Downy hawthorn. Native grasses and sedges account for a quarter to half of the ground cover in three quadrats.
- Plot RA-7 is in a disturbed mesic upland forest habitat near a forest/prairie edge. This plot is dominated by young Green ash trees in the tree and shrub layer. The average tree distance is 4.39 meters. There is a high shrub density, including two invasive species, Common buckthorn (*Rhamnus cathartica*) and Multiflora

rose. The herbaceous layer is dominated by Honewort and Black snakeroot, forbs that are indicators of grazing disturbance.

Transect RB

- Plot RB-1 is located in a mesic forest habitat that is dominated by Basswood (*Tilia americana*) and Sugar maple in the tree layer and Sugar maple saplings in the shrub layer. The average tree distance is 2.80 meters. Three-quarters of the ground cover quadrats are unvegetated and one-quarter is sparsely vegetated by two native forbs.
- Plot RB-2 is in a mesic upland forest habitat with a Basswood/Sugar maple canopy and a sparse shrub layer. The average tree distance is 4.41 meters. Ground cover is comprised of eight native species and dominated by Wood nettle and Wild ginger. There were no introduced species recorded.
- Plot RB-3 is in a mesic upland forest habitat dominated by Shagbark hickory. Average tree distance is 2.18 meters, the lowest value of the Raccoon Grove plots. Downy hawthorn is the only species in the shrub layer. The dense ground cover is composed of six native forbs. Jack-in-the-pulpit (*Arisaema triphyllum*) is dominant.
- Plot RB-4 is in a wet-mesic upland forest habitat just east of a woodland pond. The tree layer is dominated by Green ash with an under story of Downy hawthorn. Average tree distance is 4.41 meters. Downy hawthorn is the only species in the shrub layer. Honewort is dominant in the herbaceous layer.

Monee Reservoir

The Monee Reservoir transects MA and MB run east/west across several habitat types including old-field, emergent, open water and forested wetland, and recreated prairie. Typical of areas recovering from agriculture and mining, vegetation is dominated by weedy native species and adventive species.

Transect MA runs east from Ridgeland Road near the northern boundary of the preserve.

- Plot MA-1 is located in old-field habitat at the top of a man-made hill created from excavation spoil. Vegetation is dominated by European meadow grasses. The four species recorded are all introduced species. Kentucky bluegrass is dominant throughout the plot along with White clover (*Trifolium repens*). There are no trees or shrubs in the plot.
- Plot MA-2 is located in an emergent wetland dominated by Reed canary grass (*Phalaris arundinacea*). A small portion of the plot includes an adjacent wooded wetland on the east. Box elder (*Acer negundo*) is the dominant tree and also occurs in the shrub layer with American current (*Ribes americanum*).

Transect MB runs east from Ridgeland Road and ends at the edge of open water in the northeast corner of the preserve.

- Plot MB-1 was located in a wooded wetland adjacent to a stream channel at the head of Transect MB. Due to high water levels during the 2004 growing season, no data were collected from this plot.
- Plot MB-2 is a mixture of wetland and old-field vegetation. Reed canary grass is dominant throughout. Half of the plot is has a thick cover of dead Reed canary grass stalks and leaves. Eastern cottonwood appears in the tree layer.
- Plot MB-3 is in the northeast corner of the preserve where a marsh/prairie community has been recreated. The graded slopes surrounding the marsh have been planted with a tall-grass prairie seed mix. Vegetation cover is sparse and uneven, and the species mixture is dominated by grasses. Charred grass tufts were observed showing where a prescribed burn had been conducted. Big bluestem (*Andropogon gerardii*) is the dominant species throughout the plot. The introduced, invasive, forb, White sweet clover (*Melilotus alba*) was also found in three-quarters of the plot.

CTAP Plot Vegetation Summary

Comprehensive FQA reports by plot are found in **Appendix E**.

Goodenow Grove

- GC-2 Forest Plot

The plot is located in mesic forest habitat on an upland terrace just south of the forest/grassland edge to the north. Part of the wet mesic floodplain forest community to the south is included in the plot. The forest canopy in the vicinity of the plot is dominated by oaks.

Sampling took place on September 7, 2004. Three transects were laid out extending 86°ENE, 229° SSW, and 298° WNW from the center. A total of 54 species were recorded – 53 (98.1%) are native. White oak is the dominant tree in the overstory and Red oak is dominant in the shrub layer. The herbaceous stratum is dominated by Black Snakeroot (*Sanicula gregaria* FRQ23; RFRQ12.2), followed by Clearweed (*Pilea pumila* FRQ16;RFRQ8.5). One introduced shrub, Common Buckthorn (*Rhamnus cathartica*), was recorded in the tree plot on Transect 3.

- GA-3 Grassland Plot

This plot is located in the mesic tallgrass prairie/sedge meadow complex found at the northwest corner of the preserve adjacent to I-394. The grassland plot is located toward the more mesic, eastern, end of the preserve, midway between the highway to the northwest and the upland forest to the south/southeast.

Sampling took place on August 31, 2004. The 50-meter baseline extends north and south. The 41-meter transect extends east from a sedge meadow habitat at the baseline, following a gentle gradient through wet-mesic and mesic prairie. The transect starts in a sedge meadow habitat and includes mesic, wet-mesic prairie and sedge meadow habitat. A total of 47 species were recorded – 40 (88%) are native. The plot is dominated by native perennial forbs (44.7%). Perennial native grasses and sedges make up nearly 15 percent (6.4% and 8.5% respectively). The most frequent species is Big bluestem (FRQ17; RFRQ17.9), followed by Daisy fleabane (FRQ12; RFRQ11.3) and Tall goldenrod (FRQ10; RFRQ9.4). There no occurrences of shrubs or trees in the plot.

- GW-1 Wetland Plot

The wetland plot is located north of Goodenow Road and just east of a recreational trail. The community is a groundwater-fed, emergent wetland that extends north/south along the base of steep bluff in a wide strip, bordered on the west by a steep wooded slope and on the east by a thin band of woods and a lake. A spring run flows east from the bluff to the lake. CTAP sampling took place on September 1, 2004. The 50-meter baseline extends north and south along the base of the bluff and the 41-meter transects runs east from the bluff toward the lake to enable the sample to reflect the topographic and hydrologic gradient in the community.

A total of 59 species were recorded – 51 (90%) are native. The plot is dominated by native perennial forbs (47.5 %), and perennial grasses (8.5%) and sedges (11.9%). In the herbaceous stratum, the most frequent species are Redtop (FRQ15; RFRQ 8.6) and Tall goldenrod (FRQ15; RFRQ 8.6). The dominant species in the shrub layer are Gray dogwood (FRQ4; RFRQ33.3) and Sandbar willow (*Salix interior* FRQ7;RFRQ33.3). A single occurrence of the introduced species, Autumn Olive was recorded in the shrub plot. The woody vegetation plot includes nine Downy Hawthorns trees.

Raccoon Grove

- RA-4 Forest Plot:

Sampling took place on September 8, 2004. The plot is centrally located in the mesic upland forest habitat between Pauling Road to the north and the restored prairie habitat to the south. The plot is adjacent to a private property boundary. The area in vicinity of the plot is a multi-aged oak-hickory forest. Many oak snags were observed.

The three 50-meter transects were laid out extending 184°, 243° WSW, and 336°NNW from the center. A total of 53 species were recorded – 50 (94.3%) are native Red oak is the dominant tree. Multiflora rose and Shagbark hickory are the dominant species in the shrub layer. The herbaceous stratum is dominated by a native vine, Virginia creeper (*Parthenocissus quinquefolia* FRQ 28; RFRQ17.0), followed by Woodland knotweed (*Polygonum virginianum* FRQ17; RFRQ10.3). Two introduced species, Multiflora rose and Japanese barberry, occur in the shrub layer.

- RG-1 Grassland Plot:

CTAP sampling took place on August 10, 2004. The grassland plot is located south of the mesic upland forest, in a restored prairie west of Egyptian Trail. The plot is located approximately midway between the forest edge to the west and the road to the east. The 50 meter plot baseline extends north and south and the 41 meter transect runs east from the baseline.

A total of 33 species were recorded – 27 (81.8%) are native. The plot is dominated by native perennial forbs (54.5%), and native perennial grasses (9.1%) and sedges (6.1%). In the herbaceous stratum, the most frequent species is Big bluestem (FR20; FRQ 12.5), which was recorded in every quadrat. The non-native Kentucky bluegrass was the next most frequent species (FRQ14;FRQ 8.8), followed by native forbs Heath aster (*Aster ericoides* FR13;RFRQ 8.6) and Early goldenrod (*Solidago juncea* FR12;RFRQ 7.5). The native shrub Gray dogwood was found in half of the herbaceous quadrats (FR10; RFRQ 6.3) and was the only shrub occurring in the shrub plot.

Monee Reservoir

▪ MG-1 Grassland Plot

CTAP sampling took place on August 11, 2004. The grassland plot is located at the southern edge of the preserve just east of Ridgeland Road. This area is a tall-grass prairie recreation in a recovering agricultural field. The prairie slopes gently NE to SW. The 50-meter baseline was established running northeast/southwest; the 41-meter transect extends northwest. The baseline was established so that the transect would be situated at an angle to avoid running parallel to a wide, shallow swale that runs through the plot.

A total of 40 species were recorded – 32 (80%) are native. The plot is dominated by native perennial forbs (55%), native perennial grasses (10%) and non-native forbs (15%). The most frequent species are Big bluestem (FR19; FRQ 14.4), Tall goldenrod (FR17; FRQ 12.9), White sweet clover (FR17; FRQ 12.9) and Yellow coneflower (FR12; RFRQ 9.1). Introduced species comprise 32% of the herbaceous cover: White sweet clover (FR17; RFRQ12.9) and Kentucky bluegrass (F8:RFRQ6.1) are most frequent. There were no woody species present in any layer.

AQUATIC MONITORING

FISH MONITORING

Methods

Fish samples were collected from historical stream sample sites on Plum Creek in Goodenow Grove (site PLM-02, see **Exhibit 7** in **Appendix B**) and on Rock Creek in Raccoon Grove (site RCK-02, see **Exhibit 8** in **Appendix B**). Samples were collected by field ecologists in June and July, 2004.

Streams were sampled using a six by 15-foot seine with 3/16-inch mesh. Sample reaches were 200 meters in length. Sampling began at the downstream end of each reach and moved upstream into the current. Any gravel riffles or debris piles were thoroughly kicked to dislodge fish. The emphasis was on gathering representative and comparable samples, not necessarily on capturing every fish or even every species.

Results

All tables referenced in this section are contained in **Appendix F**. The nature preserve samples were part of a much larger dataset gathered largely on private land throughout the airport site. Index of Biotic Integrity (IBI) results were calculated for each sample (Karr et al., 1986) to facilitate monitoring of biotic quality trends.

At Goodenow Grove, six species and 13 individuals were captured. Species richness and IBI results were down slightly from past sample events. At both sites, repeated spring high water events following a prolonged dry spell may have affected results. A summary of results is included in **Table F-1**.

At Raccoon Grove, four species and 34 individuals were captured, and IBI results declined considerably from previous samples (1994). Creek chub (*Semotilus atromaculatus*) and bluegill (*Lepomis macrochirus*) were by far the most common species. **Table F-1** presents a summary of these results.

Reduced richness and biotic quality in 2004 could be attributable to variable stream levels (prolonged drought punctuated by significant rainfall events), to upstream impacts on private land or to a combination of both.

BENTHIC MACROINVERTEBRATE MONITORING

Methods

Benthic macroinvertebrate samples were collected from historical stream sample sites on Plum Creek in Goodenow Grove (site PLM-04, see **Exhibit 7** in **Appendix B**) and on Rock Creek in Raccoon Grove (site RCK-02, see **Exhibit 8** in **Appendix B**). Samples were collected by field ecologists on June 22 and 28, 2004.

Quantitative macroinvertebrate samples were collected following methodology previously employed by Earth Tech ecologists using a Surber Sampler. The sampler consists of a square metal frame enclosing a known area (1.0 square feet), with a net trailing out from it, swept downstream by the current. To collect a sample, the frame was

placed firmly into the substrate, ensuring that there were no gaps. The substrate within the frame was then disturbed, such that all organisms within the sediment were dislodged and carried into the net by the current. Any rocks or vegetation within the frame were carefully scrubbed and examined for animal life. All organisms collected in each sample were preserved in 10 percent formalin and returned to the laboratory for later sorting and identification. Triplicate samples were collected at each stream station.

In the laboratory, each sample was washed through a U.S. Standard No. 30 sieve to remove fine sediment and the formalin. The sample was then placed in a white enamel pan, filled approximately one-third full of water. All organisms were removed from the sample and identified under stereo-microscope to the lowest practical taxon by an experienced aquatic biologist, using various keys and guides (e.g., Hilsenhoff, 1981; Page, 1985; Smith, 2001). For comparative purposes and quality control, the identified specimens are stored in a reference collection. Additionally, subsequent to complete sorting of sample, the remaining material was placed back into the labeled jar with 10 percent formalin, for possible future quality control checks.

The Macroinvertebrate Biotic Index (MBI) is similar to IBI in that it uses multiple metrics to assign a single numerical value to each sample (Hite and Bertrand, 1989). The method was developed in Illinois. Like IBI, it was utilized in early phases of airport studies, providing an historical dataset for the study area. The MBI provides a summation or average of tolerance values assigned to each taxon collected and is weighted by their abundance; low values indicate good water quality and high values degraded water quality. This index is on a 0 to 11 scale. According to Hite (1988), water quality of Illinois streams can be assessed by the following MBI values: less than 5.0 is excellent water quality; between 5.0 and 6.0 is very good; between 6.0 and 7.5 is fair-good; between 7.5 and 10.0 is poor; and greater than 10.0 is very poor water quality. MBI is calculated by the following equation:

$$MBI = \sum(n_i t_i) / N$$

Where n_i = the number of individuals in each taxon; t_i = the tolerance value of the taxon; and N = the total number of individuals.

Results

Plum Creek samples collected adjacent to Bemis Road in Goodenow Grove Nature Preserve (site PLM-04, see **Exhibit 7** in **Appendix B**) yielded four individuals from four taxa – one isopod (*Asellidae*), one mayfly (*Ephemerella*), one clam (*Sphaerium*) and one Caddisfly larva (*Hydropsychidae*). Samples collected from Rock Creek in Raccoon Grove Nature Preserve (site RCK-02, see **Exhibit 8** in **Appendix B**) yielded four individuals representing two taxa – two black fly larvae (*Simulidae*) and two Caddisfly larvae (*Hydropsychidae*). MBI was calculated for each sample location and resulted in values of 0.73 for Plum Creek and 1.89 for Rock Creek, both indicating excellent water quality. A summary of these results is presented in **Table G-1** in **Appendix G**.

It is important to point out that while MBI was calculated for these samples, and indicates excellent water quality, such low abundances and species richness (only four individuals and two or four taxa) cannot be used reliably for quantitative analysis. As a general rule sample sizes of less than 100 are not considered robust enough to subject to quantitative analysis. The MBI scores resulting from these samples should not,

therefore, be used as a basis for absolute conclusions about water quality in the sampled streams.

The nature preserve samples were part of a much larger dataset gathered largely on private land throughout the vicinity of the proposed airport. Previous data exist for comparison from samples collected on Rock Creek in Raccoon Grove in 1994. Those samples yielded 543 individuals representing 13 taxa, including three species of aquatic beetles, one species each of isopods and amphipods, five species of fly/midge larvae, three species of mayfly larvae, six different gastropod species, one species of roundworm, one species of damselfly, two species of earthworms, three species of bivalves and three species of caddisfly larvae. These results yielded an MBI score of 9.40, indicating poor water quality.

In comparison, 2004 samples yielded significantly lower macroinvertebrate abundance and richness than samples collected in 1994, but significantly better MBI scores. There are numerous possible explanations for this disparity. Benthic macroinvertebrate communities are patchy and dynamic, and are greatly influenced by the prevailing environmental conditions. That is precisely why they make good environmental indicators. It is possible that the low species richness and abundance are attributable to degradation of the water/habitat quality, changes in the aquatic or adjacent terrestrial habitat, or to specific meteorological conditions.

Recent years have been very dry, and the upper parts of some streams were dry for extended periods of time. Generally fish samples in upper Black Walnut Creek and upper Plum Creek, both of which dry out on a regular basis, were unusually low in richness. There is no analogous evidence from benthic macroinvertebrate samples, but similar conditions may have impacted results from 2004. Rock Creek in Raccoon Grove is an ephemeral stream in many years, and 2004 samples were collected soon after heavy rain, which also could have influenced results.

The biggest change in the streams around the airport site since sampling in the early to mid-1990s, qualitatively, is an increased amount of emergent and submerged aquatic vegetation. This is likely a function of some combination of increased or changed nutrient input and a reduction in sedimentation resulting from the onset of mandated no-till agricultural practices in the early to mid 1990s. This change affects species differently; some species suffer, some benefit. Since many of the sensitive species historically associated with vegetated streams are absent or very rare today, recolonization might be incomplete or take a very long time because of scattered source populations. While the heavily shaded portions of Plum Creek and Rock Creek sampled within the nature preserves do not have an abundance of aquatic vegetation, these streams are not part of a closed system – effects are possible from nearby open-canopy portions of the streams and movement/colonization among sites.

SUMMARY

Baseline conditions have been established for the number of users, types of uses, wildlife populations and vegetation communities. The following sections summarize findings of the various baseline surveys.

User/Use Surveys

Visitors reported strong satisfaction with the environmental and physical conditions at the three preserves. Two out of three visitors reported seeing some type of wildlife during their visit. One out of four visitors believes that the preserve they visited is under-used. The most frequent activities reported were:

- Fishing, 40% of visitors
- Walking/hiking, 28% of visitors
- Picnics, 12% of visitors
- Relaxing/reading/napping, 11% of visitors

Amphibian and Reptile Monitoring

A total of 12 species, seven amphibians and five reptiles, were captured or observed at the combined study sites. The highest species richness was at Goodenow Grove Woodland, with a total of nine species. The remaining sites had five to six species each.

Avian Monitoring

Over the course of monitoring 111 species and 2,015 individuals were identified. Forest dependent species comprised the highest portion (approximately 56%) of habitat dependent species overall, and most were observed in forested habitat at Goodenow Grove or Raccoon Grove. The highest numbers of neotropical migrant species were found in forested habitat in Goodenow Grove and in wetland habitat in Monee Reservoir.

Vegetation Monitoring

A total of 21 forest, 12 grassland and one wetland plots were sampled for an overall total of 34 plots. Floodplain and mesic forest plots were dominated by native trees and shrubs, with minimal numbers of introduced or invasive species. Wetlands were dominated by native perennial forbs, with perennial grasses and sedges also noted. Mesic upland forest plots were dominated by native tree species, but were more likely to contain introduced, invasive trees and shrubs in the understory. Grassland plots showed the lower percentages of native species, but were still dominated by native perennial forbs and grasses. Some of these grassland plots were in recovering agricultural fields.

Fish and Benthic Macroinvertebrate Monitoring

Fish and benthic macroinvertebrate samples were collected from historical stream sample sites and were part of a larger dataset gathered largely on private land throughout the vicinity of the airport. Fish species richness and biotic quality were down slightly from previous sampling events. Macroinvertebrate abundance and richness were also lower than previous samples. Low species richness and abundance in these samples precludes drawing any conclusions about water quality in the sampled streams.

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Appendix E: Floristic Quality Assessment Reports

**Goodenow Grove Nature Preserve
Bird Plots**

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GA Herbaceous Plot
 Date: June 9, 2004 two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect A.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	1.5	1.2	3.0	2.7	0.3	-0.4	4	5	0.3	-0.4
2	2.5	1.7	3.5	2.9	0.0	-1.0	2	3	0.0	-1.0
AVG	2.0	1.4	3.3	2.8	0.1	-0.7	3.0	4.0		
STD	0.7	0.3	0.4	0.1	0.2	0.4	1.4	1.4		

C	NUMBER		5 NATIVE SPECIES
0	0		6 TOTAL SPECIES
1	2		2.0 NATIVE MEAN C
2	2	0 to 3	1.7 W/Adventives
3	0	80.0%	4.5 NATIVE FQI
4	1		4.1 W/Adventives
5	0		-0.4 NATIVE MEAN W
6	0	4 to 7	-0.8 W/Adventives
7	0	20.0%	
8	0		
9	0	8 to 10	
10	0	0.0%	

Native	5	83.3%	Adventive	1	16.7%
Tree	0	0.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	4	66.7%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	P-Grass	1	16.7%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	1	16.7%	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	5	300	62.5	60.0	61.3
Ad P-Grass	2	125	25.0	25.0	25.0
Nt P-Sedge	1	75	12.5	15.0	13.8

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Solidago altissima	1	FACU	2	150	22.2	27.3	24.7
AGROSTIS ALBA	0	FACW	2	125	22.2	22.7	22.5
Helianthus grosseserratus	2	FACW-	1	100	11.1	18.2	14.6
Eleocharis erythropoda	2	OBL	1	75	11.1	13.6	12.4
SOIL	0		1	50	11.1	9.1	10.1
Asclepias verticillata	1	UPL	1	25	11.1	4.5	7.8
Aster novae-angliae	4	FACW	1	25	11.1	4.5	7.8
			9	550			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
AGRALA	0	AGROSTIS ALBA	-3	FACW	Ad P-Grass	REDTOP
ASCVER	1	Asclepias verticillata	5	UPL	Nt P-Forb	WHORLED MILKWEED
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ELEERY RUSH	2	Eleocharis erythropoda	-5	OBL	Nt P-Sedge	RED-ROOTED SPIKE

HELGRO	2 Helianthus grosseserratus	-2 FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
SOIL	0 SOIL	0 nil	nil	SOIL
SOLALT	1 Solidago altissima	3 FACU	Nt P-Forb	TALL GOLDENROD

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GA Shrub Plot
 Date: June 9, 2004 four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Shrub A.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	1.0	1.0	1.0	1.0	-5.0	-5.0	1	1	-5.0	-5.0
2	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0
AVG	0.5	0.5	0.5	0.5	-2.5	-2.5	0.5	0.5		
STD	0.7	0.7	0.7	0.7	3.5	3.5	0.7	0.7		

C	NUMBER	
0	0	1 NATIVE SPECIES
1	1	1 TOTAL SPECIES
2	0	1.0 NATIVE MEAN C
3	0	1.0 W/Adventives
4	0	1.0 NATIVE FQI
5	0	1.0 W/Adventives
6	0	-5.0 NATIVE MEAN W
7	0	-5.0 W/Adventives
8	0	
9	0	8 to 10
10	0	0.0%

Native	1	100.0%	Adventive	0	0.0%
Tree	0	0.0%	Tree	0	0.0%
Shrub	1	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Shrub	1	65	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES						
SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
EMPTY QUADRAT	0	1	100	50.0	60.6	55.3
Salix interior	1 OBL	1	65	50.0	39.4	44.7
		2	165			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
EMPTY	0 EMPTY QUADRAT	0 nil	nil	EMPTY QUADRAT
SALINT	1 Salix interior	-5 OBL	Nt Shrub	SANDBAR WILLOW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow Transect A, Tree Plot
 Date: June 9, 2004 Two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect A, Tree Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	3.0	3.0	5.2	5.2	0.0	0.0	3	3		0.0	0.0
2	2.7	2.7	4.6	4.6	-1.3	-1.3	3	3		-1.3	-1.3
AVG	2.8	2.8	4.9	4.9	-0.7	-0.7	3.0	3.0			
STD	0.2	0.2	0.4	0.4	0.9	0.9	0.0	0.0			

C	NUMBER	
0	0	5 NATIVE SPECIES
1	1	5 TOTAL SPECIES
2	2	3.0 NATIVE MEAN C
3	0	3.0 W/Adventives
4	0	60.0% NATIVE FQI
5	2	6.7 W/Adventives
6	0	-0.6 NATIVE MEAN W
7	0	-0.6 W/Adventives
8	0	
9	0	4 to 7
10	0	40.0%

Native	5	100.0%	Adventive	0	0.0%
Tree	5	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	6	23	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Populus deltoides	2	FAC+	2	13	33.3	56.5	44.9
Fraxinus pennsy...subintegerrima	1	FAC	1	5	16.7	21.7	19.2
Quercus macrocarpa	5	FAC-	1	2	16.7	8.7	12.7
Salix amygdaloides	5	FACW	1	2	16.7	8.7	12.7
Crataegus crus-galli	2	FAC	1	1	16.7	4.3	10.5
			6	23			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
CRACRU	2	Crataegus crus-galli	0	FAC	Nt Tree	COCKSPUR HAWTHORN
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt Tree	GREEN ASH
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
QUEMAC	5	Quercus macrocarpa	1	FAC-	Nt Tree	BUR OAK
SALAMY	5	Salix amygdaloides	-3	FACW	Nt Tree	PEACH-LEAVED WILLOW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow Transect B, Tree Plot
 Date: June 9, 2004 Two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect B, Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	3.0	4.2	4.2	-3.0	-3.0	2	2	-1.5	-1.5
2	2.0	2.0	2.0	2.0	0.0	0.0	1	1	-1.8	-1.8
3	2.5	2.5	3.5	3.5	-2.5	-2.5	2	2	-1.2	-1.2
AVG	2.5	2.5	3.3	3.3	-1.8	-1.8	1.7	1.7		
STD	0.5	0.5	1.1	1.1	1.6	1.6	0.6	0.6		

C	NUMBER	
0	0	4 NATIVE SPECIES
1	1	4 TOTAL SPECIES
2	2	2.3 NATIVE MEAN C
3	0	2.3 W/Adventives
4	1	4.5 NATIVE FQI
5	0	4.5 W/Adventives
6	0	-1.5 NATIVE MEAN W
7	0	-1.5 W/Adventives
8	0	
9	0	0 8 to 10
10	0	0 0.0%

Native	C	NUMBER	Adventive	C	NUMBER
Native	4	100.0%	Adventive	0	0.0%
Tree	4	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	5	31	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Salix nigra	4	OBL	2	12	40.0	38.7	39.4
Populus deltoides	2	FAC+	1	8	20.0	25.8	22.9
Fraxinus pennsylvanica subintegerrima	1	FAC	1	6	20.0	19.4	19.7
Crataegus crus-galli	2	FAC	1	5	20.0	16.1	18.1
			5	31			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
CRACRU	2	Crataegus crus-galli	0	FAC	Nt Tree	COCKSPUR HAWTHORN
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt Tree	GREEN ASH
POPDEL	2	Populus deltoides	-1	FAC+	Nt Tree	EASTERN COTTONWOOD
SALNIG	4	Salix nigra	-5	OBL	Nt Tree	BLACK WILLOW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GB Herbaceous Plot
 Date: June 9, 2004 Three hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect B.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	2.4	9.9	8.8	1.2	1.1	11	14	0.3	0.5
2	2.6	2.0	6.8	6.0	-0.6	-0.2	7	9	-1.5	-1.4
3	4.0	4.0	5.7	5.7	-5.0	-5.0	2	2	-2.8	-2.6
AVG	3.2	2.8	7.5	6.8	-1.5	-1.4	6.7	8.3		
STD	0.7	1.1	2.2	1.7	3.2	3.2	4.5	6.0		

C	NUMBER	
0	0	17 NATIVE SPECIES
1	5	20 TOTAL SPECIES
2	4	2.9 NATIVE MEAN C
3	0 to 3	2.5 W/Adventives
4	2	11.9 NATIVE FQI
5	3	11.0 W/Adventives
6	2	-0.3 NATIVE MEAN W
7	0	-0.1 W/Adventives
8	4 to 7	
9	0	
10	8 to 10	
	0	5.9%

Native	17	85.0%	Adventive	3	15.0%
Tree	0	0.0%	Tree	0	0.0%
Shrub	3	15.0%	Shrub	0	0.0%
W-Vine	1	5.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	9	45.0%	P-Forb	1	5.0%
B-Forb	1	5.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	1	5.0%	P-Grass	2	10.0%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	2	10.0%	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	11	400	44.0	34.0	39.0
Ad P-Grass	3	250	12.0	21.3	16.6
Nt Shrub	4	150	16.0	12.8	14.4
Nt P-Sedge	2	175	8.0	14.9	11.4
Ad P-Forb	2	50	8.0	4.3	6.1
Nt P-Grass	1	75	4.0	6.4	5.2
Nt W-Vine	1	50	4.0	4.3	4.1
Nt B-Forb	1	25	4.0	2.1	3.1

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
AGROSTIS ALBA	0 FACW	2	150	7.4	12.2	9.8
Fragaria virginiana	1 FAC-	2	100	7.4	8.2	7.8
Cornus racemosa	1 FACW-	2	75	7.4	6.1	6.8
Helianthus rigidus	8 UPL	2	75	7.4	6.1	6.8
Carex stricta	5 OBL	1	100	3.7	8.2	5.9
POA PRATENSIS	0 FAC-	1	100	3.7	8.2	5.9
CHRYSANTHEMUM L...M PINNATIFIDUM	0 UPL	2	50	7.4	4.1	5.7
Calamagrostis canadensis	3 OBL	1	75	3.7	6.1	4.9
Carex granularis	4 FACW+	1	75	3.7	6.1	4.9
Solidago altissima	1 FACU	1	75	3.7	6.1	4.9
Rhus radicans	2 FAC+	1	50	3.7	4.1	3.9
Rubus allegheniensis	3 FACU+	1	50	3.7	4.1	3.9
Agrimonia gryposepala	2 FACU+	1	25	3.7	2.0	2.9
Cirsium discolor	2 UPL	1	25	3.7	2.0	2.9

Helianthus grosseserratus	2 FACW-	1	25	3.7	2.0	2.9
Potentilla simplex	4 FACU-	1	25	3.7	2.0	2.9
Pycnanthemum virginianum	5 FACW+	1	25	3.7	2.0	2.9
Rudbeckia hirta	1 FACU	1	25	3.7	2.0	2.9
Salix interior	1 OBL	1	25	3.7	2.0	2.9
SOIL	0	1	25	3.7	2.0	2.9
Solidago graminifolia	4 FACW-	1	25	3.7	2.0	2.9
WATER	0	1	25	3.7	2.0	2.9
		27	1225			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
AGRALA	0 AGROSTIS ALBA	-3 FACW	Ad P-Grass	REDTOP
CALCAN	3 Calamagrostis canadensis	-5 OBL	Nt P-Grass	BLUE JOINT GRASS
CXGRAN	4 Carex granularis	-4 FACW+	Nt P-Sedge	PALE SEDGE
CXSTRI SEdge	5 Carex stricta	-5 OBL	Nt P-Sedge	COMMON TUSsock
CHRLEP	0 CHRYSANTHEMUM LEUCANTHEMUM PINNATIFIDUM	5 UPL	Ad P-Forb	OX-EYE DAISY
CIRDIS	2 Cirsium discolor	5 UPL	Nt B-Forb	PASTURE THISTLE
CORRAC	1 Cornus racemosa	-2 FACW-	Nt Shrub	GRAY DOGWOOD
FRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
HELGRO	2 Helianthus grosseserratus	-2 FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
HELRIG	8 Helianthus rigidus	5 UPL	nil	PRAIRIE SUNFLOWER
POAPRA	0 POA PRATENSIS	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POTSIS	4 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
PYCVIR MINT	5 Pycnanthemum virginianum	-4 FACW+	Nt P-Forb	COMMON MOUNTAIN
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
RUDHIR	1 Rudbeckia hirta	3 FACU	Nt P-Forb	BLACK-EYED SUSAN
SALINT	1 Salix interior	-5 OBL	Nt Shrub	SANDBAR WILLOW
SOIL	0 SOIL	0 nil	nil	SOIL
SOLALT	1 Solidago altissima	3 FACU	Nt P-Forb	TALL GOLDENROD
SOLGRG GOLDENROD	4 Solidago graminifolia	-2 FACW-	Nt P-Forb	COMMON GRASS-LEAVED
WATER	0 WATER	0 nil	nil	WATER

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GB Shrub
 Date: June 9, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Shrub B.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	2.0	6.0	4.9	1.3	2.2	4	6	-0.9	0.9
2	1.5	1.0	2.1	1.7	-3.0	-0.3	2	3	-0.6	0.6
3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	-1.5	-0.2
AVG	1.5	1.0	2.7	2.2	-0.6	0.6	2.0	3.0		
STD	1.5	1.0	3.0	2.5	2.2	1.4	2.0	3.0		

C	NUMBER	
0	0	6 NATIVE SPECIES
1	2	8 TOTAL SPECIES
2	2	2.5 NATIVE MEAN C
3	1	1.9 W/Adventives
4	0	6.1 NATIVE FQI
5	0	5.3 W/Adventives
6	1	-0.2 NATIVE MEAN W
7	0	0.9 W/Adventives
8	0	
9	0	
10	0	

Native	Adventive
6 75.0%	2 25.0%
Tree 3 37.5%	Tree 0 0.0%
Shrub 3 37.5%	Shrub 2 25.0%
W-Vine 0 0.0%	W-Vine 0 0.0%
H-Vine 0 0.0%	H-Vine 0 0.0%
P-Forb 0 0.0%	P-Forb 0 0.0%
B-Forb 0 0.0%	B-Forb 0 0.0%
A-Forb 0 0.0%	A-Forb 0 0.0%
P-Grass 0 0.0%	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 Shrub	3	24	33.3	55.8	44.6
Ad Shrub	3	10	33.3	23.3	28.3
Nt Tree	3	9	33.3	20.9	27.1

SCIENTIFIC NAME	SPECIES RELATIVE IMPORTANCE VALUES					
	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
ELAEAGNUS UMBELLATA	0 UPL	2	9	20.0	20.9	20.5
Rubus allegheniensis	3 FACU+	1	13	10.0	30.2	20.1
Cornus racemosa	1 FACW-	1	10	10.0	23.3	16.6
Crataegus crus-galli	2 FAC	1	6	10.0	14.0	12.0
Populus deltoides	2 FAC+	1	2	10.0	4.7	7.3
Quercus velutina	6 UPL	1	1	10.0	2.3	6.2
ROSA MULTIFLORA	0 FACU	1	1	10.0	2.3	6.2
Salix interior	1 OBL	1	1	10.0	2.3	6.2
EMPTY QUADRAT	0	1	0	10.0	0.0	5.0
		10	43			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CORRAC	1 Cornus racemosa	-2 FACW-	Nt Shrub	GRAY DOGWOOD
CRACRU	2 Crataegus crus-galli	0 FAC	Nt Tree	COCKSPUR HAWTHORN
ELAUMB	0 ELAEAGNUS UMBELLATA	5 UPL	Ad Shrub	AUTUMN OLIVE

EMPTY	0 EMPTY QUADRAT	0 nil	nil	EMPTY QUADRAT
POPDEL	2 Populus deltoides	-1 FAC+	Nt Tree	EASTERN COTTONWOOD
QUEVEL	6 Quercus velutina	5 UPL	Nt Tree	BLACK OAK
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
SALINT	1 Salix interior	-5 OBL	Nt Shrub	SANDBAR WILLOW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow Transect B, Tree Plot
 Date: June 9, 2004 Two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect B, Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	3.0	4.2	4.2	-3.0	-3.0	2	2	-1.5	-1.5
2	2.0	2.0	2.0	2.0	0.0	0.0	1	1	-1.8	-1.8
3	2.5	2.5	3.5	3.5	-2.5	-2.5	2	2	-1.2	-1.2
AVG	2.5	2.5	3.3	3.3	-1.8	-1.8	1.7	1.7		
STD	0.5	0.5	1.1	1.1	1.6	1.6	0.6	0.6		

C	NUMBER	
0	0	4 NATIVE SPECIES
1	1	4 TOTAL SPECIES
2	2	2.3 NATIVE MEAN C
3	0	2.3 W/Adventives
4	1	4.5 NATIVE FQI
5	0	4.5 W/Adventives
6	0	-1.5 NATIVE MEAN W
7	0	-1.5 W/Adventives
8	0	
9	0	
10	0	

Native	4	100.0%	Adventive	0	0.0%
Tree	4	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	5	31	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Salix nigra	4 OBL	2	12	40.0	38.7	39.4
Populus deltoides	2 FAC+	1	8	20.0	25.8	22.9
Fraxinus pennsylvanica subintegerrima	1 FAC	1	6	20.0	19.4	19.7
Crataegus crus-galli	2 FAC	1	5	20.0	16.1	18.1
		5	31			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CRACRU	2 Crataegus crus-galli	0 FAC	Nt Tree	COCKSPUR HAWTHORN
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0 FAC	Nt Tree	GREEN ASH
POPDEL	2 Populus deltoides	-1 FAC+	Nt Tree	EASTERN COTTONWOOD
SALNIG	4 Salix nigra	-5 OBL	Nt Tree	BLACK WILLOW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GC Herbaceous Plot
 Date: June 15, 2004 six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect C.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	3.0	3.0	6.0	6.0	-0.5	-0.5	4	4		0.6	0.6
2	2.7	2.7	8.0	8.0	1.8	1.8	9	9		1.3	1.3
3	4.5	4.5	11.0	11.0	2.7	2.7	6	6		1.4	1.4
4	3.3	3.3	9.2	9.2	-0.2	-0.2	8	8		0.5	0.5
5	4.0	4.0	6.9	6.9	-1.0	-1.0	3	3		-0.0	-0.0
6	2.6	2.6	5.8	5.8	1.2	1.2	5	5		0.1	0.1
AVG	3.3	3.3	7.8	7.8	0.6	0.6	5.8	5.8			
STD	0.8	0.8	2.0	2.0	1.4	1.4	2.3	2.3			

C	NUMBER		
0	1		20 NATIVE SPECIES
1	3		20 TOTAL SPECIES
2	5	0 to 3	3.3 NATIVE MEAN C
3	2	55.0%	3.3 W/Adventives
4	4		14.8 NATIVE FQI
5	2		14.8 W/Adventives
6	0	4 to 7	1.5 NATIVE MEAN W
7	3	45.0%	1.5 W/Adventives
8	0		
9	0	8 to 10	
10	0	0.0%	

Native	20	100.0%	Adventive	0	0.0%
Tree	0	0.0%	Tree	0	0.0%
Shrub	1	5.0%	Shrub	0	0.0%
W-Vine	1	5.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	16	80.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	1	5.0%	A-Forb	0	0.0%
P-Grass	1	5.0%	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	31	1550	88.6	93.9	91.3
Nt Shrub	1	25	2.9	1.5	2.2
Nt P-Grass	1	25	2.9	1.5	2.2
Nt A-Forb	1	25	2.9	1.5	2.2
Nt W-Vine	1	25	2.9	1.5	2.2

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Sanicula gregaria	2	FAC+	6	500	17.1	30.3	23.7
Cryptotaenia canadensis	2	FAC	4	200	11.4	12.1	11.8
Actinomeris alternifolia	5	FACW	3	100	8.6	6.1	7.3
Circaea lutetiana canadensis	1	FACU	2	125	5.7	7.6	6.6
Asarum canadense	7	UPL	2	100	5.7	6.1	5.9
Laportea canadensis	3	FACW	2	75	5.7	4.5	5.1
Allium cernuum	7	[FAC-]	2	50	5.7	3.0	4.4
Geranium maculatum	4	[UPL]	2	50	5.7	3.0	4.4
Polygonum virginianum	2	FAC	1	75	2.9	4.5	3.7
Thalictrum dioicum	7	FACU+	1	75	2.9	4.5	3.7
Eupatorium rugosum	4	UPL	1	50	2.9	3.0	2.9
Fragaria virginiana	1	FAC-	1	50	2.9	3.0	2.9
Agrimonia gryposepala	2	FACU+	1	25	2.9	1.5	2.2
Elymus virginicus	4	FACW-	1	25	2.9	1.5	2.2

Galium aparine	1 FACU	1	25	2.9	1.5	2.2
Oxalis europaea	0 FACU	1	25	2.9	1.5	2.2
Potentilla simplex	4 FACU-	1	25	2.9	1.5	2.2
Rhus radicans	2 FAC+	1	25	2.9	1.5	2.2
Rubus allegheniensis	3 FACU+	1	25	2.9	1.5	2.2
Solidago ulmifolia	5 UPL	1	25	2.9	1.5	2.2
		35	1650			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACTALT	5 Actinomeris alternifolia	-3 FACW	Nt P-Forb	WINGSTEM
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
ALLCER	7 Allium cernuum	1 [FAC-]	Nt P-Forb	NODDING WILD ONION
ASACAN	7 Asarum canadense	5 UPL	Nt P-Forb	WILD GINGER
CIRLUC NIGHTSHADE	1 Circaea lutetiana canadensis	3 FACU	Nt P-Forb	ENCHANTER'S
CRYCAN	2 Cryptotaenia canadensis	0 FAC	Nt P-Forb	HONEWORT
ELYVIR	4 Elymus virginicus	-2 FACW-	Nt P-Grass	VIRGINIA WILD RYE
EUPRUG	4 Eupatorium rugosum	5 UPL	Nt P-Forb	WHITE SNAKEROOT
FRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
GALAPA	1 Galium aparine	3 FACU	Nt A-Forb	ANNUAL BEDSTRAW
GERMAC	4 Geranium maculatum	5 [UPL]	Nt P-Forb	WILD GERANIUM
LAPCAN	3 Laportea canadensis	-3 FACW	Nt P-Forb	WOOD NETTLE
OXAEUR	0 Oxalis europaea	3 FACU	Nt P-Forb	TALL WOOD SORREL
POLGVI	2 Polygonum virginianum	0 FAC	Nt P-Forb	WOODLAND KNOTWEED
POTSIS	4 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
SANGRE SNAKEROOT	2 Sanicula gregaria	-1 FAC+	Nt P-Forb	CLUSTERED BLACK
SOLULM GOLDENROD	5 Solidago ulmifolia	5 UPL	Nt P-Forb	ELM-LEAVED
THADIO	7 Thalictrum dioicum	2 FACU+	Nt P-Forb	EARLY MEADOW RUE

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GC Shrub
 Date: June 15, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Shrub C.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.7	2.7	4.6	4.6	3.0	3.0	3	3	3.0	3.0
2	1.0	1.0	1.0	1.0	3.0	3.0	1	1	2.7	2.7
3	5.5	5.5	13.5	13.5	2.2	2.2	6	6	2.2	2.2
4	3.7	3.7	6.4	6.4	1.3	1.3	3	3	2.3	2.3
5	4.3	4.3	7.5	7.5	3.3	3.3	3	3	2.5	2.5
6	4.0	4.0	11.3	11.3	2.9	2.9	8	8	3.1	3.1
AVG	3.5	3.5	7.4	7.4	2.6	2.6	4.0	4.0		
STD	1.5	1.5	4.5	4.5	0.7	0.7	2.5	2.5		

C	NUMBER	
0	0	17 NATIVE SPECIES
1	2	17 TOTAL SPECIES
2	3	4.1 NATIVE MEAN C
3	3	4.1 W/Adventives
4	0	16.7 NATIVE FQI
5	6	16.7 W/Adventives
6	0	2.5 NATIVE MEAN W
7	2	2.5 W/Adventives
8	1	
9	0	8 to 10
10	0	5.9%

Native	17	100.0%	Adventive	0	0.0%
Tree	12	70.6%	Tree	0	0.0%
Shrub	4	23.5%	Shrub	0	0.0%
W-Vine	1	5.9%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	16	35	66.7	36.5	51.6
Nt Shrub	7	59	29.2	61.5	45.3
Nt W-Vine	1	2	4.2	2.1	3.1

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Viburnum prunifolium	5 FACU	1	47	4.2	49.0	26.6
Ostrya virginiana	5 FACU-	2	7	8.3	7.3	7.8
Prunus serotina	1 FACU	2	7	8.3	7.3	7.8
Prunus virginiana	3 [FACU]	3	3	12.5	3.1	7.8
Staphylea trifolia	7 FAC	2	7	8.3	7.3	7.8
Fraxinus americana	5 FACU	2	5	8.3	5.2	6.8
Tilia americana	5 FACU	2	2	8.3	2.1	5.2
Carya ovata	5 FACU	1	3	4.2	3.1	3.6
Carpinus caroliniana virginiana	8 FAC	1	2	4.2	2.1	3.1
Crataegus mollis	2 FACU-	1	2	4.2	2.1	3.1
Crataegus pruinosa	5 UPL	1	2	4.2	2.1	3.1
Fraxinus pennsylv...subintegerrima	1 FAC	1	2	4.2	2.1	3.1
Rhus radicans	2 FAC+	1	2	4.2	2.1	3.1
Rubus allegheniensis	3 FACU+	1	2	4.2	2.1	3.1
Acer saccharum	3 FACU	1	1	4.2	1.0	2.6
Carya cordiformis	7 [FACU]	1	1	4.2	1.0	2.6

Crataegus punctata	2 UPL	1 24	1 96	4.2	1.0	2.6
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ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAU	3 Acer saccharum	3 FACU	Nt Tree	SUGAR MAPLE
CARCAV	8 Carpinus caroliniana virginiana	0 FAC	Nt Tree	BLUE BEECH
CARCOR	7 Carya cordiformis	3 [FACU]	Nt Tree	BITTERNUT HICKORY
CAROVT	5 Carya ovata	3 FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2 Crataegus mollis	4 FACU-	Nt Tree	DOWNY HAWTHORN
CRAPRU	5 Crataegus pruinosa	5 UPL	Nt Tree	FROSTED HAWTHORN
CRAPUN	2 Crataegus punctata	5 UPL	Nt Tree	DOTTED HAWTHORN
FRAAMA	5 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0 FAC	Nt Tree	GREEN ASH
OSTVIR	5 Ostrya virginiana	4 FACU-	Nt Tree	HOP HORNBEAM
PRUSER	1 Prunus serotina	3 FACU	Nt Tree	WILD BLACK CHERRY
PRUVIR	3 Prunus virginiana	3 [FACU]	Nt Shrub	CHOKE CHERRY
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
STATRI	7 Staphylea trifolia	0 FAC	Nt Shrub	BLADDERNUT
TILAME	5 Tilia americana	3 FACU	Nt Tree	AMERICAN LINDEN
VIBPRU	5 Viburnum prunifolium	3 FACU	Nt Shrub	BLACK HAW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow Transect C, Tree Plot
 Date: June 15, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect C, Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	6.3	6.3	11.0	11.0	3.0	3.0	3	3	3.0	3.0
2	4.3	4.3	7.5	7.5	3.0	3.0	3	3	3.2	3.2
3	6.0	6.0	8.5	8.5	3.5	3.5	2	2	2.5	2.5
4	3.3	3.3	6.5	6.5	1.0	1.0	4	4	2.7	2.7
5	6.0	6.0	8.5	8.5	3.5	3.5	2	2	2.7	2.7
6	5.7	5.7	9.8	9.8	3.7	3.7	3	3	3.6	3.6
AVG	5.3	5.3	8.6	8.6	2.9	2.9	2.8	2.8		
STD	1.2	1.2	1.6	1.6	1.0	1.0	0.8	0.8		

C	NUMBER	
0	0	12 NATIVE SPECIES
1	2	12 TOTAL SPECIES
2	1	4.4 NATIVE MEAN C
3	0	4.4 W/Adventives
4	0	15.3 NATIVE FQI
5	7	15.3 W/Adventives
6	0	2.6 NATIVE MEAN W
7	2	2.6 W/Adventives
8	0	
9	0	8 to 10
10	0	0.0%

Native	12	100.0%	Adventive	0	0.0%
Tree	11	91.7%	Tree	0	0.0%
Shrub	1	8.3%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	16	75	94.1	98.7	96.4
Nt Shrub	1	1	5.9	1.3	3.6

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Quercus rubra	7 FACU	4	20	23.5	26.3	24.9
Ostrya virginiana	5 FACU-	2	12	11.8	15.8	13.8
Carya cordiformis	7 [FACU]	2	9	11.8	11.8	11.8
Quercus macrocarpa	5 FAC-	1	8	5.9	10.5	8.2
Prunus serotina	1 FACU	1	7	5.9	9.2	7.5
Fraxinus americana	5 FACU	1	6	5.9	7.9	6.9
Fraxinus pennsy...subintegerrima	1 FAC	1	6	5.9	7.9	6.9
Carya ovata	5 FACU	1	2	5.9	2.6	4.3
Crataegus crus-galli	2 FAC	1	2	5.9	2.6	4.3
Tilia americana	5 FACU	1	2	5.9	2.6	4.3
Crataegus pruinosa	5 UPL	1	1	5.9	1.3	3.6
Viburnum prunifolium	5 FACU	1	1	5.9	1.3	3.6
		17	76			

ACRONYM C SCIENTIFIC NAME W WETNESS PHYSIOGNOMY COMMON NAME

CARCOR	7	<i>Carya cordiformis</i>	3 [FACU]	Nt Tree	BITTERNUT HICKORY
CAROVT	5	<i>Carya ovata</i>	3 FACU	Nt Tree	SHAGBARK HICKORY
CRACRU	2	<i>Crataegus crus-galli</i>	0 FAC	Nt Tree	COCKSPUR HAWTHORN
CRAPRU	5	<i>Crataegus pruinosa</i>	5 UPL	Nt Tree	FROSTED HAWTHORN
FRAAMA	5	<i>Fraxinus americana</i>	3 FACU	Nt Tree	WHITE ASH
FRAPES	1	<i>Fraxinus pennsylvanica subintegerrima</i>	0 FAC	Nt Tree	GREEN ASH
OSTVIR	5	<i>Ostrya virginiana</i>	4 FACU-	Nt Tree	HOP HORNBEAM
PRUSER	1	<i>Prunus serotina</i>	3 FACU	Nt Tree	WILD BLACK CHERRY
QUEMAC	5	<i>Quercus macrocarpa</i>	1 FAC-	Nt Tree	BUR OAK
QUERUB	7	<i>Quercus rubra</i>	3 FACU	Nt Tree	RED OAK
TILAME	5	<i>Tilia americana</i>	3 FACU	Nt Tree	AMERICAN LINDEN
VIBPRU	5	<i>Viburnum prunifolium</i>	3 FACU	Nt Shrub	BLACK HAW

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GD Herbaceous Plot
 Date: June 4, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect D.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	3.0	1.5	4.2	3.0	3.0	2.8	2	4		2.5	2.6
2	3.5	3.0	8.6	7.9	2.0	2.4	6	7		1.9	2.0
3	1.6	1.6	3.6	3.6	0.8	0.8	5	5		0.8	1.5
4	2.3	1.4	4.0	3.1	-0.3	1.4	3	5		0.2	1.1
AVG	2.6	1.9	5.1	4.4	1.4	1.8	4.0	5.3			
STD	0.8	0.8	2.3	2.4	1.4	0.9	1.8	1.3			

C	NUMBER	
0	1	12 NATIVE SPECIES
1	3	17 TOTAL SPECIES
2	3 0 to 3	2.6 NATIVE MEAN C
3	1 66.7%	1.8 W/Adventives
4	1	8.9 NATIVE FQI
5	3	7.5 W/Adventives
6	0 4 to 7	1.4 NATIVE MEAN W
7	0 33.3%	2.1 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	12	70.6%	Adventive	5	29.4%
Tree	1	5.9%	Tree	0	0.0%
Shrub	2	11.8%	Shrub	4	23.5%
W-Vine	3	17.6%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	5	29.4%	P-Forb	0	0.0%
B-Forb	1	5.9%	B-Forb	1	5.9%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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	8	225	38.1	36.0	37.0
Ad Shrub	4	100	19.0	16.0	17.5
Nt Shrub	3	125	14.3	20.0	17.1
Nt W-Vine	3	100	14.3	16.0	15.1
Nt Tree	1	25	4.8	4.0	4.4
Ad B-Forb	1	25	4.8	4.0	4.4
Nt B-Forb	1	25	4.8	4.0	4.4

SPECIES RELATIVE IMPORTANCE VALUES						
SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Ribes missouriense	5 UPL	2	100	9.5	16.0	12.8
Geum canadense	1 FAC	2	75	9.5	12.0	10.8
Arisaema triphyllum	4 FACW-	2	50	9.5	8.0	8.8
Fragaria virginiana	1 FAC-	2	50	9.5	8.0	8.8
Parthenocissus quinquefolia	2 FAC-	1	50	4.8	8.0	6.4
Agrimonia gryposepala	2 FACU+	1	25	4.8	4.0	4.4
ALLIARIA PETIOLATA	0 FAC	1	25	4.8	4.0	4.4
Circaea lutetiana canadensis	1 FACU	1	25	4.8	4.0	4.4
Hackelia virginiana	0 FAC-	1	25	4.8	4.0	4.4
LONICERA MAACKII	0 UPL	1	25	4.8	4.0	4.4
LONICERA TATARICA	0 [UPL]	1	25	4.8	4.0	4.4
Quercus alba	5 FAC	1	25	4.8	4.0	4.4
Rhus radicans	2 FAC+	1	25	4.8	4.0	4.4
Rubus allegheniensis	3 FACU+	1	25	4.8	4.0	4.4

Smilax tamnoides hispida	5 UPL	1	25	4.8	4.0	4.4
SYMPHORICARPOS ORBICULATUS	0 FACU	1	25	4.8	4.0	4.4
VIBURNUM DENTATUM	0 UPL	1	25	4.8	4.0	4.4
		21	625			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
ALLPET	0 ALLIARIA PETIOLATA	0 FAC	Ad B-Forb	GARLIC MUSTARD
ARITRI	4 Arisaema triphyllum	-2 FACW-	Nt P-Forb	JACK-IN-THE-PULPIT
CIRLUC NIGHTSHADE	1 Circaea lutetiana canadensis	3 FACU	Nt P-Forb	ENCHANTER'S
PRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
GEUCAN	1 Geum canadense	0 FAC	Nt P-Forb	WOOD AVENS
HACVIR	0 Hackelia virginiana	1 FAC-	Nt B-Forb	STICKSEED
LONMAA	0 LONICERA MAACKII	5 UPL	Ad Shrub	AMUR HONEYSUCKLE
LONTAT HONEYSUCKLE	0 LONICERA TATARICA	5 [UPL]	Ad Shrub	TARTARIAN
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
QUEALB	5 Quercus alba	0 FAC	Nt Tree	WHITE OAK
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
RIBMIS	5 Ribes missouriense	5 UPL	Nt Shrub	WILD GOOSEBERRY
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
SMITAH	5 Smilax tamnoides hispida	5 UPL	Nt W-Vine	BRISTLY CAT BRIER
SYMORB	0 SYMPHORICARPOS ORBICULATUS	3 FACU	Ad Shrub	CORALBERRY
VIBDEN	0 VIBURNUM DENTATUM	5 UPL	Ad Shrub	ARROW-WOOD

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow GD Shrub
 Date: June 4, 2004 Three hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Shrub D.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	2.7	2.1	7.2	6.3	2.1	2.6	7	9		2.4	2.9
2	2.9	2.1	8.1	6.9	2.8	3.2	8	11		2.6	2.9
3	2.9	2.9	7.6	7.6	2.9	2.9	7	7		3.2	3.3
4	3.0	2.5	6.7	6.1	4.0	3.8	5	6		3.4	3.3
AVG	2.9	2.4	7.4	6.7	2.9	3.1	6.8	8.3			
STD	0.1	0.4	0.6	0.6	0.8	0.5	1.3	2.2			

C	NUMBER	
0	0	11 NATIVE SPECIES
1	2	14 TOTAL SPECIES
2	3	3.2 NATIVE MEAN C
3	1	2.5 W/Adventives
4	1	10.6 NATIVE FQI
5	4	9.4 W/Adventives
6	0	2.4 NATIVE MEAN W
7	0	2.8 W/Adventives
8	0	
9	0	0.8 to 10
10	0	0.0%

Native	11	78.6%	Adventive	3	21.4%
Tree	6	42.9%	Tree	0	0.0%
Shrub	4	28.6%	Shrub	3	21.4%
W-Vine	1	7.1%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	16	83	48.5	37.1	42.8
Nt Shrub	10	77	30.3	34.4	32.3
Ad Shrub	6	63	18.2	28.1	23.2
Nt W-Vine	1	1	3.0	0.4	1.7

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Ribes missouriense	5 UPL	4	56	12.1	25.0	18.6
VIBURNUM DENTATUM	0 UPL	2	50	6.1	22.3	14.2
Crataegus mollis	2 FACU-	4	28	12.1	12.5	12.3
Prunus serotina	1 FACU	4	21	12.1	9.4	10.7
Fraxinus pensny...subintegerrima	1 FAC	3	26	9.1	11.6	10.3
ROSA MULTIFLORA	0 FACU	3	12	9.1	5.4	7.2
Rubus allegheniensis	3 FACU+	2	15	6.1	6.7	6.4
Rubus occidentalis	2 UPL	3	5	9.1	2.2	5.7
Ulmus rubra	4 FAC	2	5	6.1	2.2	4.1
Carya ovata	5 FACU	2	2	6.1	0.9	3.5
LONICERA TATARICA	0 [UPL]	1	1	3.0	0.4	1.7
Tilia americana	5 FACU	1	1	3.0	0.4	1.7
Viburnum prunifolium	5 FACU	1	1	3.0	0.4	1.7
Vitis riparia	2 FACW-	1	1	3.0	0.4	1.7
		33	224			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CAROV	5 <i>Carya ovata</i>	3 FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2 <i>Crataegus mollis</i>	4 FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1 <i>Fraxinus pennsylvanica subintegerrima</i>	0 FAC	Nt Tree	GREEN ASH
LONTAT	0 <i>LONICERA TATARICA</i>	5 [UPL]	Ad Shrub	TARTARIAN
HONEYSUCKLE				
PRUSER	1 <i>Prunus serotina</i>	3 FACU	Nt Tree	WILD BLACK CHERRY
RIBMIS	5 <i>Ribes missouriense</i>	5 UPL	Nt Shrub	WILD GOOSEBERRY
ROSMUL	0 <i>ROSA MULTIFLORA</i>	3 FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3 <i>Rubus allegheniensis</i>	2 FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	2 <i>Rubus occidentalis</i>	5 UPL	Nt Shrub	BLACK RASPBERRY
TILAME	5 <i>Tilia americana</i>	3 FACU	Nt Tree	AMERICAN LINDEN
ULMRUB	4 <i>Ulmus rubra</i>	0 FAC	Nt Tree	SLIPPERY ELM
VIBDEN	0 <i>VIBURNUM DENTATUM</i>	5 UPL	Ad Shrub	ARROW-WOOD
VIBPRU	5 <i>Viburnum prunifolium</i>	3 FACU	Nt Shrub	BLACK HAW
VITRIP	2 <i>Vitis riparia</i>	-2 FACW-	Nt W-Vine	RIVERBANK GRAPE

Site: Goodenow Grove, Will County, Illinois
 Locale: Goodenow Transect D, Tree Plot
 Date: June 4, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Goodenow Transect D, Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.7	2.7	4.6	4.6	2.3	2.3	3	3	2.0	2.0
2	4.0	4.0	6.9	6.9	1.7	1.7	3	3	1.8	1.8
3	3.3	3.3	5.8	5.8	1.3	1.3	3	3	1.5	1.5
4	3.8	3.8	7.5	7.5	1.5	1.5	4	4	1.4	1.4
AVG	3.4	3.4	6.2	6.2	1.7	1.7	3.3	3.3		
STD	0.6	0.6	1.3	1.3	0.4	0.4	0.5	0.5		

C	NUMBER	
0	0	8 NATIVE SPECIES
1	2	8 TOTAL SPECIES
2	1	3.6 NATIVE MEAN C
3	0	3.6 W/Adventives
4	1	10.3 NATIVE FQI
5	3	10.3 W/Adventives
6	1	2.0 NATIVE MEAN W
7	0	2.0 W/Adventives
8	0	
9	0	
10	0	

Native		Adventive	
Tree	8 100.0%	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	0 0.0%	P-Forb	0 0.0%
B-Forb	0 0.0%	B-Forb	0 0.0%
A-Forb	0 0.0%	A-Forb	0 0.0%
P-Grass	0 0.0%	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 Tree	13	44	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Quercus alba	5	FAC	3	18	23.1	40.9	32.0
Prunus serotina	1	FACU	3	6	23.1	13.6	18.4
Ulmus rubra	4	FAC	2	6	15.4	13.6	14.5
Quercus macrocarpa	5	FAC-	1	9	7.7	20.5	14.1
Tilia americana	5	FACU	1	2	7.7	4.5	6.1
Crataegus mollis	2	FACU-	1	1	7.7	2.3	5.0
Fraxinus pennsy...subintegerrima	1	FAC	1	1	7.7	2.3	5.0
Quercus velutina	6	UPL	1	1	7.7	2.3	5.0
			13	44			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
CRAMOL	2	Crataegus mollis	4	FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1	Fraxinus pennsylvanica subintegerrima	0	FAC	Nt Tree	GREEN ASH
PRUSER	1	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5	Quercus alba	0	FAC	Nt Tree	WHITE OAK

QUEMAC	5	Quercus macrocarpa	1	FAC-	Nt Tree	BUR OAK
QUEVEL	6	Quercus velutina	5	UPL	Nt Tree	BLACK OAK
TILAME	5	Tilia americana	3	FACU	Nt Tree	AMERICAN LINDEN
ULMRUB	4	Ulmus rubra	0	FAC	Nt Tree	SLIPPERY ELM

**Raccoon Grove Nature Preserve
Bird Plots**

Site: Racoon Grove, Will County, Illinois
 Locale: Racoon Grove RA Herbaceous Plot
 Date: June 3, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\RGTransectA.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.8	2.8	5.5	5.5	1.8	1.8	4	4	2.4	2.4
2	7.0	7.0	9.9	9.9	3.0	3.0	2	2	1.7	1.7
3	4.3	3.4	8.5	7.6	0.5	0.4	4	5	1.0	1.0
4	4.0	4.0	13.3	13.3	-0.4	-0.4	11	11	-0.0	-0.1
5	3.4	3.4	7.6	7.6	-0.2	-0.2	5	5	-0.6	-0.6
6	2.8	2.8	6.9	6.9	-1.3	-1.3	6	6	-0.3	-0.3
7	2.5	2.5	6.1	6.1	0.5	0.5	6	6	-0.4	-0.4
AVG	3.8	3.7	8.3	8.1	0.6	0.5	5.4	5.6		
STD	1.5	1.5	2.7	2.7	1.4	1.4	2.8	2.8		

C	NUMBER	
0	0	26 NATIVE SPECIES
1	4	27 TOTAL SPECIES
2	6	3.5 NATIVE MEAN C
3	4	3.3 W/Adventives
4	6	17.7 NATIVE FQI
5	2	17.3 W/Adventives
6	0	-0.3 NATIVE MEAN W
7	4	-0.3 W/Adventives
8	0	
9	0	8 to 10
10	0	0.0%

Native	26	96.3%	Adventive	1	3.7%
Tree	2	7.4%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	2	7.4%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	17	63.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	1	3.7%
A-Forb	2	7.4%	A-Forb	0	0.0%
P-Grass	3	11.1%	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	27	110	69.2	73.8	71.5
Nt W-Vine	3	11	7.7	7.4	7.5
Nt A-Forb	3	10	7.7	6.7	7.2
Nt P-Grass	3	9	7.7	6.0	6.9
Nt Tree	2	6	5.1	4.0	4.6
Ad B-Forb	1	3	2.6	2.0	2.3

SPECIES RELATIVE IMPORTANCE VALUES						
SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Allium cernuum	7 [FAC-]	4	15	9.8	9.3	9.5
Cryptotaenia canadensis	2 FAC	3	13	7.3	8.1	7.7
Circaea lutetiana canadensis	1 FACU	3	10	7.3	6.2	6.8
Geranium maculatum	4 [UPL]	2	12	4.9	7.5	6.2
SOIL	0	2	12	4.9	7.5	6.2
Asarum canadense	7 UPL	2	11	4.9	6.8	5.9
Sanicula gregaria	2 FAC+	2	10	4.9	6.2	5.5
Rhus radicans	2 FAC+	2	8	4.9	5.0	4.9
Impatiens capensis	3 FACW	2	6	4.9	3.7	4.3
Podophyllum peltatum	4 FACU	1	7	2.4	4.3	3.4
Bidens frondosa	1 FACW	1	4	2.4	2.5	2.5
Laportea canadensis	3 FACW	1	4	2.4	2.5	2.5

Polygonatum canaliculatum	3 FACU	1	4	2.4	2.5	2.5
ALLIARIA PETIOLATA	0 FAC	1	3	2.4	1.9	2.2
Arisaema dracontium	7 FACW	1	3	2.4	1.9	2.2
Arisaema triphyllum	4 FACW-	1	3	2.4	1.9	2.2
Aster lateriflorus	4 FACW-	1	3	2.4	1.9	2.2
Boehmeria cylindrica	2 OBL	1	3	2.4	1.9	2.2
Cinna arundinacea	5 FACW	1	3	2.4	1.9	2.2
Fraxinus pennsy...subintegerrima	1 FAC	1	3	2.4	1.9	2.2
Geum canadense	1 FAC	1	3	2.4	1.9	2.2
Glyceria striata	4 [FACW]	1	3	2.4	1.9	2.2
Hydrophyllum virginianum	5 [FAC]	1	3	2.4	1.9	2.2
Leersia virginica	7 FACW	1	3	2.4	1.9	2.2
Parthenocissus quinquefolia	2 FAC-	1	3	2.4	1.9	2.2
Polygonum virginianum	2 FAC	1	3	2.4	1.9	2.2
Potentilla simplex	4 FACU-	1	3	2.4	1.9	2.2
Ulmus americana	3 FACW-	1	3	2.4	1.9	2.2
		41	161			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ALLPET	0 ALLIARIA PETIOLATA	0 FAC	Ad B-Forb	GARLIC MUSTARD
ALLCER	7 Allium cernuum	1 [FAC-]	Nt P-Forb	NODDING WILD ONION
ARIDRA	7 Arisaema dracontium	-3 FACW	Nt P-Forb	GREEN DRAGON
ARITRI	4 Arisaema triphyllum	-2 FACW-	Nt P-Forb	JACK-IN-THE-PULPIT
ASACAN	7 Asarum canadense	5 UPL	Nt P-Forb	WILD GINGER
ASTLAT	4 Aster lateriflorus	-2 FACW-	Nt P-Forb	SIDE-FLOWERING
ASTER				
BIDFRO	1 Bidens frondosa	-3 FACW	Nt A-Forb	COMMON BEGGAR'S
TICKS				
BOECYC	2 Boehmeria cylindrica	-5 OBL	Nt P-Forb	FALSE NETTLE
CINARU	5 Cinna arundinacea	-3 FACW	Nt P-Grass	COMMON WOOD REED
CIRLUC	1 Circaea lutetiana canadensis	3 FACU	Nt P-Forb	ENCHANTER'S
NIGHTSHADE				
CRYCAN	2 Cryptotaenia canadensis	0 FAC	Nt P-Forb	HONEWORT
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0 FAC	Nt Tree	GREEN ASH
GERMAC	4 Geranium maculatum	5 [UPL]	Nt P-Forb	WILD GERANIUM
GEUCAN	1 Geum canadense	0 FAC	Nt P-Forb	WOOD AVENS
GLYSTR	4 Glyceria striata	-3 [FACW]	Nt P-Grass	FOWL MANNA GRASS
HYDVIR	5 Hydrophyllum virginianum	0 [FAC]	Nt P-Forb	VIRGINIA WATERLEAF
IMPCAP	3 Impatiens capensis	-3 FACW	Nt A-Forb	ORANGE JEWELWEED
LAPCAN	3 Laportea canadensis	-3 FACW	Nt P-Forb	WOOD NETTLE
LEEVIR	7 Leersia virginica	-3 FACW	Nt P-Grass	WHITE GRASS
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PODPEL	4 Podophyllum peltatum	3 FACU	Nt P-Forb	MAY APPLE
POLCAL	3 Polygonatum canaliculatum	3 FACU	Nt P-Forb	SMOOTH SOLOMON'S
SEAL				
POLGVI	2 Polygonum virginianum	0 FAC	Nt P-Forb	WOODLAND KNOTWEED
POTSIS	4 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
SANGRE	2 Sanicula gregaria	-1 FAC+	Nt P-Forb	CLUSTERED BLACK
SNAKEROOT				

SOIL	0 SOIL	0 nil	nil	SOIL
ULMAME	3 Ulmus americana	-2 FACW-	Nt Tree	AMERICAN ELM

Site: Racoon Grove, Will County, Illinois
 Locale: Racoon RA Shrub Plot
 Date: June 3, 2004 two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Racoon Shrub A.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	1.0	1.0	1.0	1.0	3.0	3.0	1	1	3.0	3.0
2	3.0	3.0	3.0	3.0	3.0	3.0	1	1	3.3	3.3
3	2.0	2.0	2.0	2.0	4.0	4.0	1	1	3.2	3.2
4	4.3	4.3	7.5	7.5	2.7	2.7	3	3	3.6	3.4
5	3.5	2.3	4.9	4.0	4.0	3.7	2	3	3.4	3.3
6	3.5	3.5	4.9	4.9	3.5	3.5	2	2	2.7	2.9
7	1.7	1.0	2.9	2.2	0.7	1.6	3	5	2.1	2.5
AVG	2.7	2.5	3.8	3.5	3.0	3.1	1.9	2.3		
STD	1.2	1.2	2.2	2.2	1.1	0.8	0.9	1.5		

C	NUMBER	9 NATIVE SPECIES
0	0	11 TOTAL SPECIES
1	2	3.0 NATIVE MEAN C
2	2 0 to 3	2.5 W/Adventives
3	2 66.7%	9.0 NATIVE FQI
4	0	8.1 W/Adventives
5	3	2.2 NATIVE MEAN W
6	0 4 to 7	2.4 W/Adventives
7	0 33.3%	
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	9	81.8%	Adventive	2	18.2%
Tree	6	54.5%	Tree	0	0.0%
Shrub	2	18.2%	Shrub	2	18.2%
W-Vine	1	9.1%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	10	29	62.5	63.0	62.8
Nt W-Vine	1	10	6.3	21.7	14.0
Ad Shrub	3	3	18.8	6.5	12.6
Nt Shrub	2	4	12.5	8.7	10.6

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Acer saccharum	3 FACU	1	18	6.3	39.1	22.7
Crataegus mollis	2 FACU-	4	4	25.0	8.7	16.8
Vitis riparia	2 FACW-	1	10	6.3	21.7	14.0
Carya ovata	5 FACU	2	2	12.5	4.3	8.4
ROSA MULTIFLORA	0 FACU	2	2	12.5	4.3	8.4
Rubus allegheniensis	3 FACU+	1	3	6.3	6.5	6.4
Fraxinus pennsylvanica subintegerrima	1 FAC	1	2	6.3	4.3	5.3
Prunus serotina	1 FACU	1	2	6.3	4.3	5.3
Ostrya virginiana	5 FACU-	1	1	6.3	2.2	4.2
RHAMNUS CATHARTICA	0 FACU	1	1	6.3	2.2	4.2
Viburnum prunifolium	5 FACU	1	1	6.3	2.2	4.2
		16	46			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAU	3 <i>Acer saccharum</i>	3 FACU	Nt Tree	SUGAR MAPLE
CAROVY	5 <i>Carya ovata</i>	3 FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2 <i>Crataegus mollis</i>	4 FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1 <i>Fraxinus pennsylvanica subintegerrima</i>	0 FAC	Nt Tree	GREEN ASH
OSTVIR	5 <i>Ostrya virginiana</i>	4 FACU-	Nt Tree	HOP HORNBEEAM
PRUSER	1 <i>Prunus serotina</i>	3 FACU	Nt Tree	WILD BLACK CHERRY
RHACAT	0 <i>RHAMNUS CATHARTICA</i>	3 FACU	Ad Shrub	COMMON BUCKTHORN
ROSMUL	0 <i>ROSA MULTIFLORA</i>	3 FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3 <i>Rubus allegheniensis</i>	2 FACU+	Nt Shrub	COMMON BLACKBERRY
VIBPRU	5 <i>Viburnum prunifolium</i>	3 FACU	Nt Shrub	BLACK HAW
VITRIP	2 <i>Vitis riparia</i>	-2 FACW-	Nt W-Vine	RIVERBANK GRAPE

Site: Raccoon Grove, Will County, Illinois
 Locale: Raccoon Grove RA Tree Plot
 Date: June 3, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Raccoon Transect A Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	4.3	4.3	7.5	7.5	2.7	2.7	3	3	3.1	3.1
2	4.0	4.0	5.7	5.7	3.5	3.5	2	2	2.9	2.9
3	2.7	2.7	4.6	4.6	2.7	2.7	3	3	2.9	2.9
4	5.0	5.0	10.0	10.0	2.5	2.5	4	4	2.8	2.8
5	4.0	4.0	6.9	6.9	3.3	3.3	3	3	1.9	1.9
6	4.0	4.0	5.7	5.7	0.0	0.0	2	2	1.8	1.8
7	1.5	1.5	2.1	2.1	2.0	2.0	2	2	1.0	1.0
AVG	3.6	3.6	6.1	6.1	2.4	2.4	2.7	2.7		
STD	1.2	1.2	2.5	2.5	1.2	1.2	0.8	0.8		

C	NUMBER		9 NATIVE SPECIES
0	0		9 TOTAL SPECIES
1	1		4.1 NATIVE MEAN C
2	1	0 to 3	4.1 W/Adventives
3	1	33.3%	12.3 NATIVE FQI
4	0		12.3 W/Adventives
5	5		1.9 NATIVE MEAN W
6	1	4 to 7	1.9 W/Adventives
7	0	66.7%	
8	0		
9	0	8 to 10	
10	0	0.0%	

Native			Adventive		
Tree	8	100.0%	Tree	0	0.0%
Shrub	1	88.9%	Shrub	0	0.0%
W-Vine	0	11.1%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	17	69	89.5	92.0	90.7
Nt Shrub	2	6	10.5	8.0	9.3

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Ostrya virginiana	5	FACU-	3	18	15.8	24.0	19.9
Crataegus mollis	2	FACU-	4	9	21.1	12.0	16.5
Fraxinus pennsylvanica subintegerrima	1	FAC	2	10	10.5	13.3	11.9
Acer saccharum	3	FACU	2	9	10.5	12.0	11.3
Quercus macrocarpa	5	FAC-	2	8	10.5	10.7	10.6
Viburnum prunifolium	5	FACU	2	6	10.5	8.0	9.3
Carya ovata	5	FACU	2	5	10.5	6.7	8.6
Quercus bicolor	6	FACW+	1	7	5.3	9.3	7.3
Juglans nigra	5	FACU	1	3	5.3	4.0	4.6
			19	75			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAU	3	Acer saccharum	3	FACU	Nt Tree	SUGAR MAPLE

CAROV	5	<i>Carya ovata</i>	3	FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2	<i>Crataegus mollis</i>	4	FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1	<i>Fraxinus pennsylvanica subintegerrima</i>	0	FAC	Nt Tree	GREEN ASH
JUGNIG	5	<i>Juglans nigra</i>	3	FACU	Nt Tree	BLACK WALNUT
OSTVIR	5	<i>Ostrya virginiana</i>	4	FACU-	Nt Tree	HOP HORNBEAM
QUEBIC	6	<i>Quercus bicolor</i>	-4	FACW+	Nt Tree	SWAMP WHITE OAK
QUEMAC	5	<i>Quercus macrocarpa</i>	1	FAC-	Nt Tree	BUR OAK
VIBPRU	5	<i>Viburnum prunifolium</i>	3	FACU	Nt Shrub	BLACK HAW

Site: Raccoon Grove, Will County, Illinois
 Locale: Raccoon Grove RB Herbaceous Plot
 Date: June 4, 2004 Four hours
 By: EarthTech
 File: c:\FQA\studies\SSA\RGTransectB.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	3.0	4.2	4.2	-1.5	-1.5	2	2	-0.1	-0.1
2	3.5	3.5	9.9	9.9	1.4	1.4	8	8	0.5	0.5
3	4.3	4.3	10.6	10.6	1.5	1.5	6	6	1.2	1.2
4	2.9	2.9	8.1	8.1	0.8	0.8	8	8	1.1	1.1
AVG	3.4	3.4	8.2	8.2	0.5	0.5	6.0	6.0		
STD	0.7	0.7	2.9	2.9	1.4	1.4	2.8	2.8		

C	NUMBER	
0	0	15 NATIVE SPECIES
1	2	15 TOTAL SPECIES
2	4	3.6 NATIVE MEAN C
3	2	3.6 W/Adventives
4	3	13.9 NATIVE FQI
5	1	13.9 W/Adventives
6	0	0.9 NATIVE MEAN W
7	3	0.9 W/Adventives
8	0	
9	0	8 to 10
10	0	0.0%

Native	15	100.0%	Adventive	0	0.0%
Tree	1	6.7%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	2	13.3%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	9	60.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	2	13.3%	A-Forb	0	0.0%
P-Grass	1	6.7%	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	16	750	66.7	73.2	69.9
Nt W-Vine	4	150	16.7	14.6	15.7
Nt A-Forb	2	50	8.3	4.9	6.6
Nt P-Grass	1	50	4.2	4.9	4.5
Nt Tree	1	25	4.2	2.4	3.3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Geranium maculatum	4	[UPL]	3	125	12.0	11.1	11.6
Parthenocissus quinquefolia	2	FAC-	3	125	12.0	11.1	11.6
Sanicula gregaria	2	FAC+	3	100	12.0	8.9	10.4
Arisaema triphyllum	4	FACW-	2	100	8.0	8.9	8.4
Cryptotaenia canadensis	2	FAC	2	100	8.0	8.9	8.4
Asarum canadense	7	UPL	1	100	4.0	8.9	6.4
Laportea canadensis	3	FACW	1	100	4.0	8.9	6.4
SOIL	0		1	100	4.0	8.9	6.4
Allium cernuum	7	[FAC-]	2	50	8.0	4.4	6.2
Anemonella thalictroides	7	UPL	1	50	4.0	4.4	4.2
Elymus virginicus	4	FACW-	1	50	4.0	4.4	4.2
Circaea lutetiana canadensis	1	FACU	1	25	4.0	2.2	3.1
Galium aparine	1	FACU	1	25	4.0	2.2	3.1
Impatiens capensis	3	FACW	1	25	4.0	2.2	3.1
Rhus radicans	2	FAC+	1	25	4.0	2.2	3.1
Tilia americana	5	FACU	1	25	4.0	2.2	3.1

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ALLCER	7 <i>Allium cernuum</i>	1 [FAC-]	Nt P-Forb	NODDING WILD ONION
ANETHA	7 <i>Anemonella thalictroides</i>	5 UPL	Nt P-Forb	RUE ANEMONE
ARITRI	4 <i>Arisaema triphyllum</i>	-2 FACW-	Nt P-Forb	JACK-IN-THE-PULPIT
ASACAN	7 <i>Asarum canadense</i>	5 UPL	Nt P-Forb	WILD GINGER
CIRLUC NIGHTSHADE	1 <i>Circaea lutetiana canadensis</i>	3 FACU	Nt P-Forb	ENCHANTER'S
CRYCAN	2 <i>Cryptotaenia canadensis</i>	0 FAC	Nt P-Forb	HONEWORT
ELYVIR	4 <i>Elymus virginicus</i>	-2 FACW-	Nt P-Grass	VIRGINIA WILD RYE
GALAPA	1 <i>Galium aparine</i>	3 FACU	Nt A-Forb	ANNUAL BEDSTRAW
GERMAC	4 <i>Geranium maculatum</i>	5 [UPL]	Nt P-Forb	WILD GERANIUM
IMPCAP	3 <i>Impatiens capensis</i>	-3 FACW	Nt A-Forb	ORANGE JEWELWEED
LAPCAN	3 <i>Laportea canadensis</i>	-3 FACW	Nt P-Forb	WOOD NETTLE
PARQUI	2 <i>Parthenocissus quinquefolia</i>	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
RHURAD	2 <i>Rhus radicans</i>	-1 FAC+	Nt W-Vine	POISON IVY
SANGRE SNAKEROOT	2 <i>Sanicula gregaria</i>	-1 FAC+	Nt P-Forb	CLUSTERED BLACK
SOIL	0 SOIL	0 nil	nil	SOIL
TILAME	5 <i>Tilia americana</i>	3 FACU	Nt Tree	AMERICAN LINDEN

Site: Raccoon Grove, Will County, Illinois
 Locale: Raccoon RB Shrub Plot
 Date: June 4, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Raccoon Shrub B.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.0	3.0	3.0	3.0	3.0	3.0	1	1	3.2	3.2
2	3.5	3.5	4.9	4.9	3.5	3.5	2	2	3.5	3.5
3	2.0	2.0	2.0	2.0	4.0	4.0	1	1	3.8	3.8
4	2.0	2.0	2.0	2.0	4.0	4.0	1	1	4.0	4.0
AVG	2.6	2.6	3.0	3.0	3.6	3.6	1.3	1.3		
STD	0.8	0.8	1.4	1.4	0.5	0.5	0.5	0.5		

C	NUMBER	
0	0	3 NATIVE SPECIES
1	0	3 TOTAL SPECIES
2	1 0 to 3	3.3 NATIVE MEAN C
3	1 66.7%	3.3 W/Adventives
4	0	5.8 NATIVE FQI
5	1	5.8 W/Adventives
6	0 4 to 7	3.3 NATIVE MEAN W
7	0 33.3%	3.3 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	3	100.0%	Adventive	0	0.0%
Tree	3	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	5	8	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Crataegus mollis	2	FACU-	3	4	60.0	50.0	55.0
Acer saccharum	3	FACU	1	3	20.0	37.5	28.8
Carya ovata	5	FACU	1	1	20.0	12.5	16.3
			5	8			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAU	3	Acer saccharum	3	FACU	Nt Tree	SUGAR MAPLE
CAROV	5	Carya ovata	3	FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2	Crataegus mollis	4	FACU-	Nt Tree	DOWNY HAWTHORN

Site: Raccoon Grove, Will County, Illinois
 Locale: Raccoon Grove RB, Tree Plot
 Date: June 3, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Raccoon Transect B Tree Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	4.0	4.0	5.7	5.7	3.0	3.0	2	2		2.5	2.5
2	4.0	4.0	6.9	6.9	2.0	2.0	3	3		2.7	2.7
3	5.0	5.0	7.1	7.1	3.0	3.0	2	2		2.4	2.4
4	2.7	2.7	4.6	4.6	2.3	2.3	3	3		2.7	2.7
AVG	3.9	3.9	6.1	6.1	2.6	2.6	2.5	2.5			
STD	1.0	1.0	1.2	1.2	0.5	0.5	0.6	0.6			

C	NUMBER		
0	0		7 NATIVE SPECIES
1	1		7 TOTAL SPECIES
2	1	0 to 3	3.6 NATIVE MEAN C
3	1	42.9%	3.6 W/Adventives
4	1		9.4 NATIVE FQI
5	3		9.4 W/Adventives
6	0	4 to 7	2.3 NATIVE MEAN W
7	0	57.1%	2.3 W/Adventives
8	0		
9	0	8 to 10	
10	0	0.0%	

Native			Adventive		
Tree	7	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	10	38	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Tilia americana	5	FACU	3	16	30.0	42.1	36.1
Acer saccharum	3	FACU	2	6	20.0	15.8	17.9
Fraxinus pennsy...subintegerrima	1	FAC	1	6	10.0	15.8	12.9
Carya ovata	5	FACU	1	5	10.0	13.2	11.6
Crataegus mollis	2	FACU-	1	2	10.0	5.3	7.6
Fraxinus americana	5	FACU	1	2	10.0	5.3	7.6
Ulmus rubra	4	FAC	1	1	10.0	2.6	6.3
			10	38			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAU	3	Acer saccharum	3	FACU	Nt Tree	SUGAR MAPLE
CAROVY	5	Carya ovata	3	FACU	Nt Tree	SHAGBARK HICKORY
CRAMOL	2	Crataegus mollis	4	FACU-	Nt Tree	DOWNY HAWTHORN
FRAAMA	5	Fraxinus americana	3	FACU	Nt Tree	WHITE ASH

FRAPES	1	<i>Fraxinus pennsylvanica subintegerrima</i>	0	FAC	Nt Tree	GREEN ASH
TILAME	5	<i>Tilia americana</i>	3	FACU	Nt Tree	AMERICAN LINDEN
ULMRUB	4	<i>Ulmus rubra</i>	0	FAC	Nt Tree	SLIPPERY ELM

**Monee Reservoir
Bird Plots**

Site: Monee Reservoir, Will County, Illinois
 Locale: Monee Grassland Transects A and B
 Date: June 3, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\MoneeTranA&B.tra

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	-0.2	0	4	0.0	-2.1	
2	0.0	0.0	0.0	0.0	0.0	-4.0	0	1	0.0	-1.2	
3	0.0	0.0	0.0	0.0	0.0	0.5	0	2	0.3	-0.5	
4	5.0	2.5	5.0	3.5	1.0	2.0	1	2	0.5	1.2	
AVG	1.3	0.6	1.3	0.9	0.3	-0.4	0.3	2.3			
STD	2.5	1.3	2.5	1.8	0.5	2.6	0.5	1.3			

C	NUMBER	
0	0	1 NATIVE SPECIES
1	0	7 TOTAL SPECIES
2	0 0 to 3	5.0 NATIVE MEAN C
3	0 0.0%	0.7 W/Adventives
4	0	5.0 NATIVE FQI
5	1	1.9 W/Adventives
6	0 4 to 7	1.0 NATIVE MEAN W
7	0 100.0%	1.1 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native		Adventive	
1	14.3%	6	85.7%
Tree	0 0.0%	0	0.0%
Shrub	0 0.0%	0	0.0%
W-Vine	0 0.0%	0	0.0%
H-Vine	0 0.0%	0	0.0%
P-Forb	0 0.0%	2	28.6%
B-Forb	0 0.0%	1	14.3%
A-Forb	0 0.0%	0	0.0%
P-Grass	1 14.3%	3	42.9%
A-Grass	0 0.0%	0	0.0%
P-Sedge	0 0.0%	0	0.0%
A-Sedge	0 0.0%	0	0.0%
Cryptogam	0 0.0%		

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES					
PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Ad P-Grass	5	350	55.6	56.0	55.8
Ad P-Forb	2	100	22.2	16.0	19.1
Nt P-Grass	1	100	11.1	16.0	13.6
Ad B-Forb	1	75	11.1	12.0	11.6

SPECIES RELATIVE IMPORTANCE VALUES						
SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
PHALARIS ARUNDINACEA	0 FACW+	3	225	30.0	32.1	31.1
Andropogon gerardii	5 FAC-	1	100	10.0	14.3	12.1
POA PRATENSIS	0 FAC-	1	100	10.0	14.3	12.1
MELILOTUS ALBA	0 FACU	1	75	10.0	10.7	10.4
SOIL	0	1	75	10.0	10.7	10.4
TRIFOLIUM PRATENSE	0 UPL	1	75	10.0	10.7	10.4
AGROSTIS ALBA	0 FACW	1	25	10.0	3.6	6.8
CHRYSANTHEMUM L. PINNATIFIDUM	0 UPL	1	25	10.0	3.6	6.8
		10	700			

ACRONYM	C	SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
AGRALA	0	AGROSTIS ALBA	-3 FACW	Ad P-Grass	REDTOP
ANDGER	5	Andropogon gerardii	1 FAC-	Nt P-Grass	BIG BLUESTEM GRASS

CHRLEP	0 CHRYSANTHEMUM LEUCANTHEMUM FINNATIFIDUM	5 UPL	Ad P-Forb	OX-EYE DAISY
MELALB	0 MELILOTUS ALBA	3 FACU	Ad B-Forb	WHITE SWEET CLOVER
PHAARU	0 PHALARIS ARUNDINACEA	-4 FACW+	Ad P-Grass	REED CANARY GRASS
POAPRA	0 POA PRATENSIS	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
SOIL	0 SOIL	0 nil	nil	SOIL
TRIPRA	0 TRIFOLIUM PRATENSE	5 UPL	Ad P-Forb	RED CLOVER

Site: Monee Reservoir, Will County, Illinois
 Locale: Monee MA Shrub Plot
 Date: June 3, 2004 Two hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\Monee Shrub A.tra

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	0.0	0	0	0.0	0.0
2	3.5	3.5	4.9	4.9	-2.5	-2.5	2	2	-2.5	-2.5
AVG	1.8	1.8	2.5	2.5	-1.2	-1.2	1.0	1.0		
STD	2.5	2.5	3.5	3.5	1.8	1.8	1.4	1.4		

C	NUMBER	
0	1	2 NATIVE SPECIES
1	0	2 TOTAL SPECIES
2	0 0 to 3	3.5 NATIVE MEAN C
3	0 50.0%	3.5 W/Adventives
4	0	4.9 NATIVE FQI
5	0	4.9 W/Adventives
6	0 4 to 7	-2.5 NATIVE MEAN w
7	1 50.0%	-2.5 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native			Adventive		
Tree	1	50.0%	Tree	0	0.0%
Shrub	1	50.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	1	1	50.0	50.0	50.0
Nt Shrub	1	1	50.0	50.0	50.0

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
EMPTY QUADRAT	0		1	100	33.3	98.0	65.7
Acer negundo	0	FACW-	1	1	33.3	1.0	17.2
Ribes americanum	7	FACW	1	1	33.3	1.0	17.2
			3	102			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACENEG	0	Acer negundo	-2	FACW-	Nt Tree	BOX ELDER
EMPTY	0	EMPTY QUADRAT	0	nil	nil	EMPTY QUADRAT
RIBAME	7	Ribes americanum	-3	FACW	Nt Shrub	WILD BLACK CURRANT

Site: Goodenow Grove, Will County, Illinois
 Locale: GTAP GA-3 Herbaceous Plot
 Date: August 31, 2004 Five hours
 By: Earth Tech
 File: c:\FOA\studies\BaselineReport\CTAP GA-3 Grassland Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.5	3.5	7.0	7.0	-0.7	-0.7	4	4	-0.2	-0.2
2	3.0	3.0	6.0	6.0	0.3	0.3	4	4	0.6	0.6
3	3.9	3.4	11.0	10.3	2.4	2.2	8	9	1.5	1.5
4	3.5	3.5	8.6	8.6	2.0	2.0	6	6	2.2	2.3
5	4.1	3.6	11.0	10.3	2.3	2.6	7	8	2.3	2.4
6	3.1	3.1	8.3	8.3	2.7	2.7	7	7	2.2	2.3
7	3.8	3.8	9.4	9.4	1.5	1.5	6	6	2.1	2.1
8	4.7	4.7	8.1	8.1	2.0	2.0	3	3	2.3	2.1
9	5.0	3.8	8.7	7.5	3.3	2.8	3	4	3.0	2.4
10	4.0	2.4	6.9	5.4	3.7	2.6	3	5	2.9	2.3
11	5.0	5.0	8.7	8.7	1.7	1.7	3	3	2.4	2.0
12	3.3	3.3	6.5	6.5	1.8	1.8	4	4	2.3	2.1
13	4.0	3.2	8.0	7.2	3.5	3.0	4	5	2.5	2.4
14	3.3	3.3	5.8	5.8	2.3	2.3	3	3	2.6	2.4
15	3.7	3.7	6.4	6.4	2.0	2.0	3	3	2.4	2.4
16	3.8	3.8	8.5	8.5	2.8	2.8	5	5	2.6	2.6
17	5.0	5.0	7.1	7.1	3.0	3.0	2	2	2.6	2.6
18	2.8	2.8	6.3	6.3	2.0	2.0	5	5	2.1	2.1
19	2.8	2.8	6.3	6.3	1.4	1.4	5	5	2.1	2.1
20	4.3	4.3	10.6	10.6	3.0	3.0	6	6	2.2	2.2
AVG	3.8	3.6	7.9	7.7	2.1	2.0	4.6	4.8		
STD	0.7	0.7	1.6	1.6	1.1	0.9	1.7	1.8		

C	NUMBER	
0	1	22 NATIVE SPECIES
1	4	25 TOTAL SPECIES
2	4 0 to 3	3.5 NATIVE MEAN C
3	1 45.5%	3.1 W/Adventives
4	4	16.4 NATIVE FQI
5	6	15.4 W/Adventives
6	0 4 to 7	1.3 NATIVE MEAN W
7	0 45.5%	1.4 W/Adventives
8	2	
9	0 8 to 10	
10	0 9.1%	

Native	22	88.0%	Adventive	3	12.0%
Tree	0	0.0%	Tree	0	0.0%
Shrub	1	4.0%	Shrub	0	0.0%
W-Vine	1	4.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	14	56.0%	P-Forb	0	0.0%
B-Forb	1	4.0%	B-Forb	1	4.0%
A-Forb	0	0.0%	A-Forb	1	4.0%
P-Grass	3	12.0%	P-Grass	1	4.0%
A-Grass	1	4.0%	A-Grass	0	0.0%
P-Sedge	1	4.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Grass	26	1220	26.8	64.0	45.4
Nt P-Forb	46	418	47.4	21.9	34.7
Nt B-Forb	12	104	12.4	5.5	8.9
Ad P-Grass	4	100	4.1	5.2	4.7
Nt W-Vine	3	7	3.1	0.4	1.7
Nt Shrub	2	6	2.1	0.3	1.2
Nt P-Sedge	1	25	1.0	1.3	1.2
Nt A-Grass	1	25	1.0	1.3	1.2
Ad A-Forb	1	1	1.0	0.1	0.5

Ad B-Forb 1 1 1.0 0.1 0.5

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Andropogon gerardii	5 FAC-	19	1020	17.9	42.0	30.0
SOIL	0	9	520	8.5	21.4	15.0
Solidago altissima	1 FACU	10	162	9.4	6.7	8.1
Erigeron strigosus	5 [UPL]	12	104	11.3	4.3	7.8
Silphium integrifolium deamii	5 UPL	9	89	8.5	3.7	6.1
Sorghastrum nutans	5 FACU+	4	125	3.8	5.2	4.5
POA PRATENSIS	0 FAC-	4	100	3.8	4.1	3.9
Helianthus grosseserratus	2 FACW-	4	80	3.8	3.3	3.5
Panicum virgatum	5 FAC+	3	75	2.8	3.1	3.0
Euphorbia corollata	2 UPL	4	12	3.8	0.5	2.1
Fragaria virginiana	1 FAC-	4	8	3.8	0.3	2.1
Juncus dudleyi	4 [FAC]	4	4	3.8	0.2	2.0
Rhus radicans	2 FAC+	3	7	2.8	0.3	1.6
Potentilla simplex	4 FACU-	2	26	1.9	1.1	1.5
Monarda fistulosa	4 FACU	2	6	1.9	0.2	1.1
Rosa carolina	5 FACU-	2	6	1.9	0.2	1.1
Aster azureus	8 UPL	1	25	0.9	1.0	1.0
Convolvulus sepium	1 FAC	2	2	1.9	0.1	1.0
Eleocharis compressa	8 FACW	1	25	0.9	1.0	1.0
Panicum capillare	1 FAC	1	25	0.9	1.0	1.0
Apocynum sibiricum	2 FAC+	1	1	0.9	0.0	0.5
Aster novae-angliae	4 FACW	1	1	0.9	0.0	0.5
Aster pilosus	0 FACU+	1	1	0.9	0.0	0.5
DAUCUS CAROTA	0 UPL	1	1	0.9	0.0	0.5
MEDICAGO LUPULINA	0 FAC-	1	1	0.9	0.0	0.5
Solidago graminifolia nuttallii	3 [FAC]	1	1	0.9	0.0	0.5
		106	2427			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ANDGER	5 Andropogon gerardii	1 FAC-	Nt P-Grass	BIG BLUESTEM GRASS
APOSIB	2 Apocynum sibiricum	-1 FAC+	Nt P-Forb	PRAIRIE INDIAN HEMP
ASTAZU	8 Aster azureus	5 UPL	Nt P-Forb	SKY-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
CONSEP	1 Convolvulus sepium	0 FAC	Nt P-Forb	HEDGE BINDWEED
DAUCAR	0 DAUCUS CAROTA	5 UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELECOM RUSH	8 Eleocharis compressa	-3 FACW	Nt P-Sedge	FLAT-STEMMED SPIKE
ERISTR	5 Erigeron strigosus	5 [UPL]	Nt B-Forb	DAISY FLEABANE
EUPCOR	2 Euphorbia corollata	5 UPL	Nt P-Forb	FLOWERING SPURGE
FRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
HELGRO	2 Helianthus grosseserratus	-2 FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
JUNDUD	4 Juncus dudleyi	0 [FAC]	Nt P-Forb	DUDLEY'S RUSH
MEDLUP	0 MEDICAGO LUPULINA	1 FAC-	Ad A-Forb	BLACK MEDICK
MONFIS	4 Monarda fistulosa	3 FACU	Nt P-Forb	WILD BERGAMOT
PANCAP	1 Panicum capillare	0 FAC	Nt A-Grass	OLD WITCH GRASS
PANVIR	5 Panicum virgatum	-1 FAC+	Nt P-Grass	SWITCH GRASS
POAPRA	0 POA PRATENSIS	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POTSIS	4 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL

RHURAD	2 <i>Rhus radicans</i>	-1 FAC+	Nt W-Vine	POISON IVY
ROSCAR	5 <i>Rosa carolina</i>	4 FACU-	Nt Shrub	PASTURE ROSE
SILIND	5 <i>Silphium integrifolium deamii</i>	5 UPL	Nt P-Forb	DEAM'S ROSIN WEED
SOIL	0 SOIL	0 nil	nil	SOIL
SOLALT	1 <i>Solidago altissima</i>	3 FACU	Nt P-Forb	TALL GOLDENROD
SOLGRN GOLDENROD	3 <i>Solidago graminifolia nuttallii</i>	0 [FAC]	Nt P-Forb	HAIKY GRASS-LEAVED
SORNUT	5 <i>Sorghastrum nutans</i>	2 FACU+	Nt P-Grass	INDIAN GRASS

**Goodenow Grove Nature Preserve
CTAP Plots**

Site: Goodenow Grove, Will County, Illinois
 Locale: GC-2, All Transects, Herbaceous Plot
 Date: Sept 7, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 All Transects, Herb Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.8	2.8	8.9	8.9	0.9	0.9	10	10	1.5	1.5
2	3.3	3.3	10.4	10.4	2.1	2.1	10	10	1.4	1.4
3	3.6	3.6	11.4	11.4	1.3	1.3	10	10	0.8	0.8
4	2.8	2.8	5.5	5.5	-1.0	-1.0	4	4	-0.4	-0.4
5	4.2	4.2	10.2	10.2	-1.5	-1.5	6	6	-0.2	-0.2
6	2.3	2.3	4.5	4.5	1.8	1.8	4	4	-0.0	-0.0
7	3.4	3.4	7.6	7.6	-0.4	-0.4	5	5	-0.2	-0.2
8	2.8	2.8	5.5	5.5	-2.0	-2.0	4	4	-0.8	-0.8
9	4.0	4.0	8.9	8.9	0.0	0.0	5	5	-0.8	-0.8
10	3.2	3.2	7.8	7.8	-0.3	-0.3	6	6	0.1	0.1
11	3.5	3.5	8.6	8.6	0.7	0.7	6	6	1.1	1.1
12	3.8	3.8	8.5	8.5	3.0	3.0	5	5	1.1	1.1
14	2.0	2.0	4.0	4.0	-0.5	-0.5	4	4	0.2	0.2
15	2.7	2.7	6.5	6.5	-2.0	-2.0	6	6	-0.2	-0.2
17	3.3	3.3	5.8	5.8	2.0	2.0	3	3	-0.7	-0.7
18	4.0	4.0	8.9	8.9	-2.0	-2.0	5	5	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.3	0.3
20	5.0	5.0	5.0	5.0	3.0	3.0	1	1	0.9	0.9
21	3.2	3.2	7.8	7.8	-0.2	-0.2	6	6	0.8	0.8
22	3.3	3.3	8.2	8.2	-0.3	-0.3	6	6	-0.1	-0.1
23	2.6	2.6	7.7	7.7	0.2	0.2	9	9	0.1	0.1
24	2.6	2.6	6.8	6.8	0.4	0.4	7	7	0.4	0.4
25	3.6	3.6	10.7	10.7	0.4	0.4	9	9	0.1	0.1
26	3.7	3.7	11.0	11.0	-0.4	-0.4	9	9	0.1	0.1
27	2.7	2.7	7.2	7.2	0.4	0.4	7	7	0.1	0.1
28	2.8	2.8	8.3	8.3	0.2	0.2	9	9	0.1	0.1
29	3.7	3.7	9.0	9.0	-0.3	-0.3	6	6	0.1	0.1
30	3.7	3.7	12.4	12.4	0.5	0.5	11	11	0.1	0.1
AVG	3.2	3.2	7.7	7.7	0.2	0.2	6.2	6.2		
STD	0.9	0.9	2.6	2.6	1.3	1.3	2.7	2.7		

C	NUMBER	
0	1	43 NATIVE SPECIES
1	4	43 TOTAL SPECIES
2	7	3.8 NATIVE MEAN C
3	6	3.8 W/Adventives
4	7	24.7 NATIVE FQI
5	14	24.7 W/Adventives
6	1	0.6 NATIVE MEAN W
7	2	0.6 W/Adventives
8	1	
9	0	0.8 to 10
10	0	2.3%

Native	Count	Percentage	Adventive	Count	Percentage
Native	43	100.0%	Adventive	0	0.0%
Tree	6	14.0%	Tree	0	0.0%
Shrub	2	4.7%	Shrub	0	0.0%
W-Vine	2	4.7%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	23	53.5%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	4	9.3%	A-Forb	0	0.0%
P-Grass	3	7.0%	P-Grass	0	0.0%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	2	4.7%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	1	2.3%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES					
PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Forb	107	1721	61.8	77.8	69.8

Nt A-Forb	24	266	13.9	12.0	12.9
Nt P-Grass	10	50	5.8	2.3	4.0
Nt Tree	11	31	6.4	1.4	3.9
Nt Shrub	7	63	4.0	2.8	3.4
Nt P-Sedge	6	62	3.5	2.8	3.1
Nt W-Vine	7	19	4.0	0.9	2.5
Cryptogam	1	1	0.6	0.0	0.3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Sanicula gregaria	2	FAC+	23	596	12.2	21.1	16.7
SOIL	0		14	506	7.4	17.9	12.7
Pilea pumila	5	FACW	16	246	8.5	8.7	8.6
Polygonum virginianum	2	FAC	18	190	9.6	6.7	8.2
Eupatorium rugosum	4	UPL	10	280	5.3	9.9	7.6
Cryptotaenia canadensis	2	FAC	13	225	6.9	8.0	7.4
Actinomeris alternifolia	5	FACW	5	130	2.7	4.6	3.6
Rubus allegheniensis	3	FACU+	4	56	2.1	2.0	2.1
EMPTY QUADRAT	0		1	100	0.5	3.5	2.0
Oxalis europaea	0	FACU	6	18	3.2	0.6	1.9
Carex granularis	4	FACW+	3	55	1.6	2.0	1.8
Rhus radicans	2	FAC+	6	14	3.2	0.5	1.8
Leersia virginica	7	FACW	4	36	2.1	1.3	1.7
Circaea lutetiana canadensis	1	FACU	3	35	1.6	1.2	1.4
Galium concinnum	5	{UPL}	2	50	1.1	1.8	1.4
Cinna arundinacea	5	FACW	4	12	2.1	0.4	1.3
Amphicarpaea bracteata	4	FAC	1	50	0.5	1.8	1.2
Boehmeria cylindrica	2	OBL	1	50	0.5	1.8	1.2
Polygonum hydropiper	2	FACW	4	8	2.1	0.3	1.2
Prunus serotina	1	FACU	4	8	2.1	0.3	1.2
Solidago ulmifolia	5	UPL	3	15	1.6	0.5	1.1
Triosteum perfoliatum	5	UPL	2	30	1.1	1.1	1.1
Campanula americana	3	FAC	3	11	1.6	0.4	1.0
Potentilla simplex	4	FACU-	3	11	1.6	0.4	1.0
Carex pennsylvanica	5	UPL	3	7	1.6	0.2	0.9
Viburnum prunifolium	5	FACU	3	7	1.6	0.2	0.9
Viola sororia	3	FAC-	3	3	1.6	0.1	0.9
Arisaema triphyllum	4	FACW-	2	2	1.1	0.1	0.6
Fraxinus americana	5	FACU	2	6	1.1	0.2	0.6
Geum canadense	1	FAC	2	6	1.1	0.2	0.6
Glyceria striata	4	[FACW]	2	2	1.1	0.1	0.6
Osmorhiza claytonii	3	FACU-	2	2	1.1	0.1	0.6
Polemonium reptans	5	FAC	2	6	1.1	0.2	0.6
Ulmus rubra	4	FAC	2	6	1.1	0.2	0.6
Viola pubescens	5	FACU-	2	6	1.1	0.2	0.6
Carya ovata	5	FACU	1	5	0.5	0.2	0.4
Parthenocissus quinquefolia	2	FAC-	1	5	0.5	0.2	0.4
Polygonatum canaliculatum	3	FACU	1	5	0.5	0.2	0.4
Quercus alba	5	FAC	1	5	0.5	0.2	0.4
Ranunculus fascicularis	6	FACU	1	5	0.5	0.2	0.4
Teucrium canadense	3	FACW	1	5	0.5	0.2	0.4
Athyrium filix-femina michauxii	8	FAC	1	1	0.5	0.0	0.3
Bidens frondosa	1	FACW	1	1	0.5	0.0	0.3
Polygonum hydropiperoides	7	OBL	1	1	0.5	0.0	0.3
Tilia americana	5	FACU	1	1	0.5	0.0	0.3

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ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACTALT	5	Actinomeris alternifolia	-3	FACW	Nt P-Forb	WINGSTEM
AMPBRB	4	Amphicarpaea bracteata	0	FAC	Nt P-Forb	UPLAND HOG PEANUT
ARITRI	4	Arisaema triphyllum	-2	FACW-	Nt P-Forb	JACK-IN-THE-PULPIT
ATHFIM	8	Athyrium filix-femina michauxii	0	FAC	Cryptogam	LADY FERN
BIDFRO	1	Bidens frondosa	-3	FACW	Nt A-Forb	COMMON BEGGAR'S
TICKS	2	Boehmeria cylindrica	-5	OBL	Nt P-Forb	FALSE NETTLE

CAMAME	3	<i>Campanula americana</i>	0	FAC	Nt A-Forb	TALL BELLFLOWER
CXGRAN	4	<i>Carex granularis</i>	-4	FACW+	Nt P-Sedge	PALE SEDGE
CXPENS	5	<i>Carex pensylvanica</i>	5	UPL	Nt P-Sedge	COMMON OAK SEDGE
CAROVT	5	<i>Carya ovata</i>	3	FACU	Nt Tree	SHAGBARK HICKORY
CINARU	5	<i>Cinna arundinacea</i>	-3	FACW	Nt P-Grass	COMMON WOOD REED
CIRLUC NIGHTSHADE	1	<i>Circaea lutetiana canadensis</i>	3	FACU	Nt P-Forb	ENCHANTER'S
CRYCAN	2	<i>Cryptotaenia canadensis</i>	0	FAC	Nt P-Forb	HONEWORT
EMPTY	0	EMPTY QUADRAT	0	nil	nil	EMPTY QUADRAT
EUPRUG	4	<i>Eupatorium rugosum</i>	5	UPL	Nt P-Forb	WHITE SNAKEROOT
FRAAMA	5	<i>Fraxinus americana</i>	3	FACU	Nt Tree	WHITE ASH
GALCON	5	<i>Galium concinnum</i>	5	[UPL]	Nt P-Forb	SHINING BEDSTRAW
GEUCAN	1	<i>Geum canadense</i>	0	FAC	Nt P-Forb	WOOD AVENS
GLYSTR	4	<i>Glyceria striata</i>	-3	[FACW]	Nt P-Grass	FOWL MANNA GRASS
LEEVIR	7	<i>Leersia virginica</i>	-3	FACW	Nt P-Grass	WHITE GRASS
OSMCLO	3	<i>Osmorhiza claytonii</i>	4	FACU-	Nt P-Forb	HAIRY SWEET CICELY
OXAEUR	0	<i>Oxalis europaea</i>	3	FACU	Nt P-Forb	TALL WOOD SORREL
PARQUI	2	<i>Parthenocissus quinquefolia</i>	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
PILPUM	5	<i>Pilea pumila</i>	-3	FACW	Nt A-Forb	CLEARWEED
POLREP	5	<i>Polemonium reptans</i>	0	FAC	Nt P-Forb	JACOB'S LADDER
POLCAL SEAL	3	<i>Polygonatum canaliculatum</i>	3	FACU	Nt P-Forb	SMOOTH SOLOMON'S
POLHYR	2	<i>Polygonum hydropiper</i>	-3	FACW	Nt A-Forb	WATER PEPPER
POLHYS	7	<i>Polygonum hydropiperoides</i>	-5	OBL	Nt P-Forb	MILD WATER PEPPER
POLGVI	2	<i>Polygonum virginianum</i>	0	FAC	Nt P-Forb	WOODLAND KNOTWEED
POTSIS	4	<i>Potentilla simplex</i>	4	FACU-	Nt P-Forb	COMMON CINQUEFOIL
PRUSER	1	<i>Prunus serotina</i>	3	FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5	<i>Quercus alba</i>	0	FAC	Nt Tree	WHITE OAK
RANFAS	6	<i>Ranunculus fascicularis</i>	3	FACU	Nt P-Forb	EARLY BUTTERCUP
RHURAD	2	<i>Rhus radicans</i>	-1	FAC+	Nt W-Vine	POISON IVY
RUBALL	3	<i>Rubus allegheniensis</i>	2	FACU+	Nt Shrub	COMMON BLACKBERRY
SANGRE SNAKEROOT	2	<i>Sanicula gregaria</i>	-1	FAC+	Nt P-Forb	CLUSTERED BLACK
SOIL	0	SOIL	0	nil	nil	SOIL
SOLULM GOLDENROD	5	<i>Solidago ulmifolia</i>	5	UPL	Nt P-Forb	ELM-LEAVED
TEUCAN	3	<i>Teucrium canadense</i>	-3	FACW	Nt P-Forb	GERMANDER
TILAME	5	<i>Tilia americana</i>	3	FACU	Nt Tree	AMERICAN LINDEN
TRIPER	5	<i>Triosteum perfoliatum</i>	5	UPL	Nt P-Forb	LATE HORSE GENTIAN
ULMRUB	4	<i>Ulmus rubra</i>	0	FAC	Nt Tree	SLIPPERY ELM
VIBPRU	5	<i>Viburnum prunifolium</i>	3	FACU	Nt Shrub	BLACK HAW

VIOPUB 5 *Viola pubescens*

VIOSOR 3 *Viola sororia*

4 FACU- Nt P-Forb YELLOW VIOLET

1 FAC- Nt P-Forb COMMON BLUE VIOLET

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 1, Shrub Plot
 Date: September 7, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 1, Shrub Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0	0	1.0	1.0
5	5.0	5.0	5.0	5.0	3.0	3.0	1	1	1.5	1.5
AVG	1.3	1.3	1.3	1.3	0.8	0.8	0.3	0.3		
STD	2.5	2.5	2.5	2.5	1.5	1.5	0.5	0.5		

C	NUMBER	
0	0	1 NATIVE SPECIES
1	0	1 TOTAL SPECIES
2	0 0 to 3	5.0 NATIVE MEAN C
3	0 0.0%	5.0 W/Adventives
4	0	5.0 NATIVE FQI
5	1	5.0 W/Adventives
6	0 4 to 7	3.0 NATIVE MEAN W
7	0 100.0%	3.0 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native		Adventive	
Tree	1 100.0%	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	0 0.0%	P-Forb	0 0.0%
B-Forb	0 0.0%	B-Forb	0 0.0%
A-Forb	0 0.0%	A-Forb	0 0.0%
P-Grass	0 0.0%	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 Tree	1	1	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES						
SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
EMPTY QUADRAT	0	3	29	75.0	96.7	85.8
Carya ovata	5 FACU	1	1	25.0	3.3	14.2
		4	30			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CAROV1	5 Carya ovata	3 FACU	Nt Tree	SHAGBARK HICKORY
EMPTY	0 EMPTY QUADRAT	0 nil	nil	EMPTY QUADRAT

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 2, Shrub Plot
 Date: September 7, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 2, Shrub Plot.ttra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	4.5	4.5	6.4	6.4	1.0	1.0	2	2		0.5	0.5
2	0.0	0.0	0.0	0.0	0.0	0.0	0	0		0.3	0.3
3	0.0	0.0	0.0	0.0	0.0	0.0	0	0		0.0	0.0
4	0.0	0.0	0.0	0.0	0.0	0.0	0	0		0.0	0.0
5	0.0	0.0	0.0	0.0	0.0	0.0	0	0		0.0	0.0
AVG	0.9	0.9	1.3	1.3	0.2	0.2	0.4	0.4			
STD	2.0	2.0	2.8	2.8	0.4	0.4	0.9	0.9			

C	NUMBER	
0	0	2 NATIVE SPECIES
1	0	2 TOTAL SPECIES
2	1 0 to 3	4.5 NATIVE MEAN C
3	0 50.0%	4.5 W/Adventives
4	0	6.4 NATIVE FQI
5	0	6.4 W/Adventives
6	0 4 to 7	1.0 NATIVE MEAN W
7	1 50.0%	1.0 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native			Adventive		
Tree	1	50.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	1	50.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 W-Vine	1	1	50.0	50.0	50.0
Nt Tree	1	1	50.0	50.0	50.0

SPECIES RELATIVE IMPORTANCE VALUES							
SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
EMPTY QUADRAT	0		4	38	66.7	95.0	80.8
Quercus rubra	7	FACU	1	1	16.7	2.5	9.6
Rhus radicans	2	FAC+	1	1	16.7	2.5	9.6
			6	40			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
EMPTY	0	EMPTY QUADRAT	0	nil	nil	EMPTY QUADRAT
QUERUB	7	Quercus rubra	3	FACU	Nt Tree	RED OAK
RHURAD	2	Rhus radicans	-1	FAC+	Nt W-Vine	POISON IVY

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 3, Shrub Plot
 Date: September 7, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 3, Shrub Plot.tra

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	0.0	0	0	1.5	1.5
2	7.0	7.0	7.0	7.0	3.0	3.0	1	1	1.0	1.0
3	0.0	0.0	0.0	0.0	0.0	0.0	0	0	2.0	2.0
4	7.0	7.0	7.0	7.0	3.0	3.0	1	1	1.7	1.7
5	3.0	3.0	3.0	3.0	2.0	2.0	1	1	2.5	2.5
AVG	3.4	3.4	3.4	3.4	1.6	1.6	0.6	0.6		
STD	3.5	3.5	3.5	3.5	1.5	1.5	0.5	0.5		

C	NUMBER		2 NATIVE SPECIES
0	0		2 TOTAL SPECIES
1	0		5.0 NATIVE MEAN C
2	0	0 to 3	5.0 W/Adventives
3	1	50.0%	7.1 NATIVE FQI
4	0		7.1 W/Adventives
5	0		2.5 NATIVE MEAN W
6	0	4 to 7	2.5 W/Adventives
7	1	50.0%	
8	0		
9	0	8 to 10	
10	0	0.0%	

Native	2	100.0%	Adventive	0	0.0%
Tree	1	50.0%	Tree	0	0.0%
Shrub	1	50.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	2	2	66.7	66.7	66.7
Nt Shrub	1	1	33.3	33.3	33.3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
EMPTY QUADRAT	0		2	20	40.0	87.0	63.5
Quercus rubra	7	FACU	2	2	40.0	8.7	24.3
Rubus allegheniensis	3	FACU+	1	1	20.0	4.3	12.2
			5	23			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
EMPTY	0	EMPTY QUADRAT	0	nil	nil	EMPTY QUADRAT
QUERUB	7	Quercus rubra	3	FACU	Nt Tree	RED OAK
RUBALL	3	Rubus allegheniensis	2	FACU+	Nt Shrub	COMMON BLACKBERRY

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 1, Tree Plot
 Date: September 7, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 1, Tree Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	4.5	4.5	9.0	9.0	2.3	2.3	4	4	2.6	2.6	
2	4.0	4.0	5.7	5.7	3.0	3.0	2	2	2.5	2.5	
3	4.7	4.7	11.4	11.4	2.2	2.2	6	6	2.8	2.8	
4	4.0	4.0	8.0	8.0	3.3	3.3	4	4	2.6	2.6	
5	4.7	4.7	8.1	8.1	2.3	2.3	3	3	2.8	2.8	
AVG	4.4	4.4	8.4	8.4	2.6	2.6	3.8	3.8			
STD	0.3	0.3	2.1	2.1	0.5	0.5	1.5	1.5			

C	NUMBER	
0	0	10 NATIVE SPECIES
1	1	10 TOTAL SPECIES
2	1 0 to 3	4.6 NATIVE MEAN C
3	0 20.0%	4.6 W/Adventives
4	1	14.5 NATIVE FQI
5	5	14.5 W/Adventives
6	0 4 to 7	2.2 NATIVE MEAN W
7	2 80.0%	2.2 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	Adventive
10 100.0%	0 0.0%
Tree 10 100.0%	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 0 0.0%	P-Forb 0 0.0%
B-Forb 0 0.0%	B-Forb 0 0.0%
A-Forb 0 0.0%	A-Forb 0 0.0%
P-Grass 0 0.0%	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 Tree	19	92	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Prunus serotina	1 FACU	3	21	15.8	22.8	19.3
Ostrya virginiana	5 FACU-	3	15	15.8	16.3	16.0
Quercus rubra	7 FACU	2	15	10.5	16.3	13.4
Fraxinus americana	5 FACU	3	9	15.8	9.8	12.8
Tilia americana	5 FACU	2	7	10.5	7.6	9.1
Ulmus rubra	4 FAC	2	5	10.5	5.4	8.0
Quercus alba	5 FAC	1	9	5.3	9.8	7.5
Carya cordiformis	7 [FACU]	1	5	5.3	5.4	5.3
Crataegus crus-galli	2 FAC	1	5	5.3	5.4	5.3
Juglans nigra	5 FACU	1	1	5.3	1.1	3.2
		19	92			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CARCOR	7 Carya cordiformis	3 [FACU]	Nt Tree	BITTERNUT HICKORY
CRACRU	2 Crataegus crus-galli	0 FAC	Nt Tree	COCKSPUR HAWTHORN

FRAAMA	5 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
JUGNIG	5 Juglans nigra	3 FACU	Nt Tree	BLACK WALNUT
OSTVIR	5 Ostrya virginiana	4 FACU-	Nt Tree	HOP HORNBEAM
PRUSER	1 Prunus serotina	3 FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5 Quercus alba	0 FAC	Nt Tree	WHITE OAK
QUERUB	7 Quercus rubra	3 FACU	Nt Tree	RED OAK
TILAME	5 Tilia americana	3 FACU	Nt Tree	AMERICAN LINDEN
ULMRUB	4 Ulmus rubra	0 FAC	Nt Tree	SLIPPERY ELM

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 2, Tree Plot
 Date: September 7, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 2, Tree Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.2	3.2	7.2	7.2	1.6	1.6	5	5	0.5	0.5
2	1.4	1.4	3.1	3.1	-0.6	-0.6	5	5	0.6	0.6
3	3.3	3.3	6.5	6.5	0.8	0.8	4	4	-0.1	-0.1
4	3.5	3.5	4.9	4.9	-0.5	-0.5	2	2	-0.0	-0.0
5	4.0	4.0	6.9	6.9	-0.3	-0.3	3	3	-0.4	-0.4
AVG	3.1	3.1	5.7	5.7	0.2	0.2	3.8	3.8		
STD	1.0	1.0	1.7	1.7	1.0	1.0	1.3	1.3		

C	NUMBER	
0	1	11 NATIVE SPECIES
1	2	11 TOTAL SPECIES
2	2 0 to 3	3.4 NATIVE MEAN C
3	1 54.5%	3.4 W/Adventives
4	0	11.2 NATIVE FQI
5	3	11.2 W/Adventives
6	1 4 to 7	0.5 NATIVE MEAN W
7	1 45.5%	0.5 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	11	100.0%	Adventive	0	0.0%
Tree	11	100.0%	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	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	19	95	100.0	100.0	100.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Prunus serotina	1 FACU	4	15	21.1	15.8	18.4
Quercus alba	5 FAC	2	18	10.5	18.9	14.7
Quercus bicolor	6 FACW+	2	18	10.5	18.9	14.7
Acer saccharinum	0 FACW	2	10	10.5	10.5	10.5
Fraxinus pennsylvanica subintegerrima	1 FAC	2	6	10.5	6.3	8.4
Populus deltoides	2 FAC+	1	9	5.3	9.5	7.4
Quercus rubra	7 FACU	1	9	5.3	9.5	7.4
Ulmus americana	3 FACW-	2	2	10.5	2.1	6.3
Carya ovata	5 FACU	1	6	5.3	6.3	5.8
Crataegus mollis	2 FACU-	1	1	5.3	1.1	3.2
Tilia americana	5 FACU	1	1	5.3	1.1	3.2
		19	95			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAI	0 Acer saccharinum	-3 FACW	Nt Tree	SILVER MAPLE
CAROV	5 Carya ovata	3 FACU	Nt Tree	SHAGBARK HICKORY

CRAMOL	2 <i>Crataegus mollis</i>	4 FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1 <i>Fraxinus pennsylvanica subintegerrima</i>	0 FAC	Nt Tree	GREEN ASH
POPDEL	2 <i>Populus deltoides</i>	-1 FAC+	Nt Tree	EASTERN COTTONWOOD
PRUSER	1 <i>Prunus serotina</i>	3 FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5 <i>Quercus alba</i>	0 FAC	Nt Tree	WHITE OAK
QUEBIC	6 <i>Quercus bicolor</i>	-4 FACW+	Nt Tree	SWAMP WHITE OAK
QUERUB	7 <i>Quercus rubra</i>	3 FACU	Nt Tree	RED OAK
TILAME	5 <i>Tilia americana</i>	3 FACU	Nt Tree	AMERICAN LINDEN
ULMAME	3 <i>Ulmus americana</i>	-2 FACW-	Nt Tree	AMERICAN ELM

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GC-2 Transect 3, Tree Plot
 Date: September 7, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GC-2 Transect 3, Tree Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	4.3	4.3	7.5	7.5	2.0	2.0	3	3		2.5	2.5
2	4.0	4.0	5.7	5.7	3.0	3.0	2	2		2.4	2.4
3	4.5	4.5	9.0	9.0	2.3	2.3	4	4		2.2	2.2
4	6.0	6.0	8.5	8.5	1.5	1.5	2	2		1.7	1.8
5	4.0	3.2	8.0	7.2	1.5	1.8	4	5		1.5	1.6
AVG	4.6	4.4	7.7	7.6	2.1	2.1	3.0	3.2			
STD	0.8	1.0	1.3	1.3	0.6	0.6	1.0	1.3			

C	NUMBER		7 NATIVE SPECIES
0	0		8 TOTAL SPECIES
1	2		4.1 NATIVE MEAN C
2	0	0 to 3	3.6 W/Adventives
3	0	28.6%	11.0 NATIVE FQI
4	0		10.3 W/Adventives
5	4		2.1 NATIVE MEAN W
6	0	4 to 7	2.3 W/Adventives
7	1	71.4%	
8	0		
9	0	8 to 10	
10	0	0.0%	

Native	7	87.5%	Adventive	1	12.5%
Tree	7	87.5%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	1	12.5%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	15	69	93.8	90.8	92.3
Ad Shrub	1	7	6.3	9.2	7.7

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Quercus alba	5 FAC	4	23	25.0	30.3	27.6
Quercus rubra	7 FACU	4	21	25.0	27.6	26.3
Prunus serotina	1 FACU	3	15	18.8	19.7	19.2
RHAMNUS CATHARTICA	0 FACU	1	7	6.3	9.2	7.7
Carya ovata	5 FACU	1	3	6.3	3.9	5.1
Fraxinus americana	5 FACU	1	3	6.3	3.9	5.1
Fraxinus pennsy...subintegerrima	1 FAC	1	3	6.3	3.9	5.1
Tilia americana	5 FACU	1	1	6.3	1.3	3.8
		16	76			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CAROVT	5 Carya ovata	3 FACU	Nt Tree	SHAGBARK HICKORY
FRAAMA	5 Fraxinus americana	3 FACU	Nt Tree	WHITE ASH
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0 FAC	Nt Tree	GREEN ASH

PRUSER	1	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5	Quercus alba	0	FAC	Nt Tree	WHITE OAK
QUERUB	7	Quercus rubra	3	FACU	Nt Tree	RED OAK
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Shrub	COMMON BUCKTHORN
TILAME	5	Tilia americana	3	FACU	Nt Tree	AMERICAN LINDEN

Site: Goodenow Grove, Will County, Illinois
 Locale: GTAP GA-3 Herbaceous Plot
 Date: August 31, 2004 Five hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GA-3 Grassland Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.5	3.5	7.0	7.0	-0.7	-0.7	4	4	-0.2	-0.2
2	3.0	3.0	6.0	6.0	0.3	0.3	4	4	0.6	0.6
3	3.9	3.4	11.0	10.3	2.4	2.2	8	9	1.5	1.5
4	3.5	3.5	8.6	8.6	2.0	2.0	6	6	2.2	2.3
5	4.1	3.6	11.0	10.3	2.3	2.6	7	8	2.3	2.4
6	3.1	3.1	8.3	8.3	2.7	2.7	7	7	2.2	2.3
7	3.8	3.8	9.4	9.4	1.5	1.5	6	6	2.1	2.1
8	4.7	4.7	8.1	8.1	2.0	2.0	3	3	2.3	2.1
9	5.0	3.8	8.7	7.5	3.3	2.8	3	4	3.0	2.4
10	4.0	2.4	6.9	5.4	3.7	2.6	3	5	2.9	2.3
11	5.0	5.0	8.7	8.7	1.7	1.7	3	3	2.4	2.0
12	3.3	3.3	6.5	6.5	1.8	1.8	4	4	2.3	2.1
13	4.0	3.2	8.0	7.2	3.5	3.0	4	5	2.5	2.4
14	3.3	3.3	5.8	5.8	2.3	2.3	3	3	2.6	2.4
15	3.7	3.7	6.4	6.4	2.0	2.0	3	3	2.4	2.4
16	3.8	3.8	8.5	8.5	2.8	2.8	5	5	2.6	2.6
17	5.0	5.0	7.1	7.1	3.0	3.0	2	2	2.6	2.6
18	2.8	2.8	6.3	6.3	2.0	2.0	5	5	2.1	2.1
19	2.8	2.8	6.3	6.3	1.4	1.4	5	5	2.1	2.1
20	4.3	4.3	10.6	10.6	3.0	3.0	6	6	2.2	2.2
AVG	3.8	3.6	7.9	7.7	2.1	2.0	4.6	4.8		
STD	0.7	0.7	1.6	1.6	1.1	0.9	1.7	1.8		

C	NUMBER	
0	1	22 NATIVE SPECIES
1	4	25 TOTAL SPECIES
2	4	3.5 NATIVE MEAN C
3	1	3.1 W/Adventives
4	4	16.4 NATIVE FQI
5	6	15.4 W/Adventives
6	0	1.3 NATIVE MEAN W
7	0	1.4 W/Adventives
8	2	
9	0	8 to 10
10	0	9.1%

Native	22	88.0%	Adventive	3	12.0%
Tree	0	0.0%	Tree	0	0.0%
Shrub	1	4.0%	Shrub	0	0.0%
W-Vine	1	4.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	14	56.0%	P-Forb	0	0.0%
B-Forb	1	4.0%	B-Forb	1	4.0%
A-Forb	0	0.0%	A-Forb	1	4.0%
P-Grass	3	12.0%	P-Grass	1	4.0%
A-Grass	1	4.0%	A-Grass	0	0.0%
P-Sedge	1	4.0%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	0	0.0%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Grass	26	1220	26.8	64.0	45.4
Nt P-Forb	46	418	47.4	21.9	34.7
Nt B-Forb	12	104	12.4	5.5	8.9
Ad P-Grass	4	100	4.1	5.2	4.7
Nt W-Vine	3	7	3.1	0.4	1.7
Nt Shrub	2	6	2.1	0.3	1.2
Nt P-Sedge	1	25	1.0	1.3	1.2
Nt A-Grass	1	25	1.0	1.3	1.2
Ad A-Forb	1	1	1.0	0.1	0.5

Ad B-Forb 1 1 1.0 0.1 0.5

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Andropogon gerardii	5 FAC-	19	1020	17.9	42.0	30.0
SOIL	0	9	520	8.5	21.4	15.0
Solidago altissima	1 FACU	10	162	9.4	6.7	8.1
Erigeron strigosus	5 [UPL]	12	104	11.3	4.3	7.8
Silphium integrifolium deamii	5 UPL	9	89	8.5	3.7	6.1
Sorghastrum nutans	5 FACU+	4	125	3.8	5.2	4.5
POA PRATENSIS	0 FAC-	4	100	3.8	4.1	3.9
Helianthus grosseserratus	2 FACW-	4	80	3.8	3.3	3.5
Panicum virgatum	5 FAC+	3	75	2.8	3.1	3.0
Euphorbia corollata	2 UPL	4	12	3.8	0.5	2.1
Fragaria virginiana	1 FAC-	4	8	3.8	0.3	2.1
Juncus dudleyi	4 [FAC]	4	4	3.8	0.2	2.0
Rhus radicans	2 FAC+	3	7	2.8	0.3	1.6
Potentilla simplex	4 FACU-	2	26	1.9	1.1	1.5
Monarda fistulosa	4 FACU	2	6	1.9	0.2	1.1
Rosa carolina	5 FACU-	2	6	1.9	0.2	1.1
Aster azureus	8 UPL	1	25	0.9	1.0	1.0
Convolvulus sepium	1 FAC	2	2	1.9	0.1	1.0
Eleocharis compressa	8 FACW	1	25	0.9	1.0	1.0
Panicum capillare	1 FAC	1	25	0.9	1.0	1.0
Apocynum sibiricum	2 FAC+	1	1	0.9	0.0	0.5
Aster novae-angliae	4 FACW	1	1	0.9	0.0	0.5
Aster pilosus	0 FACU+	1	1	0.9	0.0	0.5
DAUCUS CAROTA	0 UPL	1	1	0.9	0.0	0.5
MEDICAGO LUPULINA	0 FAC-	1	1	0.9	0.0	0.5
Solidago graminifolia nuttallii	3 [FAC]	1	1	0.9	0.0	0.5
		106	2427			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
ANDGER	5 Andropogon gerardii	1 FAC-	Nt P-Grass	BIG BLUESTEM GRASS
APOSIB	2 Apocynum sibiricum	-1 FAC+	Nt P-Forb	PRAIRIE INDIAN HEMP
ASTAZU	8 Aster azureus	5 UPL	Nt P-Forb	SKY-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
CONSEP	1 Convolvulus sepium	0 FAC	Nt P-Forb	HEDGE BINDWEED
DAUCAR	0 DAUCUS CAROTA	5 UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELECOM RUSH	8 Eleocharis compressa	-3 FACW	Nt P-Sedge	FLAT-STEMMED SPIKE
ERISTR	5 Erigeron strigosus	5 [UPL]	Nt B-Forb	DAISY FLEABANE
EUPCOR	2 Euphorbia corollata	5 UPL	Nt P-Forb	FLOWERING SPURGE
FRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
HELGRO	2 Helianthus grosseserratus	-2 FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
JUNDUD	4 Juncus dudleyi	0 [FAC]	Nt P-Forb	DUDLEY'S RUSH
MEDLUP	0 MEDICAGO LUPULINA	1 FAC-	Ad A-Forb	BLACK MEDICK
MONFIS	4 Monarda fistulosa	3 FACU	Nt P-Forb	WILD BERGAMOT
PANCAP	1 Panicum capillare	0 FAC	Nt A-Grass	OLD WITCH GRASS
PANVIR	5 Panicum virgatum	-1 FAC+	Nt P-Grass	SWITCH GRASS
POAPRA	0 POA PRATENSIS	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POTSIS	4 Potentilla simplex	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL

RHURAD	2 <i>Rhus radicans</i>	-1 FAC+	Nt W-Vine	POISON IVY
ROSCAR	5 <i>Rosa carolina</i>	4 FACU-	Nt Shrub	PASTURE ROSE
SILIND	5 <i>Silphium integrifolium deamii</i>	5 UPL	Nt P-Forb	DEAM'S ROSIN WEED
SOIL	0 SOIL	0 nil	nil	SOIL
SOLALT	1 <i>Solidago altissima</i>	3 FACU	Nt P-Forb	TALL GOLDENROD
SOLGRN GOLDENROD	3 <i>Solidago graminifolia nuttallii</i>	0 [FAC]	Nt P-Forb	HAIKY GRASS-LEAVED
SORNUT	5 <i>Sorghastrum nutans</i>	2 FACU+	Nt P-Grass	INDIAN GRASS

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GW-1 Herbaceous Plot
 Date: September 1, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GoodenowWetland.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	2.3	1.8	7.0	6.1	-0.6	-0.2	9	12	-0.7	-0.6
2	2.1	1.9	5.7	5.3	-0.9	-1.1	7	8	-0.9	-0.9
3	2.1	1.9	5.7	5.3	-1.3	-1.5	7	8	-1.1	-1.3
4	2.3	2.2	8.1	7.8	-1.2	-1.3	12	13	-1.2	-1.4
5	2.5	2.1	6.1	5.7	-1.0	-1.3	6	7	-1.4	-1.6
6	2.3	1.8	4.0	3.5	-2.0	-2.2	3	4	-1.4	-1.5
7	2.4	1.9	6.7	6.0	-1.1	-1.1	8	10	-1.6	-1.7
8	3.0	2.7	9.0	8.5	-1.8	-1.9	9	10	-2.2	-2.2
9	3.8	3.3	10.6	10.0	-3.7	-3.7	8	9	-2.1	-2.2
10	3.3	2.9	8.7	8.1	-0.9	-1.1	7	8	-2.5	-2.6
11	4.2	3.8	12.7	12.0	-2.9	-2.9	9	10	-2.0	-2.2
12	3.6	3.3	11.4	10.9	-2.4	-2.5	10	11	-2.7	-2.7
13	3.7	3.7	11.0	11.0	-2.9	-2.9	9	9	-2.8	-2.8
14	3.9	3.4	10.2	9.5	-3.1	-3.1	7	8	-3.0	-3.0
15	3.9	3.9	12.3	12.3	-2.9	-2.9	10	10	-3.4	-3.4
16	4.6	4.2	14.5	13.9	-4.3	-4.2	10	11	-4.1	-3.9
17	3.0	2.4	6.0	5.4	-5.0	-4.6	4	5	-3.8	-3.7
18	2.8	2.8	5.5	5.5	-2.2	-2.2	4	4	-3.2	-3.1
19	3.4	3.4	11.2	11.2	-2.5	-2.5	11	11	-2.9	-2.9
20	4.0	4.0	10.6	10.6	-4.1	-4.1	7	7	-3.3	-3.3
AVG	3.2	2.9	8.8	8.4	-2.3	-2.4	7.8	8.8		
STD	0.8	0.8	2.9	3.0	1.3	1.2	2.4	2.5		

C	NUMBER	
0	2	36 NATIVE SPECIES
1	5	40 TOTAL SPECIES
2	5	3.5 NATIVE MEAN C
3	4	3.2 W/Adventives
4	8	21.2 NATIVE FQI
5	9	20.1 W/Adventives
6	1	-2.6 NATIVE MEAN W
7	1	-2.2 W/Adventives
8	0	
9	0	
10	1	

Native	Count	Percentage	Adventive	Count	Percentage
Native	36	90.0%	Adventive	4	10.0%
Tree	1	2.5%	Tree	0	0.0%
Shrub	1	2.5%	Shrub	0	0.0%
W-Vine	1	2.5%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	21	52.5%	P-Forb	1	2.5%
B-Forb	1	2.5%	B-Forb	1	2.5%
A-Forb	2	5.0%	A-Forb	0	0.0%
P-Grass	4	10.0%	P-Grass	2	5.0%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	5	12.5%	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	94	1601	53.7	39.8	46.8
Nt P-Sedge	27	981	15.4	24.4	19.9
Ad P-Grass	16	710	9.1	17.7	13.4
Nt P-Grass	19	376	10.9	9.4	10.1
Nt W-Vine	10	230	5.7	5.7	5.7
Nt A-Forb	4	106	2.3	2.6	2.5
Nt Tree	1	1	0.6	0.0	0.3
Ad P-Forb	1	1	0.6	0.0	0.3
Nt Shrub	1	5	0.6	0.1	0.3

Nt B-Forb	1	5	0.6	0.1	0.3
Ad B-Forb	1	5	0.6	0.1	0.3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
AGROSTIS ALBA	0 FACW	15	685	8.6	17.0	12.8
Solidago altissima	1 FACU	15	291	8.6	7.2	7.9
Carex sartwellii	6 [OBL]	8	350	4.6	8.7	6.6
Aster simplex	3 OBL	13	225	7.4	5.6	6.5
Rhus radicans	2 FAC+	10	230	5.7	5.7	5.7
Carex tribuloides	3 FACW+	8	255	4.6	6.3	5.5
Helianthus grosseserratus	2 FACW-	8	251	4.6	6.2	5.4
Scirpus fluviatilis	4 OBL	6	226	3.4	5.6	4.5
Lycopus uniflorus	7 OBL	8	141	4.6	3.5	4.0
Glyceria striata	4 [FACW]	5	150	2.9	3.7	3.3
Prunella vulgaris lanceolata	0 [FACU]	8	80	4.6	2.0	3.3
Calamagrostis canadensis	3 OBL	6	110	3.4	2.7	3.1
Geum laciniatum trichocarpum	2 FACW	5	130	2.9	3.2	3.0
Lycopus americanus	5 OBL	7	63	4.0	1.6	2.8
Carex annectens	5 FACW	4	100	2.3	2.5	2.4
Pilea pumila	5 FACW	3	105	1.7	2.6	2.2
Viola sororia	3 FAC-	6	42	3.4	1.0	2.2
Agrimonia gryposepala	2 FACU+	3	100	1.7	2.5	2.1
Elymus virginicus	4 FACW-	4	60	2.3	1.5	1.9
Leersia oryzoides	4 OBL	4	56	2.3	1.4	1.8
Verbena hastata	4 FACW+	4	56	2.3	1.4	1.8
Iris virginica shrevei	5 OBL	2	75	1.1	1.9	1.5
Fragaria virginiana	1 FAC-	4	12	2.3	0.3	1.3
Vernonia missurica	4 FAC+	2	50	1.1	1.2	1.2
Carex stricta	5 OBL	1	50	0.6	1.2	0.9
Helenium autumnale	5 FACW+	2	6	1.1	0.1	0.6
Juncus dudleyi	4 [FAC]	1	25	0.6	0.6	0.6
Mentha arvensis villosa	5 [OBL]	1	25	0.6	0.6	0.6
POA PRATENSIS	0 FAC-	1	25	0.6	0.6	0.6
Typha latifolia	1 OBL	1	25	0.6	0.6	0.6
Bidens frondosa	1 FACW	1	1	0.6	0.0	0.3
Cirsium muticum	10 OBL	1	5	0.6	0.1	0.3
Crataegus mollis	2 FACU-	1	1	0.6	0.0	0.3
DAUCUS CAROTA	0 UPL	1	5	0.6	0.1	0.3
Eupatorium perfoliatum	4 FACW+	1	1	0.6	0.0	0.3
Galium obtusum	5 FACW+	1	1	0.6	0.0	0.3
Ludwigia palustris americana	5 OBL	1	1	0.6	0.0	0.3
Oxalis europaea	0 FACU	1	1	0.6	0.0	0.3
Salix interior	1 OBL	1	5	0.6	0.1	0.3
SONCHUS ULIGINOSUS	0 FAC-	1	1	0.6	0.0	0.3
		175	4021			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
AGRGRY	2 Agrimonia gryposepala	2 FACU+	Nt P-Forb	TALL AGRIMONY
AGRALA	0 AGROSTIS ALBA	-3 FACW	Ad P-Grass	REDTOP
ASTSIS	3 Aster simplex	-5 OBL	Nt P-Forb	PANICLED ASTER
BIDFRO TICKS	1 Bidens frondosa	-3 FACW	Nt A-Forb	COMMON BEGGAR'S
CALCAN	3 Calamagrostis canadensis	-5 OBL	Nt P-Grass	BLUE JOINT GRASS
CXANNA SEDGE	5 Carex annectens	-3 FACW	Nt P-Sedge	LARGE YELLOW FOX
CXSART	6 Carex sartwellii	-5 [OBL]	Nt P-Sedge	RUNNING MARSH SEDGE
CXSTRI SEDGE	5 Carex stricta	-5 OBL	Nt P-Sedge	COMMON TUSsock
CXTRIB SEDGE	3 Carex tribuloides	-4 FACW+	Nt P-Sedge	AWL-FRUITED OVAL
CIRMUT	10 Cirsium muticum	-5 OBL	Nt B-Forb	SWAMP THISTLE
CRAMOL	2 Crataegus mollis	4 FACU-	Nt Tree	DOWNY HAWTHORN

DAUCAR	0 DAUCUS CAROTA	5 UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELYVIR	4 Elymus virginicus	-2 FACW-	Nt P-Grass	VIRGINIA WILD RYE
EUPPER	4 Eupatorium perfoliatum	-4 FACW+	Nt P-Forb	COMMON BONESET
FRAVIR	1 Fragaria virginiana	1 FAC-	Nt P-Forb	WILD STRAWBERRY
GALOBT	5 Galium obtusum	-4 FACW+	Nt P-Forb	WILD MADDER
GEULAT	2 Geum laciniatum trichocarpum	-3 FACW	Nt P-Forb	ROUGH AVENS
GLYSTR	4 Glyceria striata	-3 [FACW]	Nt P-Grass	FOWL MANNA GRASS
HELAUT	5 Helenium autumnale	-4 FACW+	Nt P-Forb	SNEEZEWEED
HELGRO	2 Helianthus grosseserratus	-2 FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
IRIVIS	5 Iris virginica shrevei	-5 OBL	Nt P-Forb	BLUE FLAG
JUNDUD	4 Juncus dudleyi	0 [FAC]	Nt P-Forb	DUDLEY'S RUSH
LEEORY	4 Leersia oryzoides	-5 OBL	Nt P-Grass	RICE CUT GRASS
LUDPAA	5 Ludwigia palustris americana	-5 OBL	Nt P-Forb	MARSH PURSLANE
LYCAME	5 Lycopus americanus	-5 OBL	Nt P-Forb	COMMON WATER
HOREHOUND				
LYCUNI	7 Lycopus uniflorus	-5 OBL	Nt P-Forb	NORTHERN BUGLE WEED
MENARV	5 Mentha arvensis villosa	-5 [OBL]	Nt P-Forb	WILD MINT
OXAEUR	0 Oxalis europaea	3 FACU	Nt P-Forb	TALL WOOD SORREL
PILPUM	5 Pilea pumila	-3 FACW	Nt A-Forb	CLEARWEED
POAPRA	0 POA PRATENSIS	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
PRUVLA	0 Prunella vulgaris lanceolata	3 [FACU]	Nt P-Forb	SELF HEAL
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
SALINT	1 Salix interior	-5 OBL	Nt Shrub	SANDBAR WILLOW
SCIFLU	4 Scirpus fluviatilis	-5 OBL	Nt P-Sedge	RIVER BULRUSH
SOLALT	1 Solidago altissima	3 FACU	Nt P-Forb	TALL GOLDENROD
SONULI	0 SONCHUS ULIGINOSUS	1 FAC-	Ad P-Forb	COMMON SOW THISTLE
TYPLAT	1 Typha latifolia	-5 OBL	Nt P-Forb	BROAD-LEAVED
CATTAIL				
VERHAS	4 Verbena hastata	-4 FACW+	Nt P-Forb	BLUE VERVAIN
VERMIS	4 Vernonia missurica	-1 FAC+	Nt P-Forb	MISSOURI IRONWEED
VIOSOR	3 Viola sororia	1 FAC-	Nt P-Forb	COMMON BLUE VIOLET

Site: Goodenow Grove, Will County, Illinois
 Locale: CTAP GW-1 Shrub Plot
 Date: September 1, 2004 five hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP GW-1 Shrub Plot .tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	1.3	1.3	2.3	2.3	-1.0	-1.0	3	3	-1.0	-0.2
2	1.3	1.0	2.3	2.0	-1.0	0.5	3	4	-1.8	-1.3
3	1.0	1.0	1.4	1.4	-3.5	-3.5	2	2	-1.8	-1.3
4	1.3	1.3	2.3	2.3	-1.0	-1.0	3	3	-2.2	-2.2
AVG	1.3	1.2	2.1	2.0	-1.6	-1.2	2.8	3.0		
STD	0.2	0.2	0.4	0.4	1.3	1.7	0.5	0.8		

C	NUMBER	
0	0	3 NATIVE SPECIES
1	2	4 TOTAL SPECIES
2	1 0 to 3	1.3 NATIVE MEAN C
3	0 100.0%	1.0 W/Adventives
4	0	2.3 NATIVE FQI
5	0	2.0 W/Adventives
6	0 4 to 7	-1.0 NATIVE MEAN W
7	0 0.0%	0.5 W/Adventives
8	0	
9	0 8 to 10	
10	0 0.0%	

Native	3	75.0%	Adventive	1	25.0%
Tree	1	25.0%	Tree	0	0.0%
Shrub	2	50.0%	Shrub	1	25.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Shrub	8	16	66.7	80.0	73.3
Nt Tree	3	3	25.0	15.0	20.0
Ad Shrub	1	1	8.3	5.0	6.7

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Cornus racemosa	1 FACW-	4	9	33.3	45.0	39.2
Salix interior	1 OBL	4	7	33.3	35.0	34.2
Crataegus mollis	2 FACU-	3	3	25.0	15.0	20.0
ELAEAGNUS UMBELLATA	0 UPL	1	1	8.3	5.0	6.7
		12	20			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
CORRAC	1 Cornus racemosa	-2 FACW-	Nt Shrub	GRAY DOGWOOD
CRAMOL	2 Crataegus mollis	4 FACU-	Nt Tree	DOWNY HAWTHORN
ELAUMB	0 ELAEAGNUS UMBELLATA	5 UPL	Ad Shrub	AUTUMN OLIVE
SALINT	1 Salix interior	-5 OBL	Nt Shrub	SANDBAR WILLOW

**Raccoon Grove Nature Preserve
CTAP Plots**

Site: Raccoon Grove Will County, Illinois
 Locale: CTAP RA-4, All Transects, Herbaceous Plot
 Date: September 8, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP RA-4 All Transets.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	3.5	3.5	8.6	8.6	0.3	0.3	6	6	-1.8	-1.8
2	1.5	1.5	2.1	2.1	-4.0	-4.0	2	2	-1.7	-1.7
3	2.0	2.0	4.0	4.0	-1.5	-1.5	4	4	-1.7	-1.7
4	2.5	2.5	5.0	5.0	0.5	0.5	4	4	0.0	0.0
5	4.0	4.0	11.3	11.3	1.1	1.1	8	8	0.8	0.8
6	3.1	3.1	8.8	8.8	0.8	0.8	8	8	0.2	0.2
7	2.5	2.5	5.0	5.0	-1.2	-1.2	4	4	0.2	0.2
8	3.9	3.9	11.0	11.0	1.0	1.0	8	8	0.4	0.4
9	3.6	3.6	8.0	8.0	1.4	1.4	5	5	0.9	0.9
10	4.2	4.2	9.4	9.4	0.4	0.4	5	5	0.9	0.9
11	1.5	1.5	2.1	2.1	1.0	1.0	2	2	0.8	0.8
12	2.5	2.5	6.1	6.1	1.0	1.0	6	6	1.5	1.5
13	3.5	3.5	8.6	8.6	2.5	2.5	6	6	1.1	1.1
14	2.0	2.0	5.7	5.7	-0.1	-0.1	8	8	1.1	1.1
15	2.7	2.7	4.6	4.6	1.0	1.0	3	3	0.3	0.3
16	1.5	1.0	2.1	1.7	0.0	0.0	2	3	0.4	0.4
17	2.6	2.6	7.7	7.7	0.1	0.1	9	9	0.2	0.2
18	3.4	3.4	7.6	7.6	0.4	0.4	5	5	0.8	0.8
19	4.7	4.7	8.1	8.1	2.0	2.0	3	3	0.3	0.3
20	2.0	2.0	4.0	4.0	-1.5	-1.5	4	4	0.8	0.9
21	3.0	2.3	5.2	4.5	2.0	2.3	3	4	-0.1	0.0
22	1.7	1.7	2.9	2.9	-0.7	-0.7	3	3	0.6	0.7
23	2.0	2.0	2.8	2.8	0.5	0.5	2	2	-0.1	-0.1
24	2.0	2.0	2.0	2.0	0.0	0.0	1	1	0.5	0.5
25	4.5	4.5	6.4	6.4	1.0	1.0	2	2	1.0	1.0
26	1.5	1.5	2.1	2.1	2.0	2.0	2	2	1.7	1.7
27	2.7	2.7	4.6	4.6	2.0	2.0	3	3	0.7	0.7
28	6.0	6.0	8.5	8.5	-2.0	-2.0	2	2	0.5	0.5
29	2.7	2.7	9.0	9.0	1.4	1.4	11	11	1.0	1.0
30	4.3	4.3	8.5	8.5	3.5	3.5	4	4	2.4	2.4
AVG	2.9	2.9	6.1	6.0	0.5	0.5	4.5	4.6		
STD	1.1	1.2	2.8	2.9	1.5	1.5	2.5	2.5		

C	NUMBER	
0	1	42 NATIVE SPECIES
1	5	44 TOTAL SPECIES
2	9 0 to 3	3.9 NATIVE MEAN C
3	5 47.6%	3.7 W/Adventives
4	3	25.0 NATIVE FQI
5	12	24.4 W/Adventives
6	1 4 to 7	1.0 NATIVE MEAN W
7	4 47.6%	1.0 W/Adventives
8	1	
9	0 8 to 10	
10	1 4.8%	

Native	42	95.5%	Adventive	2	4.5%
Tree	8	18.2%	Tree	0	0.0%
Shrub	4	9.1%	Shrub	1	2.3%
W-Vine	3	6.8%	W-Vine	0	0.0%
H-Vine	1	2.3%	H-Vine	0	0.0%
P-Forb	15	34.1%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	1	2.3%
A-Forb	5	11.4%	A-Forb	0	0.0%
P-Grass	3	6.8%	P-Grass	0	0.0%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	1	2.3%	P-Sedge	0	0.0%
A-Sedge	0	0.0%	A-Sedge	0	0.0%
Cryptogam	2	4.5%			

PHYSIOGNOMIC RELATIVE IMPORTANCE VALUES

PHYSIOGNOMY	FRQ	COV	RFRQ	RCOV	RIV
Nt P-Forb	66	902	48.2	44.2	46.2
Nt W-Vine	24	528	17.5	25.9	21.7
Nt A-Forb	9	179	6.6	8.8	7.7
Nt Tree	15	72	10.9	3.5	7.2
Nt Shrub	9	115	6.6	5.6	6.1
Nt P-Sedge	4	82	2.9	4.0	3.5
Nt P-Grass	5	61	3.6	3.0	3.3
Cryptogam	2	26	1.5	1.3	1.4
Nt H-Vine	1	25	0.7	1.2	1.0
Ad Shrub	1	25	0.7	1.2	1.0
Ad B-Forb	1	25	0.7	1.2	1.0

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
SOIL	0		28	1027	17.0	33.5	25.2
Parthenocissus quinquefolia	2	FAC-	16	298	9.7	9.7	9.7
Polygonum virginianum	2	FAC	17	164	10.3	5.3	7.8
Rhus radicans	2	FAC+	7	205	4.2	6.7	5.5
Sanicula gregaria	2	FAC+	6	226	3.6	7.4	5.5
Eupatorium rugosum	4	UPL	7	156	4.2	5.1	4.7
Bidens frondosa	1	FACW	5	127	3.0	4.1	3.6
Geum canadense	1	FAC	7	68	4.2	2.2	3.2
Viola sororia	3	FAC-	7	61	4.2	2.0	3.1
Boehmeria cylindrica	2	OBL	6	55	3.6	1.8	2.7
Carex pensylvanica	5	UPL	4	82	2.4	2.7	2.5
Viburnum prunifolium	5	FACU	5	30	3.0	1.0	2.0
Rubus occidentalis	2	UPL	2	75	1.2	2.4	1.8
Prunus serotina	1	FACU	4	32	2.4	1.0	1.7
Galium asprellum	10	OBL	2	55	1.2	1.8	1.5
Cryptotaenia canadensis	2	FAC	4	12	2.4	0.4	1.4
Glyceria striata	4	[FACW]	2	30	1.2	1.0	1.1
Leersia virginica	7	FACW	2	30	1.2	1.0	1.1
Solidago ulmifolia	5	UPL	1	50	0.6	1.6	1.1
Fraxinus pennsylvanica subintegerrima	1	FAC	3	8	1.8	0.3	1.0
Carya ovata	5	FACU	2	10	1.2	0.3	0.8
Polemonium reptans	5	FAC	2	10	1.2	0.3	0.8
Quercus rubra	7	FACU	2	10	1.2	0.3	0.8
ALLIARIA PETIOLATA	0	FAC	1	25	0.6	0.8	0.7
Allium tricoccum	7	FACU	2	7	1.2	0.2	0.7
Athyrium filix-femina michauxii	8	FAC	1	25	0.6	0.8	0.7
Galium aparine	1	FACU	1	25	0.6	0.8	0.7
Laportea canadensis	3	FACW	1	25	0.6	0.8	0.7
Lonicera prolifera	7	UPL	1	25	0.6	0.8	0.7
Polygonum hydropiper	2	FACW	1	25	0.6	0.8	0.7
ROSA MULTIFLORA	0	FACU	1	25	0.6	0.8	0.7
Smilax lasioneura	5	[UPL]	1	25	0.6	0.8	0.7
Viola pubescens	5	FACU-	2	7	1.2	0.2	0.7
Crataegus mollis	2	FACU-	1	5	0.6	0.2	0.4
Ostrya virginiana	5	FACU-	1	5	0.6	0.2	0.4
Ribes missouriense	5	UPL	1	5	0.6	0.2	0.4
Rubus allegheniensis	3	FACU+	1	5	0.6	0.2	0.4
Smilacina racemosa	3	FACU	1	5	0.6	0.2	0.4
Acalypha rhomboidea	0	FACU	1	1	0.6	0.0	0.3
Arisaema triphyllum	4	FACW-	1	1	0.6	0.0	0.3
Cinna arundinacea	5	FACW	1	1	0.6	0.0	0.3
Cystopteris fragilis protrusa	6	FACU	1	1	0.6	0.0	0.3
Pilea pumila	5	FACW	1	1	0.6	0.0	0.3
Quercus alba	5	FAC	1	1	0.6	0.0	0.3
Ulmus americana	3	FACW-	1	1	0.6	0.0	0.3
			165	3067			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACARHO	0	Acalypha rhomboidea	3	FACU	Nt A-Forb	THREE-SEEDED
MERCURY	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
ALLTRT	7	Allium tricoccum	3	FACU	Nt P-Forb	WILD LEEK
ARITRI	4	Arisaema triphyllum	-2	FACW-	Nt P-Forb	JACK-IN-THE-PULPIT

ATHFIM	8	<i>Athyrium filix-femina michauxii</i>	0	FAC	Cryptogam	LADY FERN
BIDFRO TICKS BOECYC	1	<i>Bidens frondosa</i>	-3	FACW	Nt A-Forb	COMMON BEGGAR'S
	2	<i>Boehmeria cylindrica</i>	-5	OBL	Nt P-Forb	FALSE NETTLE
CXPENS	5	<i>Carex pensylvanica</i>	5	UPL	Nt P-Sedge	COMMON OAK SEDGE
CAROVT	5	<i>Carya ovata</i>	3	FACU	Nt Tree	SHAGBARK HICKORY
CINARU	5	<i>Cinna arundinacea</i>	-3	FACW	Nt P-Grass	COMMON WOOD REED
CRAMOL	2	<i>Crataegus mollis</i>	4	FACU-	Nt Tree	DOWNY HAWTHORN
CRYCAN	2	<i>Cryptotaenia canadensis</i>	0	FAC	Nt P-Forb	HONEWORT
CYSFRP	6	<i>Cystopteris fragilis protrusa</i>	3	FACU	Cryptogam	FRAGILE FERN
EUPRUG	4	<i>Eupatorium rugosum</i>	5	UPL	Nt P-Forb	WHITE SNAKEROOT
FRAPES	1	<i>Fraxinus pennsylvanica subintegerrima</i>	0	FAC	Nt Tree	GREEN ASH
GALAPA	1	<i>Galium aparine</i>	3	FACU	Nt A-Forb	ANNUAL BEDSTRAW
GALASP	10	<i>Galium asprellum</i>	-5	OBL	Nt P-Forb	ROUGH BEDSTRAW
GEUCAN	1	<i>Geum canadense</i>	0	FAC	Nt P-Forb	WOOD AVENS
GLYSTR	4	<i>Glyceria striata</i>	-3	[FACW]	Nt P-Grass	FOWL MANNA GRASS
LAPCAN	3	<i>Laportea canadensis</i>	-3	FACW	Nt P-Forb	WOOD NETTLE
LEEVIR	7	<i>Leersia virginica</i>	-3	FACW	Nt P-Grass	WHITE GRASS
LONPRO	7	<i>Lonicera prolifera</i>	5	UPL	Nt W-Vine	YELLOW HONEYSUCKLE
OSTVIR	5	<i>Ostrya virginiana</i>	4	FACU-	Nt Tree	HOP HORNBEAM
PARQUI	2	<i>Parthenocissus quinquefolia</i>	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
PILPUM	5	<i>Pilea pumila</i>	-3	FACW	Nt A-Forb	CLEARWEED
POLREP	5	<i>Polemonium reptans</i>	0	FAC	Nt P-Forb	JACOB'S LADDER
POLHYR	2	<i>Polygonum hydropiper</i>	-3	FACW	Nt A-Forb	WATER PEPPER
POLGVI	2	<i>Polygonum virginianum</i>	0	FAC	Nt P-Forb	WOODLAND KNOTWEED
PRUSER	1	<i>Prunus serotina</i>	3	FACU	Nt Tree	WILD BLACK CHERRY
QUEALB	5	<i>Quercus alba</i>	0	FAC	Nt Tree	WHITE OAK
QUERUB	7	<i>Quercus rubra</i>	3	FACU	Nt Tree	RED OAK
RHURAD	2	<i>Rhus radicans</i>	-1	FAC+	Nt W-Vine	POISON IVY
RIBMIS	5	<i>Ribes missouriense</i>	5	UPL	Nt Shrub	WILD GOOSEBERRY
ROSMUL	0	ROSA MULTIFLORA	3	FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3	<i>Rubus allegheniensis</i>	2	FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	2	<i>Rubus occidentalis</i>	5	UPL	Nt Shrub	BLACK RASPBERRY
SANGRE SNAKEROOT	2	<i>Sanicula gregaria</i>	-1	FAC+	Nt P-Forb	CLUSTERED BLACK
SMIRAC	3	<i>Smilacina racemosa</i>	3	FACU	Nt P-Forb	FEATHERY FALSE
SOLOMON'S SEAL	5	<i>Smilax lasioneura</i>	5	[UPL]	Nt H-Vine	COMMON CARRION
SMILAS FLOWER	0	SOIL	0	nil	nil	SOIL

SOLULM	5	<i>Solidago ulmifolia</i>	5	UPL	Nt P-Forb	ELM-LEAVED
GOLDENROD						
ULMAME	3	<i>Ulmus americana</i>	-2	FACW-	Nt Tree	AMERICAN ELM
VIBPRU	5	<i>Viburnum prunifolium</i>	3	FACU	Nt Shrub	BLACK HAW
VIOPUB	5	<i>Viola pubescens</i>	4	FACU-	Nt P-Forb	YELLOW VIOLET
VIOSOR	3	<i>Viola sororia</i>	1	FAC-	Nt P-Forb	COMMON BLUE VIOLET

Site: Raccoon Grove, Will County, Illinois
 Locale: CTAP RG-1 Grassland Plot
 Date: August 10, 2004 Four hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP RG-1 Grassland Plot.tra

TRANSECT DATA, QUADRAT										
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW SEQ	W/Ad
1	5.0	5.0	8.7	8.7	-1.7	-1.7	3	3	-0.2	-0.2
2	4.0	4.0	9.8	9.8	1.3	1.3	6	6	0.2	0.5
3	4.7	2.8	8.1	6.3	1.0	1.8	3	5	0.4	0.6
4	3.0	3.0	6.0	6.0	-1.2	-1.2	4	4	0.4	0.7
5	3.6	3.6	8.0	8.0	1.6	1.6	5	5	0.5	0.5
6	4.4	4.4	9.8	9.8	1.2	1.2	5	5	1.2	1.3
7	3.3	2.6	9.2	8.2	0.9	1.1	8	10	1.1	1.2
8	3.4	2.8	7.6	6.9	1.2	1.2	5	6	1.5	1.5
9	2.9	2.2	9.2	8.0	2.4	2.3	10	13	1.3	1.4
10	4.7	3.5	11.4	9.9	0.3	0.8	6	8	1.1	1.3
11	4.4	3.5	12.4	11.1	0.6	0.9	8	10	0.6	0.9
12	3.2	2.7	10.1	9.2	0.9	1.1	10	12	1.5	1.5
13	3.6	3.0	8.0	7.3	3.0	2.7	5	6	1.9	1.9
14	2.8	2.3	8.3	7.5	1.9	1.9	9	11	2.1	2.0
15	4.3	3.9	13.0	12.3	1.6	1.5	9	10	1.4	1.4
16	2.7	2.5	8.5	8.1	0.7	0.7	10	11	1.4	1.3
17	2.5	1.9	6.1	5.3	1.8	1.6	6	8	1.4	1.5
18	3.0	2.3	9.5	8.3	1.8	2.0	10	13	1.6	1.6
19	3.7	3.1	9.0	8.3	1.2	1.1	6	7	1.6	1.6
20	2.7	2.7	7.2	7.2	1.7	1.7	7	7	1.4	1.4
AVG	3.6	3.1	9.0	8.3	1.1	1.2	6.8	8.0		
STD	0.8	0.8	1.8	1.7	1.1	1.0	2.4	3.1		

C	NUMBER	
0	3	28 NATIVE SPECIES
1	4	34 TOTAL SPECIES
2	5 0 to 3	3.4 NATIVE MEAN C
3	2 50.0%	2.8 W/Adventives
4	5	17.8 NATIVE FQI
5	5	16.1 W/Adventives
6	2 4 to 7	0.6 NATIVE MEAN W
7	1 46.4%	1.0 W/Adventives
8	0	
9	0 8 to 10	
10	1 3.6%	

Native	28	82.4%	Adventive	6	17.6%
Tree	0	0.0%	Tree	0	0.0%
Shrub	2	5.9%	Shrub	1	2.9%
W-Vine	1	2.9%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	18	52.9%	P-Forb	3	8.8%
B-Forb	0	0.0%	B-Forb	1	2.9%
A-Forb	2	5.9%	A-Forb	0	0.0%
P-Grass	3	8.8%	P-Grass	1	2.9%
A-Grass	0	0.0%	A-Grass	0	0.0%
P-Sedge	2	5.9%	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	81	982	50.6	35.0	42.8
Nt P-Grass	35	1032	21.9	36.8	29.3
Ad P-Grass	14	341	8.8	12.1	10.4
Nt Shrub	11	215	6.9	7.7	7.3
Nt P-Sedge	4	150	2.5	5.3	3.9
Ad Shrub	5	65	3.1	2.3	2.7
Ad P-Forb	4	8	2.5	0.3	1.4
Nt A-Forb	3	3	1.9	0.1	1.0
Ad B-Forb	2	6	1.3	0.2	0.7

Nt W-Vine 1 5 0.6 0.2 0.4

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Andropogon gerardii	5	FAC-	20	805	12.5	28.7	20.6
POA PRATENSIS	0	FAC-	14	341	8.8	12.1	10.4
Solidago juncea	5	UPL	12	237	7.5	8.4	8.0
Aster ericoides	5	FACU-	13	193	8.1	6.9	7.5
Cornus racemosa	1	FACW-	10	190	6.3	6.8	6.5
Panicum implicatum	2	FAC-	9	97	5.6	3.5	4.5
Panicum virgatum	5	FAC+	6	130	3.8	4.6	4.2
Rudbeckia hirta	1	FACU	8	96	5.0	3.4	4.2
Fragaria virginiana	1	FAC-	8	72	5.0	2.6	3.8
Solidago graminifolia	4	FACW-	7	47	4.4	1.7	3.0
Solidago riddellii	7	OBL	5	81	3.1	2.9	3.0
ROSA MULTIFLORA	0	FACU	5	65	3.1	2.3	2.7
Solidago altissima	1	FACU	5	65	3.1	2.3	2.7
Agrimonia gryposepala	2	FACU+	4	60	2.5	2.1	2.3
Carex granularis	4	FACW+	3	75	1.9	2.7	2.3
Antennaria plantaginifolia	3	UPL	4	40	2.5	1.4	2.0
Eleocharis acicularis	2	OBL	1	75	0.6	2.7	1.6
Coreopsis palmata	6	UPL	2	26	1.3	0.9	1.1
Juncus tenuis	0	[FACU+]	3	11	1.9	0.4	1.1
Potentilla simplex	4	FACU-	3	11	1.9	0.4	1.1
Lycopus americanus	5	OBL	1	25	0.6	0.9	0.8
Rubus allegheniensis	3	FACU+	1	25	0.6	0.9	0.8
DAUCUS CAROTA	0	UPL	2	6	1.3	0.2	0.7
Oxalis europaea	0	FACU	2	2	1.3	0.1	0.7
Polygala sanguinea	6	FACU	2	2	1.3	0.1	0.7
TRIFOLIUM REPENS	0	FACU+	2	2	1.3	0.1	0.7
ACHILLEA MILLEFOLIUM	0	FACU	1	5	0.6	0.2	0.4
Aster novae-angliae	4	FACW	1	5	0.6	0.2	0.4
Aster ptarmicoides	10	[FAC]	1	5	0.6	0.2	0.4
Rhus radicans	2	FAC+	1	5	0.6	0.2	0.4
Tradescantia ohniensis	2	FACU+	1	5	0.6	0.2	0.4
Ambrosia artemisiifolia elatior	0	FACU	1	1	0.6	0.0	0.3
Erigeron philadelphicus	4	FACW	1	1	0.6	0.0	0.3
SONCHUS ULIGINOSUS	0	FAC-	1	1	0.6	0.0	0.3
			160	2807			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACHMIL	0	ACHILLEA MILLEFOLIUM	3	FACU	Ad P-Forb	YARROW
AGRGRY	2	Agrimonia gryposepala	2	FACU+	Nt P-Forb	TALL AGRIMONY
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ANTPLA	3	Antennaria plantaginifolia	5	UPL	Nt P-Forb	PUSSY TOES
ASTERI	5	Aster ericoides	4	FACU-	Nt P-Forb	HEATH ASTER
ASTNOV	4	Aster novae-angliae	-3	FACW	Nt P-Forb	NEW ENGLAND ASTER
ASTPTA	10	Aster ptarmicoides	0	[FAC]	Nt P-Forb	STIFF ASTER
CXGRAN	4	Carex granularis	-4	FACW+	Nt P-Sedge	PALE SEDGE
CORPAL	6	Coreopsis palmata	5	UPL	Nt P-Forb	PRAIRIE COREOPSIS
CORRAC	1	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
ELEACI	2	Eleocharis acicularis	-5	OBL	Nt P-Sedge	NEEDLE SPIKE RUSH
ERIPHI	4	Erigeron philadelphicus	-3	FACW	Nt P-Forb	MARSH FLEABANE
FRAVIR	1	Fragaria virginiana	1	FAC-	Nt P-Forb	WILD STRAWBERRY

JUNTEN	0	<i>Juncus tenuis</i>	2 [FACU+]	Nt P-Forb	PATH RUSH
LYCAME HOREHOUND	5	<i>Lycopus americanus</i>	-5 OBL	Nt P-Forb	COMMON WATER
OXAEUR	0	<i>Oxalis europaea</i>	3 FACU	Nt P-Forb	TALL WOOD SORREL
PANIMP GRASS	2	<i>Panicum implicatum</i>	1 FAC-	Nt P-Grass	OLD-FIELD PANIC
PANVIR	5	<i>Panicum virgatum</i>	-1 FAC+	Nt P-Grass	SWITCH GRASS
POAPRA	0	<i>POA PRATENSIS</i>	1 FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
POLSAN	6	<i>Polygala sanguinea</i>	3 FACU	Nt A-Forb	FIELD MILKWORT
POTSIS	4	<i>Potentilla simplex</i>	4 FACU-	Nt P-Forb	COMMON CINQUEFOIL
RHURAD	2	<i>Rhus radicans</i>	-1 FAC+	Nt W-Vine	POISON IVY
ROSMUL	0	<i>ROSA MULTIFLORA</i>	3 FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3	<i>Rubus allegheniensis</i>	2 FACU+	Nt Shrub	COMMON BLACKBERRY
RUDHIR	1	<i>Rudbeckia hirta</i>	3 FACU	Nt P-Forb	BLACK-EYED SUSAN
SOLALT	1	<i>Solidago altissima</i>	3 FACU	Nt P-Forb	TALL GOLDENROD
SOLGRG GOLDENROD	4	<i>Solidago graminifolia</i>	-2 FACW-	Nt P-Forb	COMMON GRASS-LEAVED
SOLJUN	5	<i>Solidago juncea</i>	5 UPL	Nt P-Forb	EARLY GOLDENROD
SOLRID	7	<i>Solidago riddellii</i>	-5 OBL	Nt P-Forb	RIDDELL'S GOLDENROD
SONULI	0	<i>SONCHUS ULIGINOSUS</i>	1 FAC-	Ad P-Forb	COMMON SOW THISTLE
TRAOHI	2	<i>Tradescantia ohiensis</i>	2 FACU+	Nt P-Forb	COMMON SPIDERWORT
TRIREP	0	<i>TRIFOLIUM REPENS</i>	2 FACU+	Ad P-Forb	WHITE CLOVER

Site: Raccoon Grove, Will County, Illinois
 Locale: CTAP RA-4 All Transects Shrub Plot
 Date: September 8, 2004 Six hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP RA-4 All Transects Shrub Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	2.0	1.0	2.0	1.4	5.0	4.0	1	2	2.5	2.7	
2	2.0	1.0	2.0	1.4	0.0	1.5	1	2	2.3	2.5	
3	1.5	1.5	2.1	2.1	2.0	2.0	2	2	1.5	2.0	
4	2.0	2.0	2.8	2.8	2.5	2.5	2	2	1.5	1.5	
5	2.0	2.0	2.8	2.8	0.0	0.0	2	2	2.3	2.3	
6	3.5	3.5	4.9	4.9	4.5	4.5	2	2	2.2	2.2	
7	2.7	2.7	4.6	4.6	2.0	2.0	3	3	3.2	3.2	
8	5.0	5.0	5.0	5.0	3.0	3.0	1	1	2.7	2.8	
9	5.0	2.5	5.0	3.5	3.0	3.5	1	2	2.8	2.9	
10	1.3	1.3	2.3	2.3	2.3	2.3	3	3	2.8	2.9	
11	5.0	2.5	5.0	3.5	3.0	3.0	1	2	2.3	2.3	
12	4.3	4.3	7.5	7.5	1.7	1.7	3	3	2.2	2.2	
13	3.0	3.0	5.2	5.2	2.0	2.0	3	3	2.9	2.6	
14	2.0	1.0	2.0	1.4	5.0	4.0	1	2	3.7	3.3	
15	3.5	3.5	4.9	4.9	4.0	4.0	2	2	4.5	4.0	
AVG	3.0	2.5	3.9	3.6	2.7	2.7	1.9	2.2			
STD	1.3	1.2	1.7	1.8	1.5	1.2	0.8	0.6			

C	NUMBER	
0	0	
1	2	
2	5	0 to 3
3	2	75.0%
4	0	
5	3	
6	0	4 to 7
7	0	25.0%
8	0	
9	0	8 to 10
10	0	0.0%

12 NATIVE SPECIES
 14 TOTAL SPECIES
 2.8 NATIVE MEAN C
 2.4 W/Adventives
 9.5 NATIVE FQI
 8.8 W/Adventives
 2.0 NATIVE MEAN W
 2.2 W/Adventives

Native	12	85.7%	Adventive	2	14.3%
Tree	7	50.0%	Tree	0	0.0%
Shrub	3	21.4%	Shrub	2	14.3%
W-Vine	2	14.3%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	0	0.0%	P-Forb	0	0.0%
B-Forb	0	0.0%	B-Forb	0	0.0%
A-Forb	0	0.0%	A-Forb	0	0.0%
P-Grass	0	0.0%	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 Tree	20	21	60.6	52.5	56.6
Ad Shrub	5	8	15.2	20.0	17.6
Nt W-Vine	4	6	12.1	15.0	13.6
Nt Shrub	4	5	12.1	12.5	12.3

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Carya ovata	5 FACU	6	6	18.2	15.0	16.6
ROSA MULTIFLORA	0 FACU	4	7	12.1	17.5	14.8
Prunus serotina	1 FACU	4	5	12.1	12.5	12.3
Crataegus mollis	2 FACU-	4	4	12.1	10.0	11.1
Parthenocissus quinquefolia	2 FAC-	2	3	6.1	7.5	6.8
Rhus radicans	2 FAC+	2	3	6.1	7.5	6.8

Rubus occidentalis	2 UPL	2	3	6.1	7.5	6.8
Crataegus crus-galli	2 FAC	2	2	6.1	5.0	5.5
Ostrya virginiana	5 FACU-	2	2	6.1	5.0	5.5
BERBERIS THUNBERGII	0 FACU-	1	1	3.0	2.5	2.8
Fraxinus pennsy...subintegerrima	1 FAC	1	1	3.0	2.5	2.8
Ribes missouriense	5 UPL	1	1	3.0	2.5	2.8
Rubus allegheniensis	3 FACU+	1	1	3.0	2.5	2.8
Ulmus americana	3 FACW-	1	1	3.0	2.5	2.8
		33	40			

ACRONYM	C SCIENTIFIC NAME	W WETNESS	PHYSIOGNOMY	COMMON NAME
BERTHU	0 BERBERIS THUNBERGII	4 FACU-	Ad Shrub	JAPANESE BARBERRY
CAROVY	5 Carya ovata	3 FACU	Nt Tree	SHAGBARK HICKORY
CRACRU	2 Crataegus crus-galli	0 FAC	Nt Tree	COCKSPUR HAWTHORN
CRAMOL	2 Crataegus mollis	4 FACU-	Nt Tree	DOWNY HAWTHORN
FRAPES	1 Fraxinus pennsylvanica subintegerrima	0 FAC	Nt Tree	GREEN ASH
OSTVIR	5 Ostrya virginiana	4 FACU-	Nt Tree	HOP HORNBEAM
PARQUI	2 Parthenocissus quinquefolia	1 FAC-	Nt W-Vine	VIRGINIA CREEPER
PRUSER	1 Prunus serotina	3 FACU	Nt Tree	WILD BLACK CHERRY
RHURAD	2 Rhus radicans	-1 FAC+	Nt W-Vine	POISON IVY
RIBMIS	5 Ribes missouriense	5 UPL	Nt Shrub	WILD GOOSEBERRY
ROSMUL	0 ROSA MULTIFLORA	3 FACU	Ad Shrub	MULTIFLORA ROSE
RUBALL	3 Rubus allegheniensis	2 FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	2 Rubus occidentalis	5 UPL	Nt Shrub	BLACK RASPBERRY
ULMAME	3 Ulmus americana	-2 FACW-	Nt Tree	AMERICAN ELM

File Information

(printed March 14, 2006 4:45:07 pm)

Site: Raccoon Grove, Will County, Illinois
Locale: CTAP RA-4 All Transects Shrub Plot
Date: September 8, 2004 Six hours
By: Earth Tech

Transect String

Quadrat 1

ROSMUL 1
RUBOCC 1

Quadrat 2

CRACRU 1
ROSMUL 1

Quadrat 3

PRUSER 1
PARQUI 1

Quadrat 4

PRUSER 2
RUBALL 1

Quadrat 5

RHURAD 1
PARQUI 2

Quadrat 6

RIBMIS 1
CRAMOL 1

Quadrat 7

PRUSER 1

CRACRU 1

CAROVY 1

Quadrat 8

CAROVY 1

Quadrat 9

CAROVY 1

BERTHU 1

Quadrat 10

PRUSER 1

FRAPES 1

CRAMOL 1

Quadrat 11

CAROVY 1

ROSMUL 4

Quadrat 12

ULMAME 1

CAROVY 1

OSTVIR 1

Quadrat 13

RHURAD 2

CAROVY 1

CRAMOL 1

Quadrat 14

ROSMUL 1

RUBOCC 2

Quadrat 15

CRAMOL 1

OSTVIR 1

**Monee Reservoir
CTAP Plot**

Site: Monee Reservoir, Will County, Illinois
 Locale: CTAP MG-1 Herbaceous Plot
 Date: August 11, 2004 Five hours
 By: Earth Tech
 File: c:\FQA\studies\BaselineReport\CTAP MG-1 Monee Grassland Plot.tra

TRANSECT DATA, QUADRAT											
QUAD	MC	W/Ad	FQI	W/Ad	MW	W/Ad	NS	TS	MW	SEQ	W/Ad
1	3.3	2.0	5.8	4.5	3.0	2.4	3	5	2.5	2.3	
2	3.0	1.2	4.2	2.7	2.0	2.2	2	5	2.0	1.9	
3	2.4	1.9	6.4	5.7	0.9	1.1	7	9	1.8	1.9	
4	3.7	2.2	6.4	4.9	2.7	2.4	3	5	1.6	1.7	
5	4.8	3.4	10.7	9.1	1.4	1.6	5	7	2.1	2.1	
6	3.3	2.5	8.2	7.1	2.3	2.4	6	8	2.1	2.2	
7	3.6	2.8	9.4	8.3	2.4	2.8	7	9	2.4	2.6	
8	4.5	3.0	6.4	5.2	2.5	2.7	2	3	2.4	2.6	
9	3.8	3.0	7.5	6.7	2.3	2.4	4	5	2.0	2.2	
10	2.7	2.3	6.5	6.0	1.3	1.6	6	7	1.6	1.5	
11	3.7	1.8	6.4	4.5	1.3	0.7	3	6	1.3	1.2	
12	3.4	2.4	7.6	6.4	1.2	1.4	5	7	1.8	1.6	
13	3.3	2.5	8.2	7.1	3.0	2.8	6	8	2.0	2.1	
14	3.2	2.7	7.2	6.5	1.8	2.0	5	6	2.3	2.4	
15	4.0	3.2	8.0	7.2	2.3	2.4	4	5	2.1	2.3	
16	3.4	2.8	7.6	6.9	2.4	2.5	5	6	2.1	2.4	
17	3.3	2.2	6.5	5.3	1.8	2.2	4	6	2.3	2.5	
18	3.6	2.9	10.3	9.2	2.9	2.9	8	10	2.3	2.4	
19	2.5	1.9	6.1	5.3	2.3	2.3	6	8	2.7	2.6	
20	4.0	3.4	9.8	9.1	2.8	2.6	6	7	2.6	2.4	
AVG	3.5	2.5	7.5	6.4	2.1	2.2	4.8	6.6			
STD	0.6	0.6	1.6	1.7	0.6	0.6	1.7	1.7			

C	NUMBER	
0	3	17 NATIVE SPECIES
1	1	25 TOTAL SPECIES
2	1 0 to 3	4.0 NATIVE MEAN C
3	0 29.4%	2.7 W/Adventives
4	3	16.5 NATIVE FQI
5	6	13.6 W/Adventives
6	1 4 to 7	2.2 NATIVE MEAN W
7	0 58.8%	2.0 W/Adventives
8	1	
9	1 8 to 10	
10	0 11.8%	

Native	17	68.0%	Adventive	8	32.0%
Tree	1	4.0%	Tree	0	0.0%
Shrub	0	0.0%	Shrub	0	0.0%
W-Vine	0	0.0%	W-Vine	0	0.0%
H-Vine	0	0.0%	H-Vine	0	0.0%
P-Forb	12	48.0%	P-Forb	3	12.0%
B-Forb	0	0.0%	B-Forb	2	8.0%
A-Forb	1	4.0%	A-Forb	1	4.0%
P-Grass	3	12.0%	P-Grass	2	8.0%
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	61	934	46.2	34.0	40.1
Nt P-Grass	29	1047	22.0	38.1	30.0
Ad B-Forb	19	308	14.4	11.2	12.8
Ad P-Grass	9	367	6.8	13.3	10.1
Ad P-Forb	5	57	3.8	2.1	2.9
Nt A-Forb	5	9	3.8	0.3	2.1
Ad A-Forb	2	26	1.5	0.9	1.2
Nt Tree	2	2	1.5	0.1	0.8

SPECIES RELATIVE IMPORTANCE VALUES

SCIENTIFIC NAME	C	WETNESS	FRQ	COV	RFRQ	RCOV	RIV
Andropogon gerardii	5	FAC-	19	836	14.4	30.4	22.4
Solidago altissima	1	FACU	17	362	12.9	13.2	13.0
MELILOTUS ALBA	0	FACU	17	282	12.9	10.3	11.6
POA PRATENSIS	0	FAC-	8	366	6.1	13.3	9.7
Ratibida pinnata	4	UPL	12	172	9.1	6.3	7.7
Sorghastrum nutans	5	FACU+	5	130	3.8	4.7	4.3
Helianthus grosseserratus	2	FACW-	7	75	5.3	2.7	4.0
Silphium integrifolium	5	UPL	6	90	4.5	3.3	3.9
Panicum virgatum	5	FAC+	5	81	3.8	2.9	3.4
Solidago rigida	4	FACU-	5	81	3.8	2.9	3.4
Coreopsis tripteris	5	FAC	5	53	3.8	1.9	2.9
Ambrosia artemisiifolia elatior	0	FACU	5	9	3.8	0.3	2.1
Aster pilosus	0	FACU+	4	16	3.0	0.6	1.8
TRIFOLIUM REPENS	0	FACU+	2	30	1.5	1.1	1.3
DAUCUS CAROTA	0	UPL	2	26	1.5	0.9	1.2
MEDICAGO LUPULINA	0	FAC-	2	26	1.5	0.9	1.2
Acer saccharinum	0	FACW	2	2	1.5	0.1	0.8
Coreopsis palmata	6	UPL	1	25	0.8	0.9	0.8
LOTUS CORNICULATUS	0	FAC-	1	25	0.8	0.9	0.8
Parthenium integrifolium	8	UPL	1	25	0.8	0.9	0.8
Solidago nemoralis	4	UPL	1	25	0.8	0.9	0.8
TARAXACUM OFFICINALE	0	FACU	2	2	1.5	0.1	0.8
Aster ericoides	5	FACU-	1	5	0.8	0.2	0.5
Eryngium yuccifolium	9	FAC+	1	5	0.8	0.2	0.5
PHALARIS ARUNDINACEA	0	FACW+	1	1	0.8	0.0	0.4
			132	2750			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ACESAI	0	Acer saccharinum	-3	FACW	Nt Tree	SILVER MAPLE
AMBARE	0	Ambrosia artemisiifolia elatior	3	FACU	Nt A-Forb	COMMON RAGWEED
ANDGER	5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM GRASS
ASTERI	5	Aster ericoides	4	FACU-	Nt P-Forb	HEATH ASTER
ASTPIL	0	Aster pilosus	2	FACU+	Nt P-Forb	HAIRY ASTER
CORPÁL	6	Coreopsis palmata	5	UPL	Nt P-Forb	PRAIRIE COREOPSIS
CORTRP	5	Coreopsis tripteris	0	FAC	Nt P-Forb	TALL COREOPSIS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
ERYYUC	9	Eryngium yuccifolium	-1	FAC+	Nt P-Forb	RATTLESNAKE MASTER
HELGRO	2	Helianthus grosseserratus	-2	FACW-	Nt P-Forb	SAWTOOTH SUNFLOWER
LOTCOR	0	LOTUS CORNICULATUS	1	FAC-	Ad P-Forb	BIRD'S FOOT TREFOIL
MEDLUP	0	MEDICAGO LUPULINA	1	FAC-	Ad A-Forb	BLACK MEDICK
MELALB	0	MELILOTUS ALBA	3	FACU	Ad B-Forb	WHITE SWEET CLOVER
PANVIR	5	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PARINT	8	Parthenium integrifolium	5	UPL	Nt P-Forb	WILD QUININE
PHAARU	0	PHALARIS ARUNDINACEA	-4	FACW+	Ad P-Grass	REED CANARY GRASS
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
RATPIN	4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
SILINI	5	Silphium integrifolium	5	UPL	Nt P-Forb	ROSIN WEED
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD

SOLNEM	4	<i>Solidago nemoralis</i>	5	UPL	Nt P-Forb	OLD-FIELD GOLDENROD
SOLRIG	4	<i>Solidago rigida</i>	4	FACU-	Nt P-Forb	STIFF GOLDENROD
SORNUT	5	<i>Sorghastrum nutans</i>	2	FACU+	Nt P-Grass	INDIAN GRASS
TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
TRIREP	0	TRIFOLIUM REPENS	2	FACU+	Ad P-Forb	WHITE CLOVER

Appendix D: Vegetation Monitoring Results

CTAP Plot Layout Diagrams for Forest and Grassland/Wetland Sampling

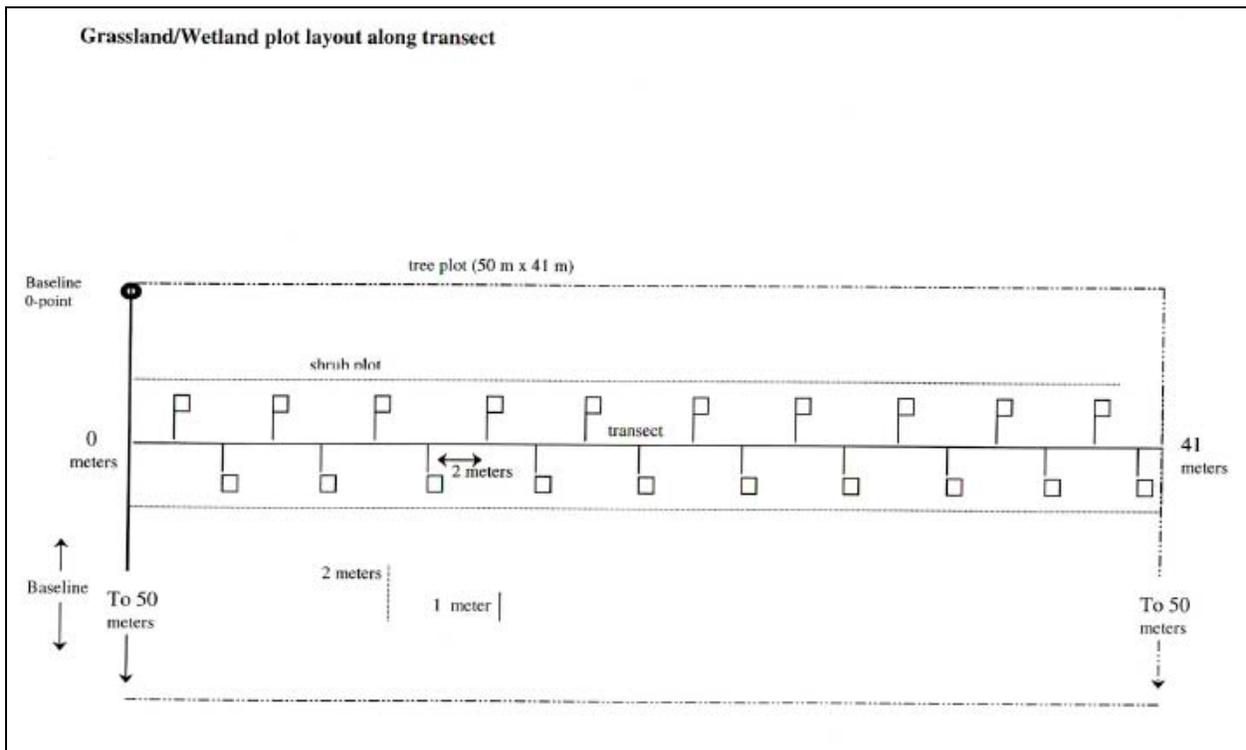
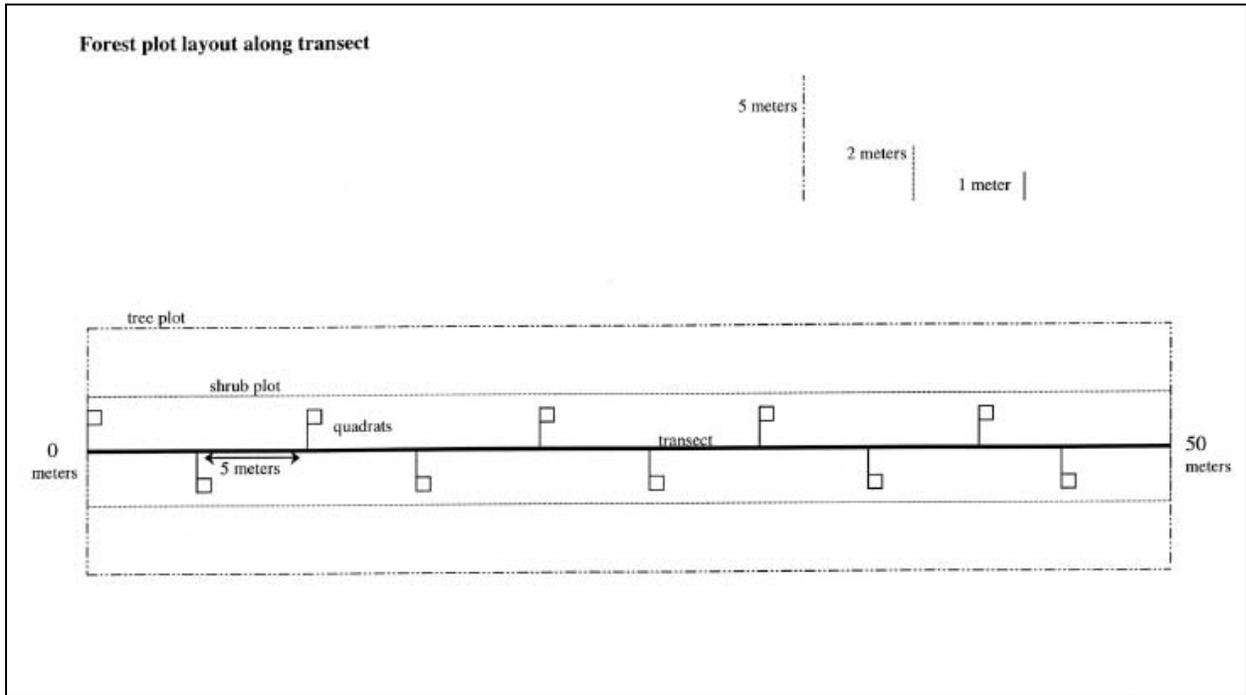


Table D-1.1 Bird Plot Inventory Results for all Strata								
Location	Transect	Habitat	Native Species	All Species	Native FQI	FQI w/ advent.	Native Mean C	Mean C w/ advent.
Monee Reservoir	MA (n=2)	Grassland	4	8	5.0	3.5	2.5	1.3
	MB (n=2)	Grassland	3	6	4.6	3.3	2.7	1.3
Goodenow Grove	GA (n=2)	Grassland	11	12	7.8	7.5	2.4	2.2
	GB (n=3)	Grassland	20	25	12.1	10.8	2.7	2.2
	GC (n=6)	Forest	36	36	23.5	23.5	3.9	3.9
	GD (n=4)	Forest	22	28	14.5	12.9	3.1	2.4
Raccoon Grove	RA (n=7)	Forest	36	38	21.8	21.3	3.6	3.4
	RB (n=4)	Forest	21	21	16.1	16.1	3.5	3.5

Table D-1.2 Bird Plot Transect Averages for Herbaceous Strata															
Location	Transect	Habitat	% Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Monee Reservoir (combined)	MA (n=2)	Grassland	14.3	1	0.3	7	2.3	5.0	1.3	1.9	0.9	5.0	1.3	0.7	0.6
	MB (n=2)	Grassland													
Goodenow Grove	GA (n=2)	Grassland	83.3	5	3.0	6	4.0	4.5	3.3	4.1	2.8	2.0	2.0	1.7	1.4
	GB (n=3)	Grassland	85	17	6.7	20	8.3	11.9	7.5	11.0	6.8	2.9	3.2	2.5	2.8
	GC (n=6)	Forest	100	20	5.8	20	5.8	14.8	7.8	14.8	7.8	3.3	2.6	3.3	2.6
	GD (n=4)	Forest	70.6	12	4.0	17	5.3	8.9	5.1	7.5	4.4	2.6	2.6	1.8	1.9
Raccoon Grove	RA (n=7)	Forest	96.3	26	5.4	27	5.6	17.7	8.3	17.3	8.1	3.5	3.8	3.3	3.7
	RB (n=4)	Forest	100	15	6.0	15	6.0	13.9	8.2	13.9	8.2	3.6	3.4	3.6	3.4

Table D-1.3 Bird Plot Transect Averages for Shrub Strata															
Location	Transect	Habitat	% Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Monee Reservoir	MA (n=2)	Grassland	100	2	1.0	2	1.0	4.9	2.5	4.9	2.5	3.5	1.8	3.5	1.8
	MB (n=2)	Grassland		0	0.0	0	0.0								
Goodenow Grove	GA (n=2)	Grassland	100	1	0.5	1	0.5	1.0	0.5	1.0	0.5	1.0	0.5	1.0	0.5
	GB (n=3)	Grassland	75	6	3.0	8	4.5	6.1	4.1	5.3	3.3	2.5	2.3	1.9	1.5
	GC (n=6)	Forest	100	17	4.0	17	4.0	16.7	7.4	16.7	7.4	4.1	3.5	4.1	3.5
	GD (n=4)	Forest	78.6	11	6.8	14	8.3	10.6	7.4	9.4	6.7	3.2	2.9	2.5	2.4
Raccoon Grove	RA (n=7)	Forest	81.8	9	1.9	11	2.3	9.0	3.8	8.1	3.5	3.0	2.7	2.5	2.5
	RB (n=4)	Forest	100	3	1.3	3	1.3	5.8	3.0	5.8	3.0	3.3	2.6	3.3	2.6

Table D-1.4 Bird Plot Transect Averages for Tree Strata															
Location	Transect	Habitat	% Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Monee Reservoir	MA (n=2)	Grassland		0		0									
	MB (n=2)	Grassland		0		0									
Goodenow Grove	GA (n=2)	Grassland	100	5	3.0	5	3.0	6.7	4.9	6.7	4.9	3.0	2.8	3.0	2.8
	GB (n=3)	Grassland	100	4	1.7	4	1.7	4.5	3.3	4.5	3.3	2.3	2.5	2.3	2.3
	GC (n=6)	Forest	100												
Raccoon Grove	GD (n=4)	Forest	100												
	RA (n=7)	Forest	100	9	2.7	9	2.7	12.3	6.1	12.3	6.1	4.1	3.6	4.1	3.6
	RB (n=4)	Forest	100	7	2.5	7	2.5	9.4	6.1	9.4	6.1	3.6	3.9	9.4	3.9

Table D-2.1 CTAP Plot Inventory Results for all Strata								
Location	Plot	Habitat	Native Species	All Species	Native FQI	FQI w/ advent.	Native Mean C	Mean C w/ advent.
Monee Reservoir	MG-1	Grassland	32.0	40.0	22.6	20.2	4.0	3.2
Goodenow Grove	GC-2	Forest	53.0	54.0	26.5	26.3	3.6	3.5
	GA-3	Grassland	40.0	47.0	20.7	19.1	3.3	2.8
	GW-1	Wetland	51.0	59.0	25.9	24.1	3.6	3.1
Raccoon Grove	RG-1	Grassland	27.0	33.0	17.9	16.2	3.4	2.8
	RA-4	Forest	50.0	53.0	29.1	28.3	4.1	3.9

Table D-2.2 CTAP Transect Results for Herbaceous Strata: All Plots																		
Location	Plot	Habitat	Transect	%Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.		
Monee Reservoir	MG-1	Grassland	1(n=20)	68	17	4.8	25	6.6	16.5	7.5	13.6	6.4	4.0	3.5	2.7	2.5		
Goodenow Grove	GC-2	Forest	1(n=10)	100	31	6.4	31	6.4	19.9	8.1	19.9	8.1	3.6	3.2	3.6	3.2		
			2(n=10)	100	19	3.0	19	3.0	15.1	4.7	15.1	4.7	3.5	2.4	3.5	2.4		
			3(n=10)	100	28	7.9	28	7.9	19.1	8.9	19.1	8.9	3.6	3.2	3.6	3.2		
			GA-3	Grassland	1(n=20)	88	22	4.6	25	4.8	16.4	7.9	15.4	7.7	3.5	3.8	3.1	3.6
Raccoon Grove	RG-1	Grassland	1(n=20)	90	36	7.8	40	8.8	21.2	8.8	20.1	8.4	3.5	3.2	3.2	2.9		
			1(n=20)	82.4	28	6.8	34	8.0	17.8	9.0	16.1	8.3	3.4	3.6	2.8	3.1		
			RA-4	Forest	1(n=10)	100	31	5.4	31	5.4	21.9	7.3	21.9	7.3	3.9	3.1	3.9	3.1
			2(n=10)	95.7	22	5.1	23	5.2	15.8	6.1	15.4	6.1	3.4	2.7	3.2	2.7		
			3(n=10)	94.7	18	3.3	19	3.4	14.4	5.0	14.0	4.9	3.4	2.9	3.2	2.8		

Table D-2.3 CTAP Transect Results for Shrub/Tree Strata: Grassland and Wetland Plots																
Location	Plot	Habitat	Transect	%Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Monee Reservoir	MG-1	Grassland	1(n=20)		0		0									
Goodenow Grove	GA-3	Grassland	1(n=20)		0		0									
	GW-1	Wetland	1(n=20)	75	3	2.8	4	3.0	2.3	2.1	2.0	2.0	1.3	1.3	1.0	1.2
Raccoon Grove	RG-1	Grassland	1(n=20)	100	1	1.0	1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Table D-2.4 CTAP Transect Averages for Tree Strata: Forest Plots																
Location	Plot	Habitat	Transect	%Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Goodenow Grove	GC-2	Forest	1(n=10)	100	10	3.8	10	3.8	14.5	8.4	14.5	8.4	4.6	4.4	4.6	4.4
			2(n=10)	100	11	3.8	11	3.8	11.2	5.7	11.2	5.7	3.4	3.1	3.4	3.1
			3(n=10)	87.5	7	3.0	8	3.2	11.0	7.7	10.3	7.6	4.1	4.6	3.6	4.4
Raccoon Grove	RA-4	Forest	1(n=10)	100	10	3.8	10	3.8	13.9	7.5	13.9	7.5	4.4	3.8	4.4	3.8
			2(n=10)	100	10	5.2	10	5.2	12.3	7.6	12.3	7.6	3.9	3.4	3.9	3.4
			3(n=10)	100	10	4.8	10	4.8	12.6	10.0	12.6	10.0	4.0	4.6	4.0	4.6

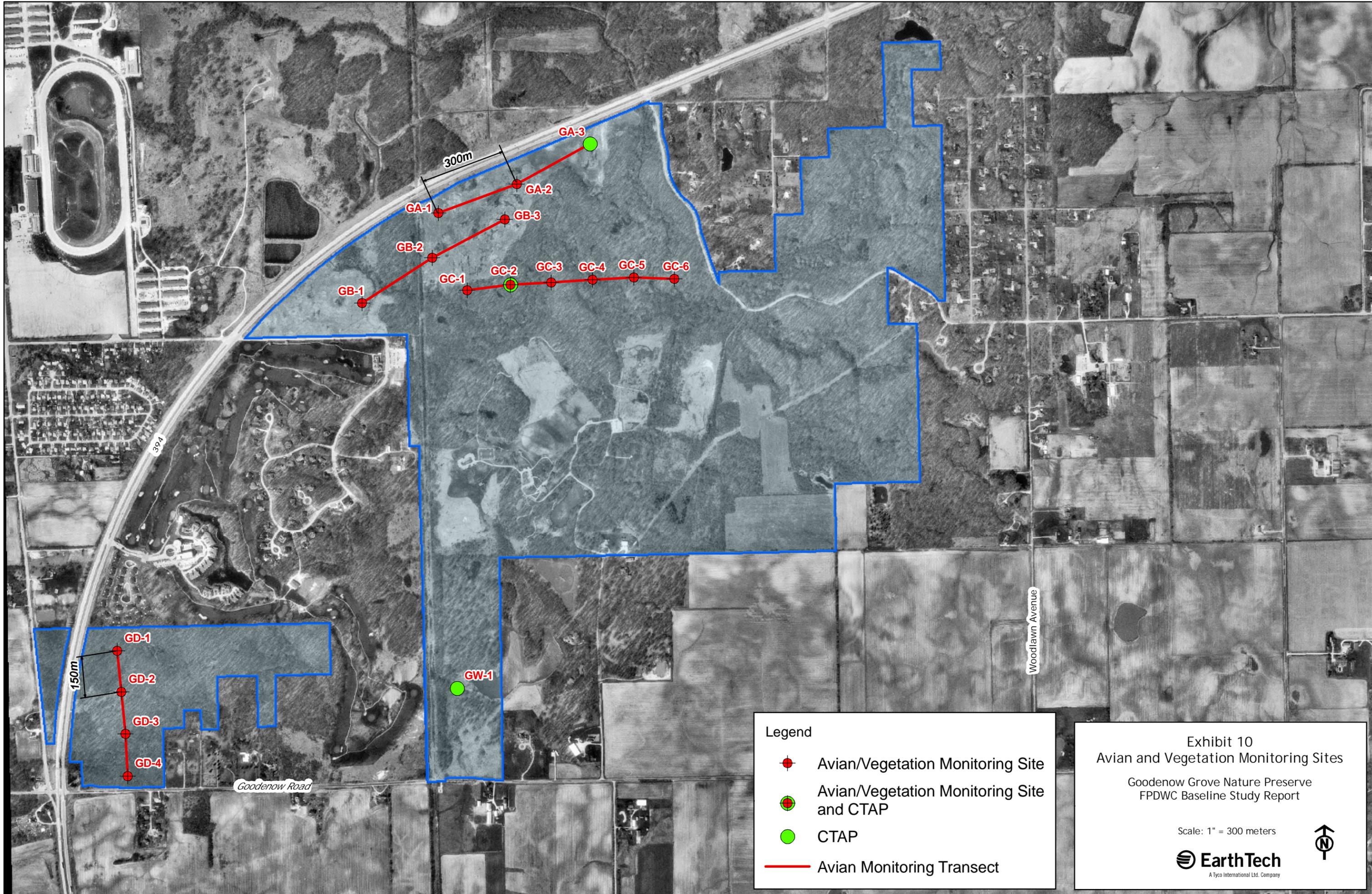
Table D-2.5 CTAP Transect Results for Shrub Strata: Forest Plots																
Location	Plot	Habitat	Transect	Percent Native Species	Transect Native Species	Quad Avg Native Species	Transect Total Species	Quad Avg Total Species	Transect Native FQI	Quad Avg Native FQI	Transect FQI w/ advent	Quad Avg FQI w/ advent.	Transect Native Mean C	Quad Avg Native Mean C	Transect Mean C w/ advent.	Quad Avg Mean C w/ advent.
Goodenow Grove	GC-2	Forest	1(n=10)	100	1	0.2	1	0.2	5.0	1.0	5.0	1.0	5.0	1.0	5.0	1.0
			2(n=10)	100	2	0.4	2	0.4	6.4	1.3	6.4	1.3	4.5	0.9	4.5	0.9
			3(n=10)	100	2	0.6	2	0.6	7.1	3.4	7.1	3.4	5.0	3.4	5.0	3.4
Raccoon Grove	RA-4	Forest	1(n=10)	85.7	6	1.6	7	2.0	4.9	2.4	4.5	2.1	2.0	1.9	1.7	1.5
			2(n=10)	85.7	6	2	7	2.2	6.5	4.4	6.0	4.1	2.7	3.5	2.3	3.0
			3(n=10)	85.7	6	2	7	2.4	7.8	4.9	7.2	4.5	3.2	3.6	2.7	2.9

Table D-3 Vegetation Results by Preserve and Habitat																						
Preserve	Habitat	Plot	Mean C ¹			FQI ²			# Species		Dominant Percent Cover						Introduced Species: # and % cover					
			Tree	Shrub	Herbaceous	Tree	Shrub	Herbaceous	Native	Total	Tree		Shrub		Herbaceous		Herbaceous		Shrub		Tree	
											(Mean Basal Area) Species ³	Avg.% cover	Species ³	Avg% cover	Species ³	Avg.% cover	Species ³	Avg.% cover	Species ³	Avg.% cover	Species ³	Avg.% cover
GG	Forest	GC1	6.3	2.7	3.0	11.0	4.6	6.0	10.0	10.0	QUERUB	589.2	CRAMOL RUBALL	2.5 2.5	SANGRE	72.50		0.00		0		0
	Forest	GC2*	4.0	1.8	2.9	7.3	1.9	7.7	10.0	10.0	QUEALB	1437.32	QUERUB	2.0	SANGRE BARE	19.87 16.87		0.00				
	Forest	GC3	6.0	5.5	4.5	8.5	13.5	11.0	14.0	14.0	QUERUB	2140.08	STATRI OSTVIR	5.1 5.1	SANGRE THADIO	25 25		0.00		0		0
	Forest	GC4	3.3	3.7	3.3	6.5	6.4	9.2	15.0	15.0	QUEMAC	1963.5	STATRI	3.8	ASACAN LAPCAN SANGRE	18.75 18.75 18.75		0.00		0		0
	Forest	GC5	6.0	4.3	4.0	8.5	7.5	6.9	8.0	8.0	OSTVIR	112.87	OSTVIR	3.8	SANGRE	37.50		0.00		0		0
	Forest	GC6	5.7	4.0	2.6	9.8	11.3	5.8	16.0	16.0	QUERUB	23.76	VIBPRU	59.9	SANGRE	18.75		0.00		0		0
	Forest	GD1	2.7	2.7	3.0	4.6	7.2	4.2	12.0	16.0	PRUSER	56.65	VIRDEN PRUSER	42 19.1	RIBMIS	12.50	VIBDEN ALLPET	6.25 6.25	VIRDEN ROSMUL	33 9		0
	Forest	GD2	4.0	2.9	3.5	6.9	8.1	8.6	17.0	21.0	QUERUB	2779.23	VIRDEN CRAMOL RUBALL	21.6 21.6 17.8	RIBMIS LONTAT	18.75 18.75	LONTAT	18.75	VIRDEN LONTAT ROSMUL	17 1 2		
	Forest	GD3	3.3	2.9	1.6	5.8	7.6	3.6	15.0	15.0	QUEMAC	3237.12	RIBMIS	21.6	GEUCAN	12.50			0		0	
	Forest	GD4	3.8	3.0	2.3	7.5	6.7	4.0	12.0	15.0	QUEALB	1294.02	RIBMIS	21.6	LONMAA	23.75	LONMAA SYMORB	23.75 6.25	ROSMUL	1		0
Average-Preserve			4.5	3.4	3.1	7.6	7.5	6.7	12.9	14.0												
RG	Forest	RA1	4.3	1.0	2.8	7.5	1.0	5.5	8.0	8.0	QUEMAC	1213.04	PRUSER	2.5	GERMAC SANGRE	18.75 18.75		0.00		0		0
	Forest	RA2	4.0	3.0	7.0	5.7	3.0	9.9	5.0	5.0	ACESAC	520.34	ACESAC	22.9	ASACAN BARE	25 37.5		0.00		0		0
	Forest	RA3	2.7	2.0	4.3	4.6	2.0	8.5	8.0	9.0	OSTVIR	924.01	CRAMOL	1.3	PODPEL ASACON	50 55	ALLPET	6.25		0		0
	Forest	RA4*	3.9	3.0	2.9	8.4	3.9	6.1	12.0	12.0	QUERUB	780.1	ROSMUL CAROVT	5.5 3.0	SOIL PARQUI SANGRE	34.23 9.93 7.53						
	Forest	RA5	4.0	3.5	3.4	6.9	4.9	7.6	10.0	13.0	VIBPRU	373.25	OSTVIR CRAMOL ROSMUL	1.3 1.3 1.3	LITTER/BARE ALLCER RHURAD BIDFRO POTSIS	61.25 12.5 12.4 12.5 12.5		0.00	ROSMUL	1		0
	Forest	RA6	4.0	3.5	2.8	5.7	4.9	6.9	10.0	10.0	QUEBIC	445.99	CAROVT CRAMOL	1.3 1.3	CAREXSP BOECYC	25.0 12.5		0.00		0		0
	Forest	RA7	1.5	1.7	2.5	2.1	2.9	6.1	11.0	13.0	FRAPES	126.3	FRAPES	2.5	CRYCAN SANGRE	43.75 31.25		0.00	ROSMUL RHACAT	1		0
	Forest	RB1	4.0	3.0	3.0	5.7	3.0	4.2	5.0	5.0	TILAME	1717.87	ACESAC	3.8	BARE ARITRI SANGRE	75.0 6.25 6.25		0.00		0		0
	Forest	RB2	4.0	3.5	3.5	6.9	4.9	9.9	13.0	13.0	TILAME	133.2	CRAMOL CAROVT	1.3 1.3	LAPCAN ASACAN	37.5 31.25		0.00		0		0
	Forest	RB3	5.0	2.0	4.3	7.1	2.0	10.6	9.0	9.0	CAROVT	69.63	CRAMOL	2.5	ARITRI	25.00		0.00		0		0
	Forest	RB4	2.7	2.0	2.9	4.6	2.0	8.1	12.0	12.0	FRAPES	1170.21	CRAMOL	1.3	CRYCAN	37.50		0.00		0		0
Average-Preserve			3.6	2.6	3.6	5.9	3.1	7.6	9.4	9.9												
Average-Forest			4.1	3.0	3.3	6.8	5.3	7.1	11.1	12.0												

Table D-3 Vegetation Results by Preserve and Habitat																					
GG	Grassland	GA1	3.0	1.0	1.5	5.2	1.0	3.0	8.0	9.0	POPDEL	390.57	SALINT	82.8	HELGRO ELEERY	37.5 25	AGRALA	12.50		0	0
	Grassland	GA3*	0.0	0.0	3.8	0.0	0.0	7.9	5.0	5.0	N/A	0		0	ANDGER BARE SOLALT ERISTR	51 26 8.1 5.2					
	Grassland	GB1	3.0	3.0	3.0	4.2	6.0	9.9	17.0	22.0	POPDEL	730.48	RUBALL CORRAC	16.6 12.7	POAPRA AGRALA RUBALL	37.5 31.25 31.25	POAPRA AGRALB CHRLEP	37.5 31.25 6.25	ROSMUL ELEUMB	1 5	
	Grassland	GB2	2.0	1.5	2.6	2.0	2.1	6.8	10.0	13.0	FRAPES	33.23	ELEUMB	5.1	CXGRAN	31.25	AGRALB CHRLEP	12.5 6.25	ELEUMB	4	
Average- Preserve			2.0	1.4	2.7	2.9	2.3	6.9	10.0	12.3											
RG	Grassland	RG1*	0.0	1.0	3.6	0.0	1.0	9.0	8.0	9.0		0	CORRAC	26.0	ANDGER POAPRA SOLJUN ASTERI	40.25 17.05 11.85 9.65					
Average- Preserve			0.0	1.0	3.6	0.0	1.0	9.0	8.0	9.0											
MR	Grassland	MA1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	POPDEL	47.58		0	POAPRA	67.50	POAPRA TRIREP AGRALB PHAARU	67.5 25 12.5 12.5		0	0
	Grassland	MB2	1.0	0.0	0.0	1.0	0.0	0.0	1.0	3.0	POPDEL	52.65		0	PHAARU	43.75	PHAARU CHRLEP	43.75 6.25		0	0
	Grassland	MG1*	0.0	0.0	3.5	0.0	0.0	7.5	5.0	7.0		0	0	ANDGER SOLALT MELALB	41.88 18.1 14.1						
Average- Preserve			0.3	0.0	1.2	0.3	0.0	2.5	2.0	4.7											
Average- Grassland			0.8	0.8	2.5	1.1	1.1	6.1	6.7	8.6											
GG	Wetland	GA2	3.0	0.0	2.5	4.6	0.0	3.5	5.0	6.0	POPDEL	902.78		0	AGRALA SOLALT	25 25	AGRALB	25.00		0	0
	Wetland	GB3	2.5	0.0	4.0	3.5	0.0	5.7	4.0	4.0	FRAPES	273.28		0	CXSTRI LITTER	62.5 50		0.00		0	0
	Wetland	GW1*	2.0	1.3	3.2	2.0	2.1	8.8	12.0	13.0	CRAMOL	43.59	CORRAC SALINT	47 27.4	AGRALA CXSART SOLALT	34.3 17.5 14.6					
Average- Preserve			2.5	0.4	3.2	3.4	0.7	6.0	7.0	7.7											
RG	Wetland	RW1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Average- Preserve			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
MR	Wetland	MA2	0.0	3.5	0.0	0.0	4.9	0.0	2.0	3.0	ACENEG	1320.35	RIBAME ACENEG	1 1	PHAARU	100.00	PHAARU	100.00		0	0
	Wetland	MB1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
	Wetland	MB3	2.0	0.0	5.0	2.0	0.0	5.0	2.0	3.0	N/A	N/A	N/A	N/A	BARE ANDGER	55 55	MELALB	18.75		0.0	0.0
Average- Preserve			0.7	1.2	1.7	0.7	1.6	1.7	1.3	2.0											
Average- Wetland			1.1	0.5	1.6	1.3	0.8	2.6	2.8	3.2											

Notes:
¹Mean Coefficient of Conservatism
²Floristic Quality Index value
³Appendix E – Floristic Quality Assessment Reports
Bold* = CTAP Plot

Appendix C: Avian Monitoring Results



Legend

- Avian/Vegetation Monitoring Site
- Avian/Vegetation Monitoring Site and CTAP
- CTAP
- Avian Monitoring Transect

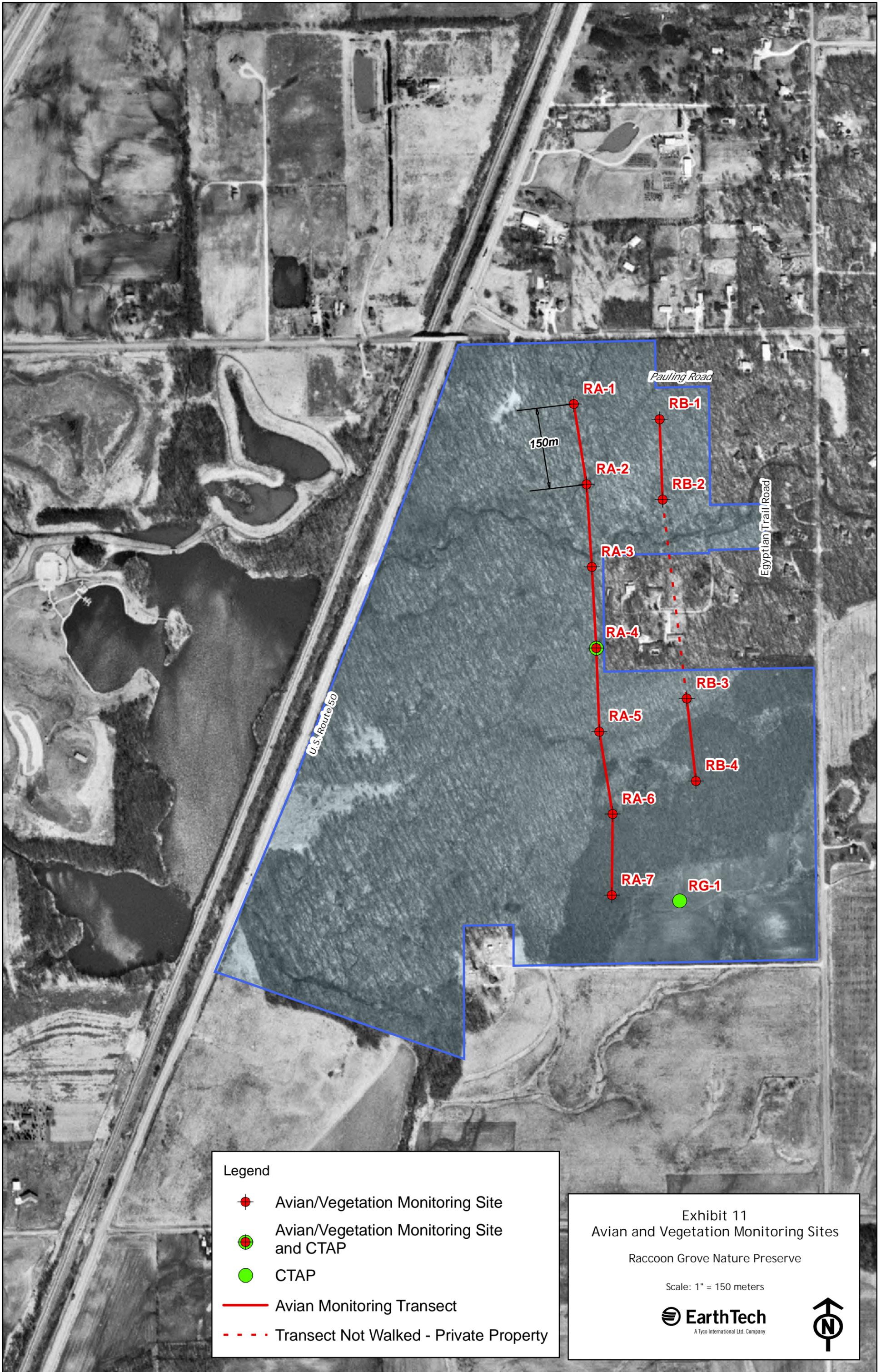
Exhibit 10
Avian and Vegetation Monitoring Sites

Goodenow Grove Nature Preserve
 FPDWC Baseline Study Report

Scale: 1" = 300 meters




A Tyco International Ltd. Company



Legend

- Avian/Vegetation Monitoring Site
- Avian/Vegetation Monitoring Site and CTAP
- CTAP
- Avian Monitoring Transect
- - - Transect Not Walked - Private Property

Exhibit 11
 Avian and Vegetation Monitoring Sites
 Raccoon Grove Nature Preserve
 Scale: 1" = 150 meters
EarthTech
A Tyco International Ltd. Company



Legend

- Avian/Vegetation Monitoring Site
- CTAP
- Avian Monitoring Transect

Exhibit 12
Avian and Vegetation Monitoring Sites
Monee Reservoir
Scale: 1" = 100 meters

EarthTech
A Tyco International Ltd. Company

Table C-1 Avian Monitoring Master Species List		
Abbreviation	Common Name	Scientific Name
ACFL	Acadian Flycatcher	<i>Empidonax virecens</i>
ALFL	Alder Flycatcher	<i>Empidonax alnorum</i>
AMCR	American Crow	<i>Corvus brachyrhynchos</i>
AMGO	American Goldfinch	<i>Carduelis tristis</i>
AMRE	American Redstart	<i>Setophaga ruticilla</i>
AMRO	American Robin	<i>Turdus migratorius</i>
AMWO	American Woodcock	<i>Scolopax minor</i>
ATSP	American Tree Sparrow	<i>Spizella arborea</i>
BASW	Barn Swallow	<i>Hirundo rustica</i>
BBWA	Bay-breasted Warbler	<i>Dendroica castanea</i>
BCCH	Black-capped Chickadee	<i>Parus atricapillus</i>
BEKI	Belted Kingfisher	<i>Ceryle alcyon</i>
BGGN	Blue-gray Gnatcatcher	<i>Poliophtila caerulea</i>
BHCO	Brown-headed Cowbird	<i>Molothrus ater</i>
BLJA	Blue Jay	<i>Cyanocitta cristata</i>
BRCR	Brown Creeper	<i>Certhia americana</i>
BRTH	Brown Thrasher	<i>Toxostoma rufum</i>
BTBW	Black-throated Blue Warbler	<i>Dendroica caerulescens</i>
BTGW	Black-throated Green Warbler	<i>Dendroica virens</i>
BWTE	Blue-winged Teal	<i>Anas discors</i>
BWWA	Blue-winged Warbler	<i>Vermivora pinus</i>
CAGO	Canadian Goose	<i>Branta canadensis</i>
CAWR	Carolina Wren	<i>Thryothorus ludovicianus</i>
CEWX	Cedar Waxwing	<i>Bombycilla cedrorum</i>
CHSP	Chipping Sparrow	<i>Spizella passerina</i>
CHSW	Chimney Swift	<i>Chaetura pelagica</i>
COGR	Common Grackle	<i>Quiscalus quiscula</i>
COHA	Cooper's Hawk	<i>Accipiter cooperii</i>
COSN	Common Snipe	<i>Gallinago gallinago</i>
COWA	Connecticut Warbler	<i>Oporornis agilis</i>
COYE	Common Yellowthroat	<i>Geothlypis trichas</i>
CSWA	Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>
DEJU	Dark-eyed Junco	<i>Junco hyemalis</i>
DICK	Dickcissel	<i>Spiza americana</i>
DOWO	Downy Woodpecker	<i>Picoides pubescens</i>
EABL	Eastern Bluebird	<i>Sialia sialis</i>
EAKI	Eastern Kingbird	<i>Tyrannus tyrannus</i>
EAME	Eastern Meadowlark	<i>Sturnella magna</i>
EAPH	Eastern Phoebe	<i>Sayornis phoebe</i>
EUST	European Starling	<i>Sturnus vulgaris</i>
EWPE	Eastern Wood-Pewee	<i>Contopus virens</i>
FISP	Field Sparrow	<i>Spizella pusilla</i>

Table C-1 Avian Monitoring Master Species List		
Abbreviation	Common Name	Scientific Name
GBHE	Great Blue Heron	<i>Ardea herodias</i>
GCFL	Great Crested Flycatcher	<i>Myiarchus crinitus</i>
GCKI	Golden-crowned Kinglet	<i>Regulus satrapa</i>
GRCA	Gray Catbird	<i>Dumetella carolinensis</i>
GREG	Great Egret	<i>Ardea alba</i>
GRSP	Grasshopper Sparrow	<i>Ammodramus savannarum</i>
HAWO	Hairy Woodpecker	<i>Picoides villosus</i>
HOFI	House Finch	<i>Carpodacus mexicanus</i>
HOWR	House Wren	<i>Troglodytes aedon</i>
INBU	Indigo Bunting	<i>Passerina cyanea</i>
KILL	Killdeer	<i>Charadrius vociferus</i>
LEFL	Least Flycatcher	<i>Empidonax minimus</i>
LISP	Lincoln's Sparrow	<i>Melospiza lincolnii</i>
MALL	Mallard	<i>Anas platyrhynchos</i>
MAWA	Magnolia Warbler	<i>Dendroica magnolia</i>
MODO	Mourning Dove	<i>Zenaida macroura</i>
NAWA	Nashville Warbler	<i>Vermivora ruficapilla</i>
NOBO	Northern Bobwhite	<i>Colinus virginianus</i>
NOCA	Northern Cardinal	<i>Cardinalis cardinalis</i>
NOFL	Northern Flicker	<i>Colaptes auratus</i>
NOHA*	Northern Harrier*	<i>Circus cyaneus*</i>
NOOR	Baltimore Oriole	<i>Icterus galbula</i>
NOPA	Northern Parula	<i>Parula americana</i>
OROR	Orchard Oriole	<i>Icterus spurius</i>
OVEN	Ovenbird	<i>Seiurus aurocapillus</i>
PAWA	Palm Warbler	<i>Dendroica palmarum</i>
PBGR	Pied-billed Grebe	<i>Podilymbus podiceps</i>
PHVI	Philadelphia Vireo	<i>Vireo philadelphicus</i>
PIWO	Pileated Woodpecker	<i>Dryocopus pileatus</i>
RBGR	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>
RBGU	Ring-billed Gull	<i>Larus delawarensis</i>
RBWO	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>
RCKI	Ruby-crowned Kinglet	<i>Regulus calendula</i>
REVI	Red-eyed Vireo	<i>Vireo olivaceus</i>
RHWO	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>
RNPH	Ring-necked Pheasant	<i>Phasianus colchicus</i>
RODO	Rock Dove	<i>Columba livia</i>
RSTO	Eastern Towhee	<i>Pipilo erythrophthalmus</i>
RTHA	Red-tailed Hawk	<i>Buteo jamaicensis</i>
RWBL	Red-winged Blackbird	<i>Agelaius phoeniceus</i>
SCTA	Scarlet Tanager	<i>Piranga olivacea</i>
SEWR	Sedge Wren	<i>Cistothorus platensis</i>

Table C-1 Avian Monitoring Master Species List		
Abbreviation	Common Name	Scientific Name
SORA	Sora	<i>Porzana carolina</i>
SOSA	Solitary Sandpiper	<i>Tringa solitaria</i>
SOSP	Song Sparrow	<i>Melospiza melodia</i>
SSHA	Sharp-shinned Hawk	<i>Falco</i>
SWSP	Swamp Sparrow	<i>Melospiza georgiana</i>
SWTH	Swainson's Thrush	<i>Catharus ustulatus</i>
TEWA	Tennessee Warbler	<i>Vermivora peregrina</i>
TRSW	Tree Swallow	<i>Tachycineta bicolor</i>
TUTI	Tufted Titmouse	<i>Baeolophus bicolor</i>
TUVU	Turkey Vulture	<i>Cathartes aura</i>
UNBL	Unknown Blackbird	
UNEMP	Unknown Empidonax Flycatcher	
UNOW	Unknown Owl	
UNPAS	Unknown Passerine	
VESP	Vesper Sparrow	<i>Pooecetes gramineus</i>
WAVI	Warbling Vireo	<i>Vireo gilvus</i>
WBNU	White-breasted Nuthatch	<i>Sitta carolinensis</i>
WCSP	White-crowned Sparrow	<i>Zonotrichia leucophrys</i>
WIFL	Willow Flycatcher	<i>Empidonax traillii</i>
WITU	Wild Turkey	<i>Meleagris gallopavo</i>
WIWR	Winter Wren	<i>Troglodytes troglodytes</i>
WODU	Wood Duck	<i>Aix sponsa</i>
WOTH	Wood Thrush	<i>Hylocichla mustelina</i>
YBCU	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>
YBSA	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>
YEWA	Yellow Warbler	<i>Dendroica petechia</i>
YRWA	Yellow-rumped Warbler	<i>Dendroica coronata</i>

Source: Earth Tech Ecologists 2004.

*Illinois Endangered Species, Illinois Endangered Species Protection Board, 2004.

Table C-2 Species Observed During Point Count Surveys						
Order	Common Name	Scientific Name	Abbreviation	Area Sensitive	Habitat Dependent	Neotropical Migrant
ANSERIFORMES	Blue-winged Teal	<i>Anas discors</i>	BWTE		W	Y
	Canadian Goose	<i>Branta canadensis</i>	CAGO		W	
	Mallard	<i>Anas platyrhynchos</i>	MALL		W	
	Wood Duck	<i>Aix sponsa</i>	WODU		W	
APODIFORMES	Chimney Swift	<i>Chaetura pelagica</i>	CHSW			Y
CHARADRIIFORMES	Killdeer	<i>Charadrius vociferus</i>	KILL			
	Ring-billed Gull	<i>Larus delawarensis</i>	RBGU		W	
CICONIIFORMES	Great Blue Heron	<i>Ardea herodias</i>	GBHE		W	
	Great Egret	<i>Ardea alba</i>	GREG		W	
	Turkey Vulture	<i>Cathartes aura</i>	TUVU			
COLUMBIFORMES	Mourning Dove	<i>Zenaida macroura</i>	MODO			
	Rock Dove	<i>Columba livia</i>	RODO			
CORACIIFORMES	Belted Kingfisher	<i>Ceryle alcyon</i>	BEKI		W	
CUCULIFORMES	Yellow-billed Cuckoo	<i>Coccyzus americanus</i>	YBCU	M	F	Y
FALCONIFORMES	Cooper's Hawk	<i>Accipiter cooperii</i>	COHA	L	F	
	Red-tailed Hawk	<i>Buteo jamaicensis</i>	RTHA			
GALLIFORMES	Northern Bobwhite	<i>Colinus virginianus</i>	NOBO			
	Ring-necked Pheasant	<i>Phasianus colchicus</i>	RNPH	L	G	
GRUIFORMES	American Coot	<i>Fulica americana</i>	AMCO		W	
	Sora	<i>Porzana carolina</i>	SORA		W	
PASSERIFORMES	Alder Flycatcher	<i>Empidonax alnorum</i>	ALFL			Y
	American Goldfinch	<i>Carduelis tristis</i>	AMGO			
	American Redstart	<i>Setophaga ruticilla</i>	AMRE	H	F	
	American Robin	<i>Turdus migratorius</i>	AMRO	L	F	
	American Tree Sparrow	<i>Spizella arborea</i>	ATSP			
	Baltimore Oriole	<i>Icterus galbula</i>	NOOR			Y
	Barn Swallow	<i>Hirundo rustica</i>	BASW			Y
	Bay-breasted Warbler	<i>Dendroica castanea</i>	BBWA			Y
	Black-capped Chickadee	<i>Peocile atricapillus</i>	BCCH	L	F	

Table C-2 Species Observed During Point Count Surveys						
Order	Common Name	Scientific Name	Abbreviation	Area Sensitive	Habitat Dependent	Neotropical Migrant
	Black-throated Blue Warbler	<i>Dendroica caerulescens</i>	BTBW			Y
	Blue Jay	<i>Cyanocitta cristata</i>	BLJA	L	F	
	Blue-gray Gnatcatcher	<i>Poliopitila caerulea</i>	BGGN	M	F	Y
	Blue-winged Warbler	<i>Vermivora pinus</i>	BWWA			Y
	Brown Creeper	<i>Certhia americana</i>	BRCR			
	Brown Thrasher	<i>Toxostoma rufum</i>	BRTH			
	Brown-headed Cowbird	<i>Molothrus ater</i>	BHCO			
	Carolina Chickadee	<i>Poecile carolinensis</i>	CACH	L	F	
	Carolina Wren	<i>Thryothorus ludovicianus</i>	CAWR			
	Cedar Waxwing	<i>Bombycilla cedrorum</i>	CEWX			
	Chestnut-sided Warbler	<i>Dendroica pensylvanica</i>	CSWA			Y
	Common Grackle	<i>Quiscalus quiscula</i>	COGR			
	Common Yellowthroat	<i>Geothlypis trichas</i>	COYE			Y
	Connecticut Warbler	<i>Oporornis agilis</i>	COWA			Y
	Dark-eyed Junco	<i>Junco hyemalis</i>	DEJU			
	Dickcissel	<i>Spiza americana</i>	DICK	L	G	Y
	Eastern Kingbird	<i>Tyrannus tyrannus</i>	EAKI			Y
	Eastern Meadowlark	<i>Sturnella magna</i>	EAME	M	G	
	Eastern Phoebe	<i>Sayornis phoebe</i>	EAPH			
	Eastern Wood-Pewee	<i>Contopus virens</i>	EWPE			Y
	European Starling	<i>Sturnus vulgaris</i>	EUST			
	Field Sparrow	<i>Spizella pusilla</i>	FISP	L	G	
	Golden-crowned Kinglet	<i>Regulus satrapa</i>	GCKI	M	F	
	Grasshopper Sparrow	<i>Ammodramus savannarum</i>	GRSP	M	G	Y
	Gray Catbird	<i>Dumetella carolinensis</i>	GRCA			Y
	Great Crested Flycatcher	<i>Myiarchus crinitus</i>	GCFL	L	F	Y
	House Wren	<i>Troglodytes aedon</i>	HOWR	L	F	
	Indigo Bunting	<i>Passerina cyanea</i>	INBU			Y
	Least Flycatcher	<i>Empidonax minimus</i>	LEFL	H	F	Y

Table C-2 Species Observed During Point Count Surveys						
Order	Common Name	Scientific Name	Abbreviation	Area Sensitive	Habitat Dependent	Neotropical Migrant
	Magnolia Warbler	<i>Dendroica magnolia</i>	MAWA			Y
	Nashville Warbler	<i>Vermivora ruficapilla</i>	NAWA			Y
	Northern Cardinal	<i>Cardinalis cardinalis</i>	NOCA			
	Red-eyed Vireo	<i>Vireo olivaceus</i>	REVI	M	F	Y
	Red-winged Blackbird	<i>Agelaius phoeniceus</i>	RWBL			
	Rose-breasted Grosbeak	<i>Pheucticus ludovicianus</i>	RBGR	L	F	Y
	Scarlet Tanager	<i>Piranga olivacea</i>	SCTA	M	F	Y
	Sedge Wren	<i>Cistothorus platensis</i>	SEWR	M	G	
	Song Sparrow	<i>Melospiza melodia</i>	SOSP	L	G	
	Swainson's Thrush	<i>Catharus ustulatus</i>	SWTH			Y
	Swamp Sparrow	<i>Melospiza georgiana</i>	SWSP		W	
	Tennessee Warbler	<i>Vermivora peregrina</i>	TEWA			Y
	Tree Swallow	<i>Tachycineta bicolor</i>	TRSW			Y
	Tufted Titmouse	<i>Baeolophus bicolor</i>	TUTI			
	Vesper Sparrow	<i>Poocetes gramineus</i>	VESP	L	G	
	Warbling Vireo	<i>Vireo gilvus</i>	WAVI	L	F	Y
	White-breasted Nuthatch	<i>Sitta carolinensis</i>	WBNU	M	F	
	Willow Flycatcher	<i>Empidonax traillii</i>	WIFL		W	Y
	Winter Wren	<i>Troglodytes troglodytes</i>	WIWR			
	Wood Thrush	<i>Hylocichla mustelina</i>	WOTH	M	F	Y
	Yellow Warbler	<i>Dendroica petechia</i>	YEWA			Y
PICIFORMES	Downy Woodpecker	<i>Picoides pubescens</i>	DOWO	L	F	
	Hairy Woodpecker	<i>Picoides villosus</i>	HAWO	M	F	
	Northern Flicker	<i>Colaptes auratus</i>	NOFL			
	Pileated Woodpecker	<i>Dryocopus pileatus</i>	PIWO	H	F	
	Red-bellied Woodpecker	<i>Melanerpes carolinus</i>	RBWO	L	F	
	Red-headed Woodpecker	<i>Melanerpes erythrocephalus</i>	RHWO	L	F	
	Yellow-bellied Sapsucker	<i>Sphyrapicus varius</i>	YBSA	M	F	

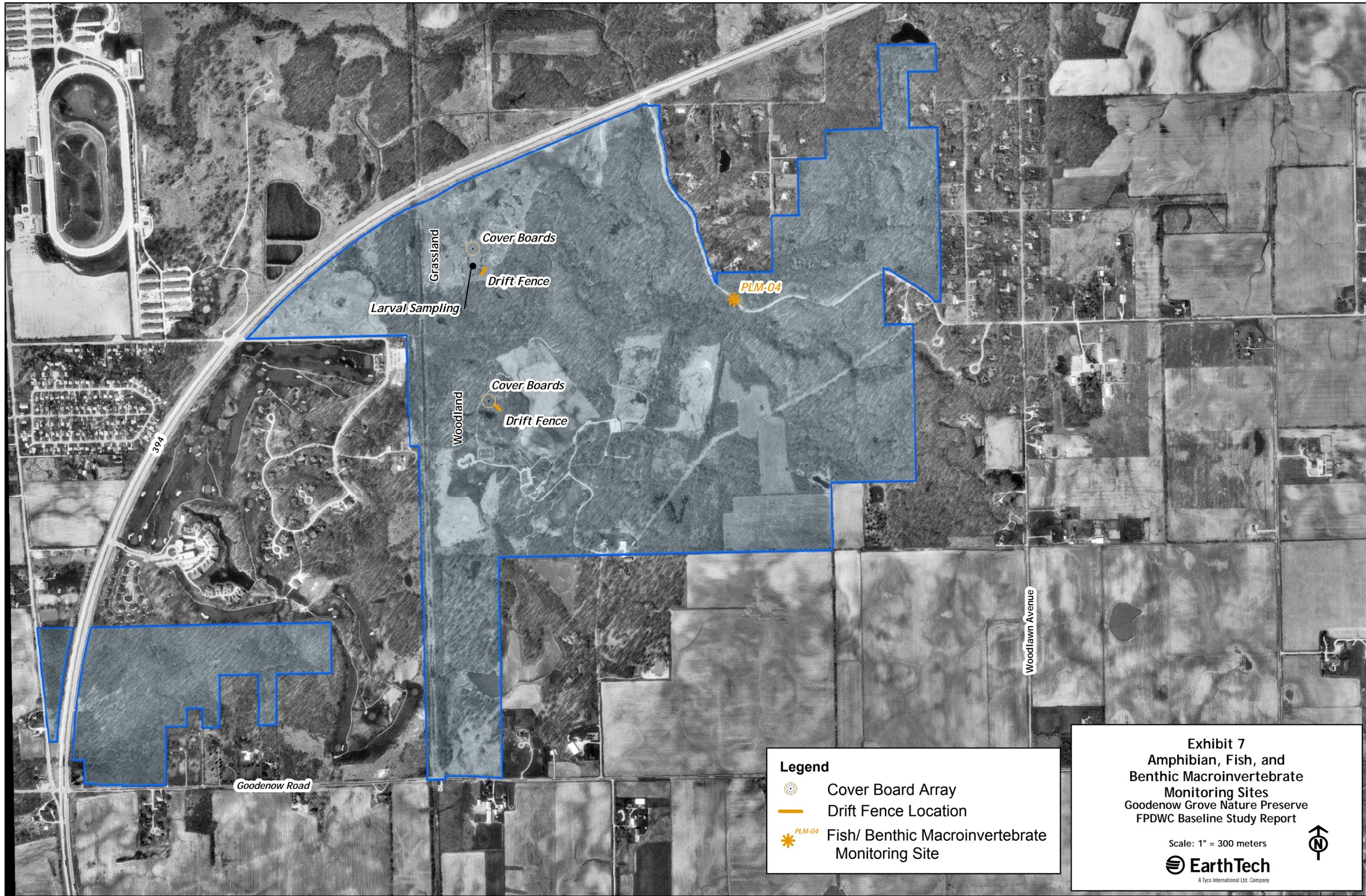
Notes: For Area Sensitive Species: H=High, M=Moderate, L=Low
 For Habitat Dependent Species: F=Forest, G=Grassland, W=Wetland

Table C-3 Total Species Summary											
Category	Habitat/Location	Total Species	Area Sensitive				Habitat Dependent			Neotropical Migrants	
			Total	High	Moderate	Low	Total	Forest	Grassland		Wetland
Habitat	Forest	59	24	2	9	13	29	23	1	5	20
	Grassland	44	17	1	5	11	25	10	7	8	14
	Wetland	61	17	1	4	12	27	10	4	13	19
Habitat by Preserve	Goodenow-Forest	44	19	0	8	11	22	18	1	3	17
	Goodenow-Grassland	26	10	0	4	6	13	5	5	3	10
	Goodenow-Wetland	30	10	0	3	7	14	7	3	4	10
	Raccoon-Forest	41	19	2	7	10	23	19	0	4	10
	Raccoon-Grassland	15	7	1	1	5	8	2	5	1	5
	Raccoon-Wetland	23	8	0	3	5	12	8	0	4	5
	Monee-Grassland	24	7	0	0	7	12	4	3	5	5
	Monee-Wetland	42	10	1	0	9	18	8	2	8	14
Preserve	Goodenow	60	24	0	11	13	30	19	5	6	22
	Raccoon	55	24	3	8	13	30	22	2	6	15
	Monee	48	14	1	1	12	23	8	6	9	15
TOTAL		86	33	3	12	18	45	25	8	12	33

Table C-4						
Density per Plot and Preserve						
Preserve	Plot	# Individuals	Density/m²	# Species	Density/m²	
GG	GA1	27	0.0034	12	0.0015	
	GA2	41	0.0052	16	0.0020	
	GA3	26	0.0033	9	0.0011	
	GB1	33	0.0042	16	0.0020	
	GB2	30	0.0038	16	0.0020	
	GB3	31	0.0039	12	0.0015	
	GW1	56	0.0071	20	0.0025	
	GC1	19	0.0024	11	0.0014	
	GC2	20	0.0025	12	0.0015	
	GC3	19	0.0024	11	0.0014	
	GC4	29	0.0037	18	0.0023	
	GC5	25	0.0032	14	0.0018	
	GC6	20	0.0025	13	0.0017	
	GD1	25	0.0032	13	0.0017	
	GD2	29	0.0037	23	0.0029	
	GD3	27	0.0034	20	0.0025	
	GD4	15	0.0019	11	0.0014	
	Average		28	0.0035	15	0.0018
	RG	RA1	28	0.0036	10	0.0013
		RA2	27	0.0034	12	0.0015
RA3		33	0.0042	13	0.0017	
RA4		34	0.0043	12	0.0015	
RA5		17	0.0022	12	0.0015	
RA6		21	0.0027	15	0.0019	
RA7		26	0.0033	15	0.0019	
RB1		25	0.0032	13	0.0017	
RB2		33	0.0042	15	0.0019	
RB3		20	0.0025	10	0.0013	
RB4		20	0.0025	10	0.0013	
RG1		24	0.0031	15	0.0019	
RW1		63	0.0080	23	0.0029	
Average		29	0.0036	13	0.0017	
MR		MA1	29	0.0037	12	0.0015
		MA2	27	0.0034	14	0.0018
	MB1	73	0.0093	25	0.0032	
	MB2	32	0.0041	15	0.0019	
	MB3	68	0.0087	16	0.0020	
	MC1	25	0.0032	11	0.0014	
Average		42	0.0054	16	0.0020	

Table C-5							
Density per Habitat-Within-a-Preserve and Habitat							
Preserve	Habitat	Plot	# Individuals	Density/m2	# Species	Density/m2	
GG	Forest	GC1	19	0.0024	11	0.0014	
	Forest	GC2	20	0.0025	12	0.0015	
	Forest	GC3	19	0.0024	11	0.0014	
	Forest	GC4	29	0.0037	18	0.0023	
	Forest	GC5	25	0.0032	14	0.0018	
	Forest	GC6	20	0.0025	13	0.0017	
	Forest	GD1	25	0.0032	13	0.0017	
	Forest	GD2	29	0.0037	23	0.0029	
	Forest	GD3	27	0.0034	20	0.0025	
	Forest	GD4	15	0.0019	11	0.0014	
	Average-Goodenow-Forest			23	0.0029	15	0.0019
	RG	Forest	RA1	28	0.0036	10	0.0013
Forest		RA2	27	0.0034	12	0.0015	
Forest		RA3	33	0.0042	13	0.0017	
Forest		RA4	34	0.0043	12	0.0015	
Forest		RA5	17	0.0022	12	0.0015	
Forest		RA6	21	0.0027	15	0.0019	
Forest		RA7	26	0.0033	15	0.0019	
Forest		RB1	25	0.0032	13	0.0017	
Forest		RB2	33	0.0042	15	0.0019	
Forest		RB3	20	0.0025	10	0.0013	
Forest		RB4	20	0.0025	10	0.0013	
Average-Raccoon-Forest			26	0.0033	12	0.0016	
Average-Forest			24	0.0031	14	0.0017	
GG	Grassland	GA1	27	0.0034	12	0.0015	
	Grassland	GA3	26	0.0033	9	0.0011	
	Grassland	GB1	33	0.0042	16	0.0020	
	Grassland	GB2	30	0.0038	16	0.0020	
Average-Goodenow-Grassland			29	0.0037	13	0.0017	
RG	Grassland	RG1	24	0.0031	15	0.0019	
	Raccoon-Grassland			24	0.0031	15	0.0019
MR	Grassland	MA1	29	0.0037	12	0.0015	
	Grassland	MB2	32	0.0041	15	0.0019	
	Grassland	MC1	25	0.0032	11	0.0014	
Average-Monee-Grassland			29	0.0036	13	0.0016	
Average-Grassland			27	0.0035	14	0.0017	
GG	Wetland	GA2	41	0.0052	16	0.0020	
	Wetland	GB3	31	0.0039	12	0.0015	
	Wetland	GW1	56	0.0071	20	0.0025	
Average-Goodenow-Wetland			43	0.0054	16	0.0020	
RG	Wetland	RW1	63	0.0080	23	0.0029	
	Raccoon-Wetland			63	0.0080	23	0.0029
MR	Wetland	MA2	27	0.0034	14	0.0018	
	Wetland	MB1	73	0.0093	25	0.0032	
	Wetland	MB3	68	0.0087	16	0.0020	
Average-Monee-Wetland			56	0.0071	18	0.0023	
Average-Wetland			54	0.0069	19	0.0024	

Appendix B: Amphibian and Reptile Monitoring Results



Legend

-  Cover Board Array
-  Drift Fence Location
-  ^{PLM-04} Fish/ Benthic Macroinvertebrate Monitoring Site

Exhibit 7
Amphibian, Fish, and
Benthic Macroinvertebrate
Monitoring Sites
Goodenow Grove Nature Preserve
FPDWC Baseline Study Report

Scale: 1" = 300 meters

 **EarthTech**
A Tyco International Ltd. Company





Legend

-  Cover Board Array
-  Drift Fence Location
-  *RCK-02* Fish/ Benthic Macroinvertebrate Monitoring Site

Exhibit 8
Amphibian, Fish, and
Benthic Macroinvertebrate
Monitoring Sites

Raccoon Grove Nature Preserve

Scale: 1" = 150 meters

 **EarthTech**
A Tyco International Ltd. Company





157

Pauling Road

Ridge land Avenue

Amtrak

Route 50



Cover Boards



Larval Sampling



Drift Fence

Legend



Cover Board Array



Drift Fence Location

**Exhibit 9
Amphibian Monitoring Sites**

Monee Reservoir

Scale: 1" = 100 meters



Table B-1 Amphibian and Reptile Monitoring Results Goodenow Grove Woodland							
Species	Drift fence #	#/Trap Night	Cover boards	Frog call surveys	Larval surveys	Egg mass surveys	Total
Blue-spotted Salamander	3	0.034	5			Y	9
Spotted Salamander						Y	1
Tiger Salamander					Y		1
American Toad							
Spring Peeper	52	0.602	1	Y			53
Western Chorus Frog	3	0.034		Y		Y	4
Plains Leopard Frog							
Bullfrog			1				1
Green Frog							
Northern Leopard Frog				Y	Y	Y	2
Smooth Green Snake							
Fox Snake							
Kirtland's Snake							
Northern Water Snake							
Brown Snake	3	0.034					3
Plains Garter Snake							
Common Garter Snake	11	0.125					11
Massasauga							
No. of species	5		3	3	2	4	9
Total Individuals	72		7				85

Source: Earth Tech Ecologists 2004.

Table B-2 Amphibian and Reptile Monitoring Results Goodenow Grove Grassland							
Species	Drift fence #	#/Trap Night	Cover boards	Frog call surveys	Larval surveys	Egg mass surveys	Total
Blue-spotted Salamander							
Spotted Salamander							
Tiger Salamander							
American Toad							
Spring Peeper	1	0.011		Y			2
Western Chorus Frog	11	0.125		Y	Y	Y	14
Plains Leopard Frog							
Bullfrog							
Green Frog							
Northern Leopard Frog							
Smooth Green Snake	1	0.011	4				5
Fox Snake							
Kirtland's Snake	1	0.011					1
Northern Water Snake							
Brown Snake	1	0.011					1
Plains Garter Snake							
Common Garter Snake			2				2
Massasauga							
No. of species	5		2	2	1	1	6
Total Individuals	15		6				25

Source: Earth Tech Ecologists 2004.

Table B-3 Amphibian and Reptile Monitoring Results Raccoon Grove							
Species	Drift fence #	#/Trap Night	Cover boards	Frog call surveys	Larval surveys	Egg mass surveys	Total
Blue-spotted Salamander							
Spotted Salamander							
Tiger Salamander					Y		1
American Toad							
Spring Peeper							
Western Chorus Frog	38	0.432		Y		Y	40
Plains Leopard Frog							
Bullfrog							
Green Frog							
Northern Leopard Frog	1	0.011		Y	Y	Y	4
Smooth Green Snake							
Fox Snake							
Kirtland's Snake							
Northern Water Snake							
Brown Snake	4	0.045					4
Plains Garter Snake	1	0.011					1
Common Garter Snake	2	0.023					2
Massasauga							
No. of species	5		0	2	2	2	6
Total Individuals	46		0				52

Source: Earth Tech Ecologists 2004.

Table B-4 Amphibian and Reptile Monitoring Results Monee Reservoir							
Species	Drift fence #	#/Trap Night	Cover boards	Frog call surveys	Larval surveys	Egg mass surveys	Total
Blue-spotted Salamander							
Spotted Salamander							
Tiger Salamander							
American Toad				Y	Y		2
Spring Peeper							
Western Chorus Frog	1	0.011		Y			2
Plains Leopard Frog							
Bullfrog					Y		1
Green Frog							
Northern Leopard Frog							
Smooth Green Snake							
Fox Snake							
Kirtland's Snake							
Northern Water Snake							
Brown Snake	1	0.011	12				13
Plains Garter Snake	2	0.023	3				5
Common Garter Snake	5	0.057					5
Massasauga							
No. of species	4	4	2	2	2	0	6
Total Individuals	9	9	15	2	2		28

Source: Earth Tech Ecologists 2004.

Appendix A: User Study Results

**Exhibit 2
Survey Instrument**

FREQUENCY OF RESPONSES:

**FPDWC User Surveys from Goodenow Grove, Raccoon Grove,
and Monee Reservoir**

Final Results (June, 2004 through May, 2005)

Sample Sizes:

	Unweighted	Weighted *
Overall	2,014	2,038
Goodenow Grove	620	517
Raccoon Grove	112	84
Monee Reservoir	1,282	1,443

* Data were weighted to correct for interviewing adjustments on days when every nth visitor was interviewed (instead of every visitor).

NOTE: The overall response rate was 87%, meaning 13% or an additional 296 visitors were asked to complete the survey but refused. Response rates did not vary significantly by site (85% at Goodenow Grove Nature Preserve, 89% at Raccoon Grove Nature Preserve, and 88% at Monee Reservoir).

Frequency of Responses

Hello. My name is _____ and I'm conducting a brief interview on behalf of the Forest Preserve District about your visit here today. It only takes about 2 or 3 minutes, and your answers are completely anonymous.

1. First, about how long did you visit (name of site) today?

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=2,038)	(n=619)	(n=110)	(n=1,301)
Average (mean) amount of time	2 hr. 27 min.	1 hr. 26 min.	0 hr. 33 min.	2 hr. 27 min.

2. And how did you arrive at the preserve today? (Including refusals)

	ALL (n=2,281)	Goodenow Grove (n=717)	Raccoon Grove (n=125)	Monee Reservoir (n=1,438)
Drove/car/motorcycle	99%	99%	95%	99%
Walked/jogged	.05%	1%	4%	0%
Bicycle	.05%	0%	1%	1%
Other	0%	0%	0%	0%

3. And what did you do today at this preserve – which activities? (Multiple Responses)

	ALL (n=2,031)	Goodenow Grove (n=616)	Raccoon Grove (n=110)	Monee Reservoir (n=1,297)
Walk/hike/jog/use trails	28%	50%	56%	19%
Bicycling	1%	1%	1%	1%
Picnic	12%	15%	1%	12%
Relax/reading	11%	11%	13%	10%
Bird watching	2%	3%	1%	1%
Nature/wildlife watching	5%	8%	5%	4%
Photography	1%	1%	5%	1%
Boating	7%	< 1%	0%	9%
Fishing	40%	1%	0%	56%
Horseback riding	< 1%	0%	0%	<1%
Sledding	5%	13%	0%	2%
Cross country ski/snowshoe	1%	2%	0%	1%
Walk pets	9%	21%	9%	4%
Playground	< 1%	1%	0%	0%
Sports activities (baseball, soccer, football, etc.)	3%	7%	1%	1%
Visit nature center, general	3%	11%	0%	<1%
Attend FPD ¹ program/event	7%	1%	0%	10%
Camping	< 1%	< 1%	0%	0%
Other	8%	10%	30%	6%

¹Forest Preserve District

4. Thinking about your overall experience at the preserve today, how would you rate it on a zero through ten scale? Zero means you are completely dissatisfied, ten means you are completely satisfied, and five is a neutral score.

	ALL (n=2,039)	Goodenow Grove (n=623)	Raccoon Grove (n=110)	Monee Reservoir (n=1,300)
Mean rating	8.7	9.5	8.2	8.4
% Dissatisfied (0-4 Ratings)	5%	0%	5%	7%
% Very Satisfied (9-10 Ratings)	66%	86%	50%	59%

- 5A. (IF 0-4): Why are you dissatisfied/did you have a negative experience today? (PROBE)
 5B. (IF 5-8): Why are you not more satisfied? How could it have been better?

Most Frequent Multiple Responses (n=668 cases): Too few fish/Understocked (24%); Poor fishing in general (18%); Fish are too small/undersized (6%); Poor weather (4%); Too many ducks/geese (3%); Facility is too small (3%)

6. What, in your opinion, is the source of (that issue/those issues)? (PROBE FOR SPECIFICS)

Most frequent responses (n=318): Nature/Natural causes/Not man-made or development-related causes (63%); Not sure (17%); Reservoir is over-fished/Need to restock (14%); Chemicals/Weed killer in reservoir (5%); Pollution/Litter (1%)

7. And on a zero through ten scale, how satisfied were you with each of the following during your visit today. Zero means you are completely dissatisfied, ten is completely satisfied, and five is neutral. How would you rate:

	ALL (n=2,039)			Goodenow Grove (n=623)			Raccoon Grove (n=110)			Monee Reservoir (n=1,301)		
	Avg. (Mean) Rating	% Dissat. (0-4)	% Very Satisf. (9-10)	Avg. (Mean) Rating	% Dissat. (0-4)	% Very Satisf. (9-10)	Avg. (Mean) Rating	% Dissat. (0-4)	% Very Satisf. (9-10)	Avg. (Mean) Rating	% Dissat. (0-4)	% Very Satisf. (9-10)
The level of noise at the preserve during your visit	9.2	2%	82%	9.6	0%	89%	8.6	4%	60%	9.2	3%	81%
Your ability to arrive at the preserve easily without any delays or traffic congestion	9.7	1%	94%	9.7	1%	93%	9.8	0%	97%	9.7	1%	94%
Overall air quality within the preserve	9.8	0%	95%	9.9	0%	98%	9.7	0%	93%	9.8	0%	94%
Overall water quality and cleanliness of lakes, ponds, & streams	8.6	4%	65%	9.4 (n=313)	1%	84%	7.9 (n=19)	0%	43%	8.5 (n=1101)	5%	61%
Overall cleanliness of the preserve property and facility	9.6	1%	9%	9.8	0%	96%	9.7	0%	93%	9.5	1%	89%

8. Did you observe any wildlife at the preserve today?

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=2,041)	(n=624)	(n=110)	(n=1,301)
Yes	67%	54%	38%	73%
No	33%	46%	62%	27%

8B. (IF YES): In general, do you believe that wildlife populations at this preserve are:

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=1,421)	(n=372)	(n=42)	(n=976)
Increasing	24%	24%	21%	25%
Decreasing	6%	4%	8%	7%
Or staying about the same?	35%	37%	32%	34%
(not sure/no opinion/not familiar)	35%	35%	39%	34%

8C. (IF DECREASING): Why do you think they are decreasing? (PROBE FOR SOURCES OF PROBLEMS)

Natural causes/cycles (41%); Too much development/Residential growth (25%); No idea/not sure (18%); Habitat destruction/Tree removal (5%); Too much auto traffic (3%)

9. Based on the number of people here today, did this facility seem to be particularly:

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=2,029)	(n=617)	(n=108)	(n=1,297)
Over-used	5%	2%	1%	6%
Under-used	24%	41%	42%	17%
Or did the level of usage seem appropriate	71%	57%	57%	77%

9B. (IF OVER- OR UNDER-USED): Is that a concern for you?

THOSE SAYING "OVER-USED"	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=96)	(n=12)	(n=1)	(n=77)
Yes	53%	n=5	n=1	55%
No	47%	n=7	n=0	45%

THOSE SAYING "UNDER-USED"	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=452)	(n=232)	(n=46)	(n=203)
Yes	16%	19%	17%	14%
No	84%	81%	83%	86%

9C. (IF YES): Why do you think it is (over-/under-used)?

"Overused" (n=45): Natural causes (53%); Over-fished/Limits not enforced (27%); Too many people, general (7%)

"Underused" (n=71): Not sure/No reason (91%); Chemicals in water/Weed killer (4%); Over-fished/Limits not enforced (3%)

10. When was the last time you visited this preserve?

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=2,003)	(n=613)	(n=109)	(n=1,275)
Yesterday/Previous Day	7%	11%	7%	6%
Within past week (2-7 days ago)	17%	12%	11%	9%
Within past month (2-4 weeks ago)	34%	33%	29%	35%
Within past year (2-12 months ago)	17%	20%	5%	16%
More than one year ago	18%	17%	23%	18%
Never before/First visit	14%	8%	5%	15%

10B. (IF WITHIN PREVIOUS YEAR): In the past twelve months, how many times have you visited this preserve?

	ALL	Goodenow Grove	Raccoon Grove	Monee Reservoir
	(n=1,360)	(n=461)	(n=56)	(n=845)
Mean number of visits (average)	32	50	55	24
Median (midpoint)	8	12	24	6

11. And during the next twelve months – do you think you will visit this preserve:

	ALL (n=2,038)	Goodenow Grove (n=622)	Raccoon Grove (n=110)	Monee Reservoir (n=1,300)
More often	49%	45%	39%	51%
Less often	4%	2%	4%	4%
Or about as often has you have in the past twelve months?	43%	49%	54%	41%
(not sure/no idea)	4%	4%	3%	4%

12. In the past __ month(s), have you completed a survey like this at:

	ALL (n=2,035)	Goodenow Grove (n=621)	Raccoon Grove (n=110)	Monee Reservoir (n=1,277)
% Yes – at Goodenow Grove	6%	18%	3%	2%
% Yes – at Raccoon Grove	1%	1%	10%	1%
% Yes – at Monee Reservoir	7%	2%	7%	8%

13. In what year were you born? (AGE CATEGORIES COMPUTED)

	ALL (n=2,020)	Goodenow Grove (n=617)	Raccoon Grove (n=110)	Monee Reservoir (n=1,287)
18-29 years old	10%	10%	15%	9%
30-39 years old	18%	19%	19%	17%
40-49 years old	29%	34%	26%	28%
50-59 years old	20%	19%	18%	21%
60-69 years old	6%	13%	16%	17%
70+ years old	7%	4%	6%	8%
Avg. (mean) age	48	46.5	46	49

14. And what is your zip code? (MOST FREQUENT RESPONSES – 3% OR MORE)

	ALL (n=2,044)	Goodenow Grove (n=624)	Raccoon Grove (n=110)	Monee Reservoir (n=1,304)
Immediate area	41%	57%	39%	36%
Other Will County	7%	3%	11%	9%
South Suburbs	34%	25%	22%	37%
Chicago	7%	2%	7%	8%
North Suburbs	1%	1%	2%	1%
Downstate Illinois	5%	3%	12%	5%
Indiana	2%	7%	4%	1%
Other	<1%	<1%	1%	0%
Refused	3%	1%	2%	4%

Thank you very much for your time, those are all the questions I have. Have a great (day/evening).

(NOTE GENDER): INCLUDING REFUSALS

	ALL (n=2,249)	Goodenow Grove (n=706)	Raccoon Grove (n=122)	Monee Reservoir (n=1,417)
Male	69%	60%	81%	72%
Female	31%	40%	19%	28%

(RECORD IF VISITOR WAS): INCLUDING REFUSALS

	ALL (n=2,239)	Goodenow Grove (n=713)	Raccoon Grove (n=124)	Monee Reservoir (n=1,403)
Alone	32%	37%	55%	29%
With other adults	54%	46%	42%	59%
With children	37%	36%	14%	34%

Table A-1
Dates of Data Collection at FPDWC Sites

2004 Dates of Data Collection (and groups/events)	
June 17	Thursday
June 26	Saturday (Reel Kids Can Fish and Boy Scout group at Monee Reservoir)
June 28	Monday
July 15	Thursday
July 18	Sunday
July 28	Wednesday
August 6	Friday
August 26	Thursday (Cross-country meet at Goodenow Grove)
August 29	Sunday
September 8	Wednesday (Cross-country meet and school group at Goodenow Grove)
September 19	Sunday (Fly Fishing event at Monee Reservoir)
September 23	Thursday (Cross-country meet at Goodenow Grove)
October 6	Wednesday (Cross-country meet and school group at Goodenow Grove)
October 14	Thursday
October 30	Saturday (Halloween event at Goodenow Grove)
November 6	Saturday
November 19	Friday
November 22	Monday
December 3	Friday
December 16	Thursday
December 19	Sunday

2005 Dates of Data Collection (and groups/events)	
January 8	Saturday (Musher event at Monee Reservoir)
January 25	Tuesday
January 27	Thursday
February 4	Friday
February 27	Sunday
February 28	Monday
March 7	Monday
March 15	Tuesday
March 19	Saturday
April 3	Sunday
April 12	Tuesday (School group at Goodenow Grove)
April 25	Monday
May 4	Wednesday (School group at Goodenow Grove)
May 20	Friday (School group at Goodenow Grove)
May 21	Saturday (Fishing derby at Monee Reservoir)

Table A-2 FPDWC User Demographics for Users at Goodenow Grove, Raccoon Grove and Monee Reservoir		
Region	% of cases	Communities (based on respondent's zip code)
Immediate Area (Closest to the three Preserves)	41	Beecher, Crete, Monee, Peotone, University Park/Park Forest
Other Will county (Outside Immediate Area)	7	Braidwood, Channahan, Frankfort, Joliet, Bolingbrook, Romeoville, Mokena, New Lenox, Wilmington, Plainfield, etc.
South Chicago Suburbs	34	All Chicago suburbs south of the Eisenhower Expressway, with most respondents coming from Chicago Heights, Matteson, Steger, Richton Park
City of Chicago	7	All Chicago zip codes
North Suburbs	1	All Chicago suburbs north of the Eisenhower Expressway
Other "Downstate" Illinois	5	Illinois Counties south and west of Will County
Indiana	2	Mostly northwest Indiana communities
Refused/Undetermined	3	

**Exhibit 3
User Satisfaction at FPDWC Sites
Overall and by Environmental Condition**

Q. Thinking about your overall experience at the preserve today, how would you rate it on a zero through ten scale where zero means you are completely dissatisfied, ten means you are completely satisfied, and five is a neutral score?

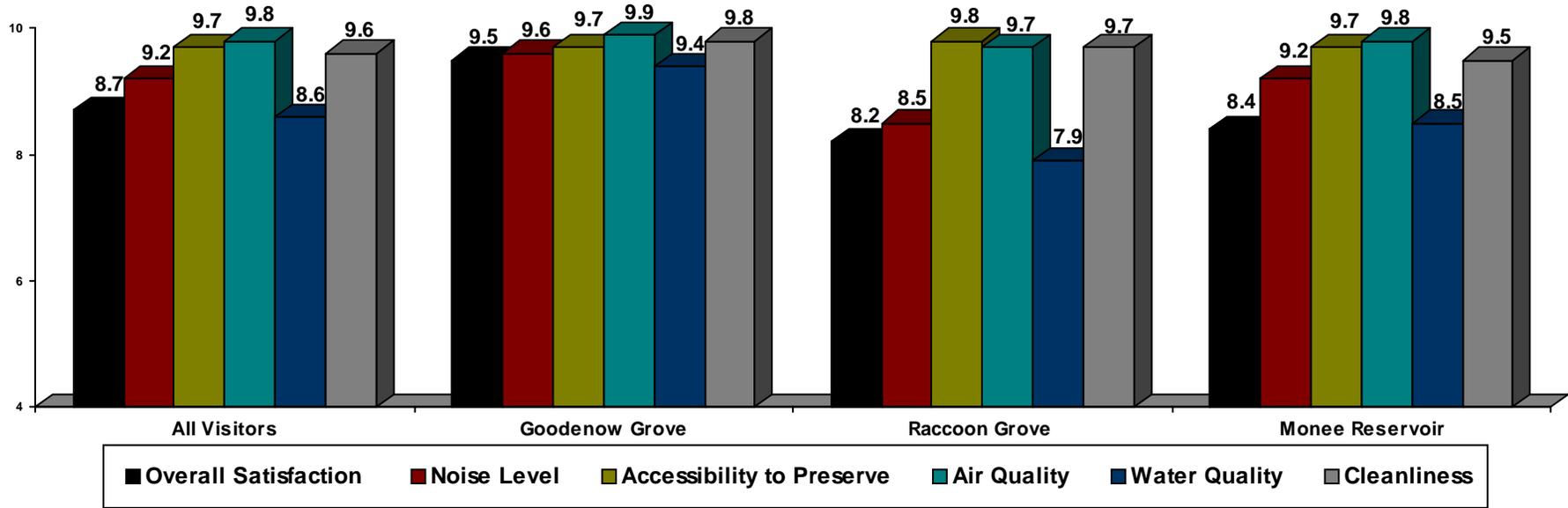


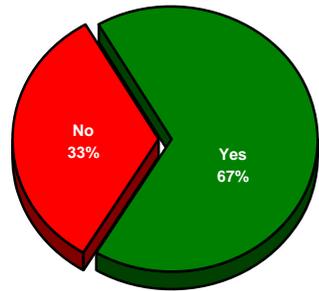
Table A-3 Sources of Lower Satisfaction Q. (If overall satisfaction is "8" or lower): Why are you dissatisfied/Why are you not more satisfied?				
Most Frequent Multiple Responses	All Sites (n=667)	Goodenow Grove (n=89)	Raccoon Grove (n=60)	Monee Reservoir (n=495)
Fishing – too few, under stocked reservoir	25%	1%	0%	31%
Fishing concerns, general	18%	1%	0%	22%
Fishing – too small in size	7%	1%	0%	9%
Too many weeds in water/reservoir	3%	0%	0%	4%
Boat rental policy/ fees/condition of boats	2%	0%	0%	2%
Weather (rain, heat, lack of snow, too windy)	7%	17%	7%	6%
Too many ducks/geese (noise, waste)	3%	0%	0%	4%
Too many bugs	2%	8%	9%	*
Facility is too small	3%	1%	31%	1%
Lack of playground, children recreation	2%	5%	0%	2%
Lack of improvements (restrooms, tables)	2%	1%	17%	1%
Poor upkeep (trail maintenance, mowing)	2%	7%	5%	1%
Too crowded, too many people	1%	5%	0%	1%
Hours of operation, closes too early	2%	3%	0%	2%
No trail maps, trail info	1%	7%	7%	*
Trails too muddy	1%	6%	8%	*

*Less than 1%

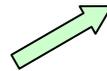
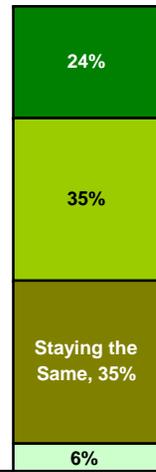
Exhibit 4 Visitor Responses Concerning Wildlife at FPDWC Sites

Q. (IF YES): In general, do you believe that wildlife populations at this preserve are increasing, decreasing or staying about the same?

Q. Did you observe any wildlife at the preserve today?



(n=2,041)

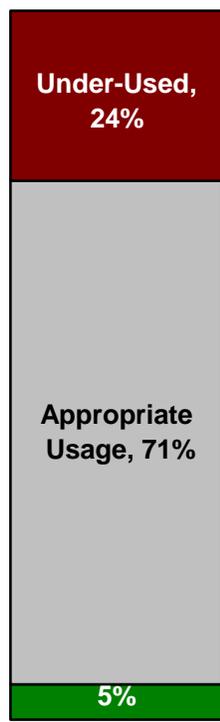


Q. Why do you think wildlife populations are decreasing? (n=93)

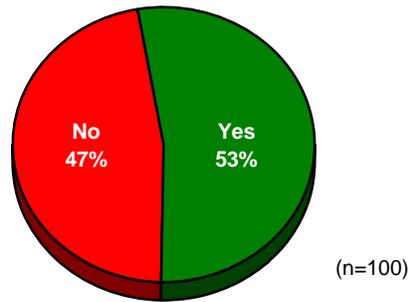
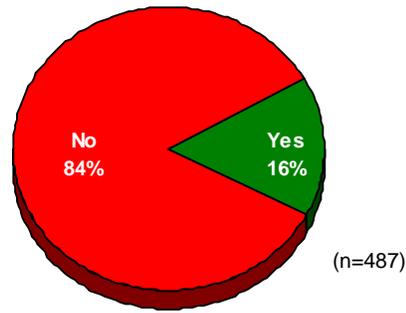
Natural causes/cycles	41%
Development, Population moving in	25%
No idea, Not sure	18%
Habitat destruction, tree removal, fewer wooded areas	5%
Over-fished reservoir, need to restock, enforce limits	3%
Too much traffic, cars scare away wildlife	3%
Other	5%

Exhibit 5 Visitor Responses Concerning Perceived Usage at FPDWC Sites

Q. Based on the number of people here today, did this facility seem to be particularly over-used, under-used, or did the level of usage seem appropriate?



Q. (IF OVER- OR UNDER-USED): Is that a concern for you?



**Exhibit 6
Most Frequent Activities Reported by Visitors Overall and at
Goodenow Grove, Raccoon Grove and Monee Reservoir**

Q. What did you do today at this preserve? What activities? (Most frequent multiple responses)

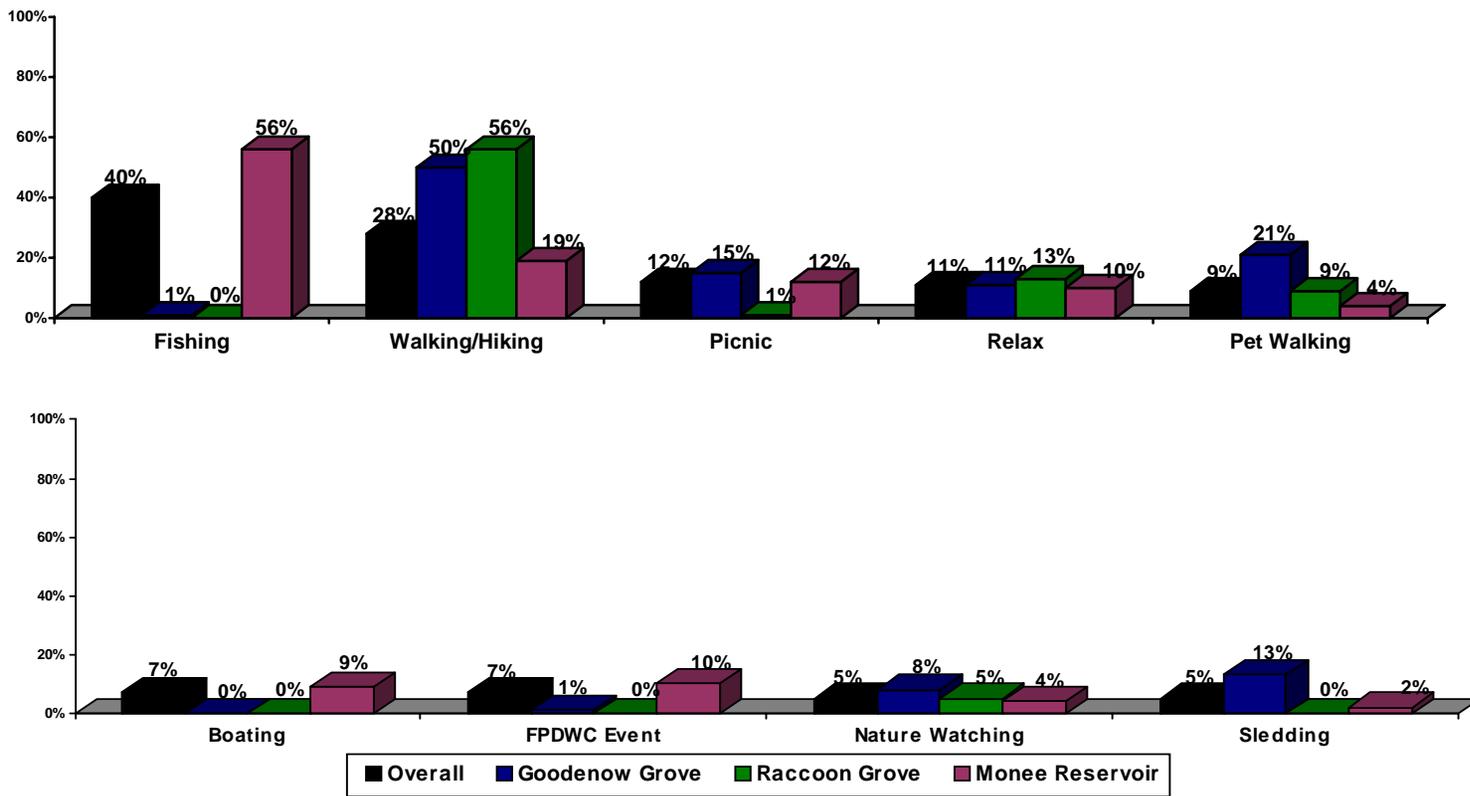


Table A-4 Goodenow Grove Visitor Profiles: Most Frequent Activities							
	All Visitors	Walk/Hike/Jog	Pet Walking	Sledding	Picnic	Relaxing/Reading	Nature Watching
Region	Local Area (57%) S. Suburbs (25%) Indiana (7%) Other Will Co. (3%) Downstate (3%)	Local Area (62%) S. Suburbs (25%) Indiana (6%) Other Will Co. (3%) Downstate (3%)	Local Area (74%) S. Suburbs (14%) Indiana (4%) Other Will Co. (3%) Downstate (3%)	S. Suburbs (36%) Local Area (35%) Indiana (21%) Other Will Co. (3%)	Local Area (43%) S. Suburbs (31%) Indiana (9%) N. Suburbs (6%) Other Will Co. (5%)	Local Area (48%) S. Suburbs (39%) Indiana (9%)	Local Area (54%) S. Suburbs (31%) Indiana (7%) Other Will Co. (5%) Downstate (4%)
Age	40-49 (34%) 50-59 (19%) 30-39 (19%) 60-69 (13%) 18-29 (10%)	40-49 (33%) 50-59 (18%) 30-39 (17%) 60-69 (16%)	40-49 (32%) 50-59 (31%) 30-39 (15%) 60-69 (11%)	40-49 (41%) 30-39 (33%) 18-29 (13%) 50-59 (11%)	40-49 (33%) 50-59 (19%) 60-69 (18%) 30-39 (18%)	40-49 (33%) 18-29 (22%) 60-69 (18%) 30-39 (17%)	40-49 (27%) 60-69 (23%) 18-29 (18%) 30-39 (15%)
Gender	Men (60%)	Men (57%)	Men (61%)	Men (68%)	Women (53%)	Men (63%)	Women (62%)

Meaningful differences by activity are in **bold and italics**, compared to all visitors at preserve.

Table A-5 Raccoon Grove Visitor Profiles: Most Frequent Activities		
	All Visitors	Walk/Hike/Jog
Region	Local Area (39%) S. Suburbs (22%) Downstate (12%) Other Will Co. (11%) Chicago (7%) Indiana (4%)	Local Area (42%) S. Suburbs (25%) Other Will Co. (11%) Chicago (8%) Downstate (7%)
Age	40-49 (26%) 60-69 (19%) 18-29 (18%) 50-59 (16%) 30-39 (15%)	40-49 (23%) 18-29 (20%) 60-69 (19%) 50-59 (16%) 30-39 (14%)
Gender	Men (81%)	Men (81%)

Meaningful differences by activity are in ***bold and italics***, compared to all visitors at preserve.

Table A-6 Monee Reservoir Visitor Profiles: Most Frequent Activities							
	All Visitors	Fishing	Walk/Hike/Jog	Relax/Read	Picnic	Boating	FPDWC Event
Region	S. Suburbs (37%) Local Area (36%) Other Will Co. (9%) Chicago (8%) Downstate (5%)	S. Suburbs (43%) Local Area (30%) Chicago (11%) Other Will Co. (7%) Downstate (5%)	Local Area (49%) S. Suburbs (30%) Other Will Co. (11%) Chicago (5%)	Local Area (45%) S. Suburbs (39%) Other Will Co. (8%) Chicago (7%)	Local Area (43%) S. Suburbs (34%) Chicago (10%) Downstate (7%) Other Will Co. (3%)	S. Suburbs (39%) Local Area (27%) Other Will Co. (13%) Chicago (11%) Downstate (8%)	Local Area (37%) S. Suburbs (31%) Other Will Co. (18%) Downstate (8%)
Age	40-49 (28%) 50-59 (21%) 60-69 (17%) 30-39 (17%) 18-29 (9%) 70+ (8%)	40-49 (26%) 50-59 (21%) 30-39 (19%) 60-69 (17%)	40-49 (27%) 50-59 (25%) 60-69 (21%) 30-39 (14%)	60-69 (24%) 70+ (21%) 40-49 (22%) 50-59 (19%)	40-49 (31%) 30-39 (18%) 60-69 (18%) 50-59 (17%)	40-49 (28%) 30-39 (24%) 50-59 (22%) 18-29 (14%)	40-49 (39%) 30-39 (15%) 50-59 (18%)
Gender	Men (72%)	Men (83%)	Men (64%)	Men (55%)	Women (52%)	Men (83%)	Women (56%)

Meaningful differences by activity are in **bold and italics**, compared to all visitors at preserve.

Table A-7 Visitor Arrival Data: Goodenow Grove								
Users	Visitors				“Turnaround” (Entered Facility, But Non-Visitor)			
	# Autos	# Motorcycles	# Bikes	# Pedestrians	# Autos	# Motorcycles	# Bikes	# Pedestrians
		1,018	24	11	4	184	18	1
# Adults	1,432	31	9	2	255	22	1	0
# Children	1,025	3	2	2	33	0	0	0
<i>Total Visitors</i>	<i>2,457</i>	<i>34</i>	<i>11</i>	<i>4</i>	<i>288</i>	<i>22</i>	<i>1</i>	<i>0</i>

Table A-8 Projected Visitors and Non-Visitors: Goodenow Grove						
Users	Projected Visitors (36 sampling days X 10 = 360 days of operation)			“Turnaround” (Entered Facility, But Non-Visitor)		
	Survey Visitors (36 Days)	X 10 (to equal approximately 360 days of operation)	Projected Total Visitors	“Turnaround” Non- Visitors (36 days)	X 10 (to equal approximately 360 days of operation)	Projected Total of Turnarounds (Non-Visitors)
Adults	1,474	10	14,740	278	10	2,780
Children	1,032	10	10,320	33	10	330
<i>Total Visitors</i>	<i>2,506</i>	<i>10</i>	<i>25,060</i>	<i>311</i>	<i>10</i>	<i>3,110</i>

Table A-9 Average Visitors Per Car: Goodenow Grove		
	Visitors Arriving By Car	“Turnaround” Non-Visitors: Cars Only
Avg. # of Adults Per Car	1.5	1.4
Avg. # of Children Per Car	1.0	0.2
<i>Total Avg. # Per Car</i>	<i>2.5</i>	<i>1.6</i>

Table A-10 Visitor Arrival Data: Raccoon Grove								
Users	Visitors				"Turnaround" (Entered Facility, But Non-Visitor)			
	# Autos	# Motorcycles	# Bikes	# Pedestrians	# Autos	# Motorcycles	# Bikes	# Pedestrians
	216	6	2	6	311	13	6	1
# Adults	289	10	1	6	407	16	6	1
# Children	49	0	1	0	22	1	0	0
<i>Total Visitors</i>	338	10	2	6	429	17	6	1

Table A-11 Projected Visitors and Non-Visitors: Raccoon Grove						
Users	Projected Visitors (36 sampling days X 10 = 360 days of operation)			"Turnaround" (Entered Facility, But Non-Visitor)		
	Survey Visitors (36 Days)	X 10 (to equal approximately 360 days of operation)	Projected Total Visitors	"Turnaround" Non- Visitors (36 days)	X 10 (to equal approximately 360 days of operation)	Projected Total of Turnarounds (Non-Visitors)
Adults	306	10	3,060	430	10	4,300
Children	50	10	500	23	10	230
<i>Total Visitors</i>	356	10	3,560	453	10	4,530

Table A-12 Average Visitors Per Car: Raccoon Grove		
	Visitors Arriving By Car	"Turnaround" Non-Visitors: Cars Only
Avg. # of Adults Per Car	1.4	1.3
Avg. # of Children Per Car	0.2	0.1
<i>Total Avg. # Per Car</i>	1.6	1.4

Table A-13 Visitor Arrival Data: Monee Reservoir								
Users	Visitors				“Turnaround” (Entered Facility, But Non-Visitor)			
	# Autos	# Motorcycles	# Bikes	# Pedestrians	# Autos	# Motorcycles	# Bikes	# Pedestrians
		2,331	42	73	5	389	11	21
# Adults	3,511	52	72	2	514	12	21	0
# Children	1,140	1	2	3	48	0	0	0
<i>Total Visitors</i>	<i>4,651</i>	<i>53</i>	<i>74</i>	<i>5</i>	<i>562</i>	<i>12</i>	<i>21</i>	<i>0</i>

Table A-14 Projected Visitors and Non-Visitors: Monee Reservoir						
Users	Projected Visitors (36 sampling days X 10 = 360 days of operation)			“Turnaround” (Entered Facility, But Non-Visitor)		
	Survey Visitors (36 Days)	X 10 (to equal approximately 360 days of operation)	Projected Total Visitors	“Turnaround” Non- Visitors (36 days)	X 10 (to equal approximately 360 days of operation)	Projected Total of Turnarounds (Non-Visitors)
	Adults	3,637	10	36,370	547	10
Children	1,146	10	11,460	48	10	480
<i>Total Visitors</i>	<i>4,783</i>	<i>10</i>	<i>47,830</i>	<i>595</i>	<i>10</i>	<i>5,950</i>

Table A-15 Average Visitors Per Car: Monee Reservoir		
	Visitors Arriving By Car	“Turnaround” Non-Visitors: Cars Only
Avg. # of Adults Per Car	1.5	1.3
Avg. # of Children Per Car	0.5	0.1
<i>Total Avg. # Per Car</i>	<i>2.0</i>	<i>1.4</i>

Appendix F: Fish Monitoring Results

Table F-1 Fish Sampling Results		
Species	PLM-04 Plum Creek in Goodenow Grove July 2004	RCK-02 Rock Creek in Raccoon Grove June 2004
Central stoneroller		1
Common shiner	3	
Redfin shiner	1	
Bluntnose minnow	4	
Creek chub	4	17
Pumpkinseed		1
Bluegill	1	17
Johnny darter	1	
No. of species	6	4
Total Individuals	13	34
Index of Biotic Integrity	34	36

Source: Earth Tech Ecologists 2004.

Appendix G: Benthic Macroinvertebrate Monitoring Results

Table G-1 2004 Benthic Macroinvertebrate Results Summary of Nature Preserve Sampling		
Taxa	Sample Station	
	PLM-04	RCK-02
	Plum Creek @ Bemes Road	Rock Creek in Raccoon Grove
Crustacea		
Isopoda – <i>Asellidae</i>	1	
Diptera (Flies/Midges)		
<i>Simulidae</i>		2
Ephemeroptera (Mayflies)		
<i>Ephemerella</i>	1	
Pelecypoda (Clams/Mussels)		
<i>Sphaerium</i>	1	
Trichoptera (Caddisflies)		
Hydropsychidae	1	2
Total Taxa	4	2
Total Individuals	4	4
Macroinvertebrate Biotic Index	0.73	1.89

Source: Earth Tech Ecologists 2004.