CHICAGO BOTANIC GARDEN

November 27, 2012

Mr. John Wilker
Illinois Department of Natural Resources
One Natural Resources Way
Springfield, IL 62702-1271

RE: Grant #12-L01W

Dear Mr. Wilker:

Thank you for the continued support of the Illinois Department of Natural Resources, Wildlife Preservation Fund. Enclosed is the Chicago Botanic Garden's 2012 *Plants of Concern: Standardized Rare Plant Monitoring Using Trained Volunteers* report.

Plants of Concern continues to grow each year in the number of volunteers and partner agencies engaged, and through the critical and viable rare plant data that informs land managers in the region. With your help, we are offering an important resource for the development of monitoring and conservation protocols and developing the capacity of citizen scientists to be effective environmental stewards.

If you have questions about the program or this report, please contact me at (847) 835-8226. We welcome your comments.

Sincerely,

Gregory M. Mueller, Ph.D.
Vice President, Science and Academic Programs

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*One of the green treasures of the Forest Preserve District of Cook County*

# Plants of Concern: Standardized Rare Plant Monitoring Using Trained Volunteers

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## Final Report to

**Illinois Department of Natural Resources, Illinois Wildlife Preservation Fund**

## Grant #12-L01W

**Chicago Botanic Garden**

**December, 2012**

***Covering the grant period from July 1, 2011 to December 1, 2012***

***with comparative discussion from 2001-2010***


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## PLANTS OF CONCERN: CONCEPT AND OBJECTIVES

***This document is a report covering the period July 1, 2011 through December 1, 2012 with detailed analysis of the 2011 season in relation to previous seasons, as well as a preliminary account of the 2012 season. Final 2012 numbers are not yet available.***

Plants of Concern (POC) was launched in 2001. This long-term rare plant monitoring initiative is unique to the region in its use of standardized monitoring protocols used by trained citizen scientists. The program has now completed ten years of monitoring and has accumulated a substantial base for analyzing long-term data on a significant number of species and Element Occurrences (EOs).

Species monitored by POC were initially selected largely from the 1999 *Chicago Wilderness Biodiversity Recovery Plan's* species priority list, because they are state endangered or threatened and are considered by regional land managers and ecologists to be rare and significant within the Chicago Wilderness region (CW). In subsequent years, POC staff and landowners have decided, on a case-by-case basis, that any listed plant was eligible to be included in the program. The non-listed species monitored by POC are "species of concern" that represent individual landowners' choices of rare, high quality species that they wish to track at the county level. Through 2011, POC monitored 120 listed species and 117 rare species.

The primary geographic area covered by POC from 2001-2006 included the six counties of northeast Illinois, with one site in Kankakee County. In 2009, four sites from Kendall County, Illinois were added. Because of POC's Chicago Wilderness affiliation, since 2007, 15 sites have been added in northwest Indiana and six sites in southeast Wisconsin (see GIS Map, Attachment 1). This report will focus on Illinois counties and species.

POC incorporates the following interrelated elements, all equally important to its success and recognition as a unique and valuable long-term monitoring program:

- Monitoring rare plants, particularly state-listed species, over time using a standardized census protocol to gain uniform data (plant numbers, population area, GPS coordinates, invasive and other threats, and management activities) on populations on a regional basis (Level 1 Monitoring Form, Attachment 2). Select species are targeted for more intensive demographic monitoring (Level 2) that supports projects coordinated by CBG researchers assisted by volunteers.
- Monitoring rare species in relation to management activities as reported by both monitors and land managers to form a feedback loop for short- and long-term adaptive management responses (Attachment 3).
- Analyzing the POC long-term dataset for an increased understanding of population trends in relation to management activities and to invasive species and other threats.
- Training volunteers as citizen scientists to leverage agency resources for monitoring rare species and to create an informed conservation constituency.
- Working in partnership with public and private landowners, land managers, and agencies, through an Advisory Group (Attachment 4*),* to generate a shared approach to regional monitoring.

In 2012, two staff members, a manager and a research assistant, managed the overall POC program. Two other research assistants worked at Midewin National Tallgrass Prairie on a POC-based monitoring program and with the Cook County Forest Preserve District monitoring effort, respectively. Finally, a part-time intern was assigned to the Openlands Lakeshore Preserve monitoring program. Reports on the listed species monitored through all these programs are included in the reports to the Illinois Natural Heritage Database.

## SUMMARY: CUMULATIVE MONITORING RESULTS 2001 – 2011

In 2011, POC's eleventh year, the program exhibited growth in nearly all measures of accomplishment and participation. The number of monitored subpopulations remained steady from 2010, although the number of monitored EORs was greater. Retention of EOs was steady, with 51% of EOs monitored in previous years also monitored in 2011. In 2011, 122 new EOs were monitored, nearly twice as many as were newly monitored in 2010. The Illinois Natural Heritage Database tracks listed species across the state, and POC monitors 66% of the 923 EOs and 80% of the 169 listed species in seven northeast Illinois counties that this agency records (July 2011). It is important to note, however, that the percentage given for EOs monitored is slightly inflated because a single EO in the state database may include several sites, whereas POC EOs are site specific.

The following graph and table are discussed in detail in the remainder of the report and in Attachments 5-7. *(Note: Statistics in the following figures, tables and attachments were derived from the POC database for analysis on several different dates starting 9/17/2012 and may reflect minor discrepancies in numbers. Graphs from previous years may not correspond precisely due to late report submissions, merging of subpopulations and other factors).*

*Figure 1. POC accomplishments and participation for all years, 2001-2011. Includes IN and WI.*

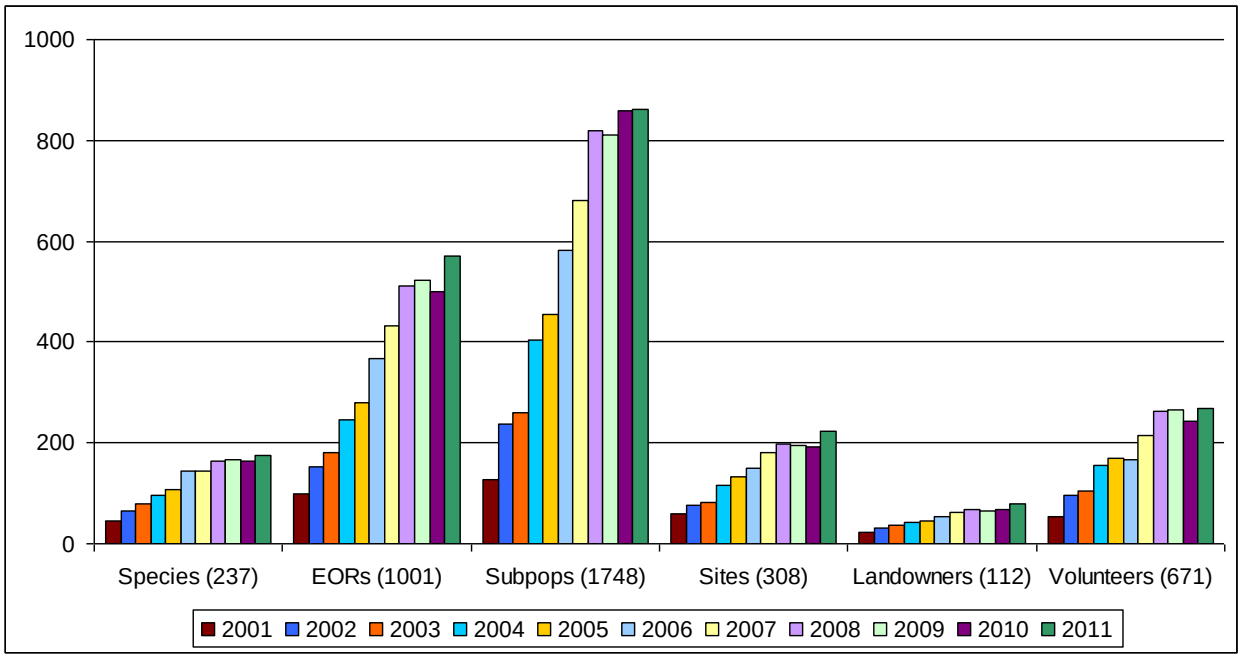



*Table 1. POC accomplishments and participation for all years, 2001-2011, including IN and WI.*

| | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Cumulative |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Species * | 45 | 66 | 78 | 95 | 108 | 143 | 144 | 164 | 166 | 164 | 176 | 237 |
| EORs | 98 | 153 | 180 | 246 | 281 | 366 | 431 | 510 | 524 | 501 | 570 | 1001 |
| Subpopulations ** | 127 | 237 | 259 | 403 | 455 | 581 | 680 | 819 | 810 | 859 | 861 | 1748 |
| Sites | 59 | 75 | 83 | 117 | 133 | 151 | 181 | 199 | 196 | 192 | 222 | 308 |
| Landowners | 24 | 32 | 38 | 42 | 44 | 54 | 63 | 69 | 65 | 68 | 79 | 112 |
| Volunteers | 53 | 96 | 104 | 154 | 170 | 167 | 215 | 264 | 266 | 243 | 268 | 671 |

* Includes 120 (IL) listed and 117 rare, non-listed species (Attachment 5).
**A subpopulation is defined as a grouping of a species within the same EO that is tracked separately because it is located more than 50 meters from another grouping, or because the grouping is within a different management unit or habitat.

**Species monitored in multiple counties** (see Attachment 5 for a breakdown of listed and non-listed species and the number of EOs monitored for each).

*Species (listed and non-listed) monitored across multiple counties are the basis for a regional assessment of species status.*

Illinois
1 species in 6 counties
7 species in 5 counties
15 species in 4 counties
33 species in 3 counties
60 species in 2 counties
113 species in 1 county

**2001-2011 cumulative EOs monitored (listed and non-listed), by IL county:**

| | |
|---|---|
| Cook: | 221 |
| DuPage: | 176 |
| Kane: | 68 |
| Kankakee: | 2 |
| Kendall: | 10 |
| Lake: | 295 |
| McHenry: | 112 |
| Will: | 63 |
| Total: | 947 |

## THE VOLUNTEER COMPONENT OF POC: CITIZEN SCIENTISTS

Without volunteers, POC could not function successfully. Both public conservation agencies and private groups recognize the importance of leveraging volunteer resources for monitoring and management work. Citizen science, now termed Public Participation in Scientific Research by the Citizen Science Central network out of the Cornell Lab of Ornithology, is increasingly acknowledged as a method for gathering reliable and valuable data, thereby greatly expanding potential for scientific analysis. Each major agency working with POC typically has one or two staff, a volunteer coordinator, and/or ecologist assigned to work with POC in recruitment, training, and field assistance of volunteers.

**Note on volunteers for 2012**. It is important to mention that this spring brought special challenges to all monitors. Because of record warm temperatures in early spring, plants started to bloom a month or more earlier than normal, some before training workshops were completed and new volunteers assigned to their species. There followed a challenging period of rapid communication with volunteers and volunteer coordinators as well as field checking for blooms in order to monitor the many spring bloomers in time. Monitors rose to the occasion and most came through very well. The record-breaking high temperatures and drought during the summer brought additional challenges to volunteers, and to the plant species themselves. Final tallies for 2012, which will be completed by March 2013, will demonstrate the effects of these conditions on POC volunteer numbers.

**Volunteer statistics**

*Table 2: Number of cumulative volunteers by county: 2001-2011 (some monitors have assignments in more than one county).*

| Illinois | |
|---|---|
| Cook | 208 |
| DuPage | 50 |
| Kane | 50 |
| Kankakee | 4 |
| Kendall | 3 |
| Lake | 154 |
| McHenry | 79 |
| Will | 74 |

| Wisconsin | |
|---|---|
| Kenosha | 14 |
| Walworth | 13 |

| Indiana | |
|---|---|
| Lake | 6 |
| LaPorte | 1 |
| Porter | 9 |

*New volunteers in 2011 (total: 68, 7 monitored in two or more counties)*
Cook: 20; DuPage: 7; Kane: 4; Kendall: 6; Lake: 17; McHenry: 9; Will: 6. (IN: 9; WI: 0)
Average: 8.3 new volunteers per Illinois County (excluding Kankakee).

*Volunteer retention*
Retention from 2010 to 2011: 64.9% (174 of 268) of those who monitored in 2010 were retained in 2011

Retention from 2001 to 2011: 37.7% (20 of 53) of volunteers who monitored in 2001 monitored in 2010

Retention into 2011: 62.3% (167 of 268) volunteers who monitored in 2011 also monitored previously

142 of the 268 volunteers (52.9%) who monitored in 2011 had monitored for three or more preceding years, and 240 of 671 volunteers (35.7%) who monitored at any time in the program did so for three or more years.

Volunteers monitoring for 11 years: 11
Volunteers monitoring for 10 years: 17
Volunteers monitoring for 9 years: 14
Volunteers monitoring for 8 years: 17
Volunteers monitoring for 7 years: 22
Volunteers monitoring for 6 years: 30
Volunteers monitoring for 5 years: 41
Volunteers monitoring for 4 years: 51
Volunteers monitoring for 3 years: 62
Volunteers monitoring for 2 years: 112
Volunteers monitoring for 1 year: 294 (includes 69 new volunteers in 2011)

*Volunteer hours*
Hours worked by POC volunteers may fall into one of the three following categories. Hours accumulated from 2010 are shown for comparison.

| Hours volunteered | 2011 | 2010 |
|---|---|---|
| Field | 2008 | 2110 |
| Workshop training | 418 | 337 |
| Office | 511 | 627 |
| **Total** | **2937** | **3074** |

*Stewards as monitors*
In 2011, 61 of 268 volunteer monitors (22.8%, a 5% decrease from 2010), were also volunteer stewards. Overall, 100 of 672 (15%) of cumulative volunteers have been stewards.

**Recruitment**
Volunteers are recruited by agency volunteer coordinators and current POC monitors through word of mouth; articles and announcements in stewardship newsletters, such as *The Habitat Herald* and Midewin's T*allgrass Telegraph*; the Chicago Environmental Network Website; and POC staff presentations at meetings such as Wild Things, Lake County Audubon, and Wild Ones. The training workshops are listed on the POC website and promoted through stewardship newsletters and email newsletters to previous, current and prospective POC volunteers.

**Training**
The two different formats for volunteer training in 2011 were day-long spring workshops and in-field training. Four workshops were offered—one each in McHenry, Cook and Will Counties in Illinois and Porter County in Indiana. Seventy-six (76) returning and prospective volunteers learned POC program objectives and were trained in monitoring techniques for Level 1 protocols. (In 2012, 65 volunteers attended four training workshops held, in Lake, Cook, McHenry and Kane Counties.) Representatives from county agencies presented information about rare plants monitored in their counties, guided volunteer assignments, and discussed the relationships between monitoring and management and the benefits of POC in relation to their work. The sensitivity and confidentiality of rare plant locations were stressed in training sessions, and new volunteers were required to sign a Confidentiality Form. In the field, POC program staff, interns, agency ecologists, site stewards, or experienced volunteer monitors provided new monitors with additional field mentoring and orientation to the sites and populations. In addition, several monitoring forays led by POC staff are held each year at larger sites such as Illinois Beach State Park, Braidwood Dunes and Savanna Nature Preserve, and Waterfall Glen, and often attract eight or more volunteers who seek additional training in monitoring protocols.

Volunteer retention is important to ensure continuity of monitoring and consistent application of protocols. Retention rates from year to year have held fairly high, as reported above. The 61 monitors who are stewards represent 22.8% of all volunteer monitors in 2011. Stewards are individuals familiar with site management and provide reliable reporting on management activities within monitored populations. Agency staff members also contribute to program continuity and consistency. Since 2001, POC has worked with many of the same staff from major agencies, and when there has been turnover, a new staff member has been assigned to take on POC responsibilities. It is clear there will continue to be substantial agency staff involvement working with volunteers, as each year new volunteers need support in the field. However, as volunteers are trained, they become more self-sufficient and can successfully mentor new recruits.

## LEVEL 1 MONITORING DATA

**Database, Data Submission, Data Review and Confidentiality**
All Level 1 monitoring data is entered into a MySQL database developed and managed by Bianca Rosenbaum, Conservation Information Manager. This system is an upgrade from the Access database established in 2001. The "back end" MySQL interfaces with an entirely web-based "front end" coded in PHP. Data is backed up on a daily basis and is entered on-line by volunteers and staff via the password-protected, role-restricted POC website. Volunteers must submit field/paper copies of their monitoring forms, but may also submit reports online. An effort to scan all paper forms into a digital archive is underway. As of December 2011, 21% of all paper-submitted monitoring forms were scanned electronically for archival purposes.

Individual monitors can access only their assigned monitoring reports online and only by means of a password. In 2011, 81% of forms (694 of 859) were submitted online, which constitutes a large increase from 62% in 2010. Online entry saves hours of manual data entry by program staff. Monitoring reports are reviewed for accuracy and completeness by POC staff and landowners, who have access to their own site reports. Data entry and review are typically completed in March, and then reports are submitted to the

Illinois Natural Heritage Database; landowners for their respective sites; and the Nature Preserves Commission for nature preserves and land and water reserves.

Changes in the database and content management system have occurred over the past few years. A new content management system, Drupal, will be used starting in 2012. This system will be compatible with the new POC PostgreSQL database, allowing integration of the website with spatial information in the POC database (see Research Outgrowths for a more extensive discussion).

**Results and Discussion**

The Level 1 analyses below reflect information based on subpopulation reports submitted through 2011. Many EOs have multiple subpopulations. For each category of analysis, only reports with data in the specified category were included in the percentages given. Forms marked NA (Not Applicable) or blank for particular fields were excluded from the percentages given in the analysis, but, where possible, the percentages of the total forms that were excluded due to a NA answer are shown in order to provide a perspective on sample size.

It is important to note that in the analyses presented, data for each year is not based on an equivalent set of populations monitored. Each year, new populations/subpopulations are added to the program, and previously monitored populations/subpopulations may not be monitored in that year. Therefore, yearly increases or decreases in values do not reflect a cumulative change for the same group of populations.

The overall value of the data is to reveal general levels of threats, management activity, and plant recruitment throughout POC populations. More direct assessment of change or trends is possible when the analysis is applied to the same group of populations over time; with up to ten years of data on many populations, this analysis can yield robust data. As future resources and funding allow, POC will be able to undertake this more detailed analysis.

*Ecological Threats (numbers from 11/18/2012)*

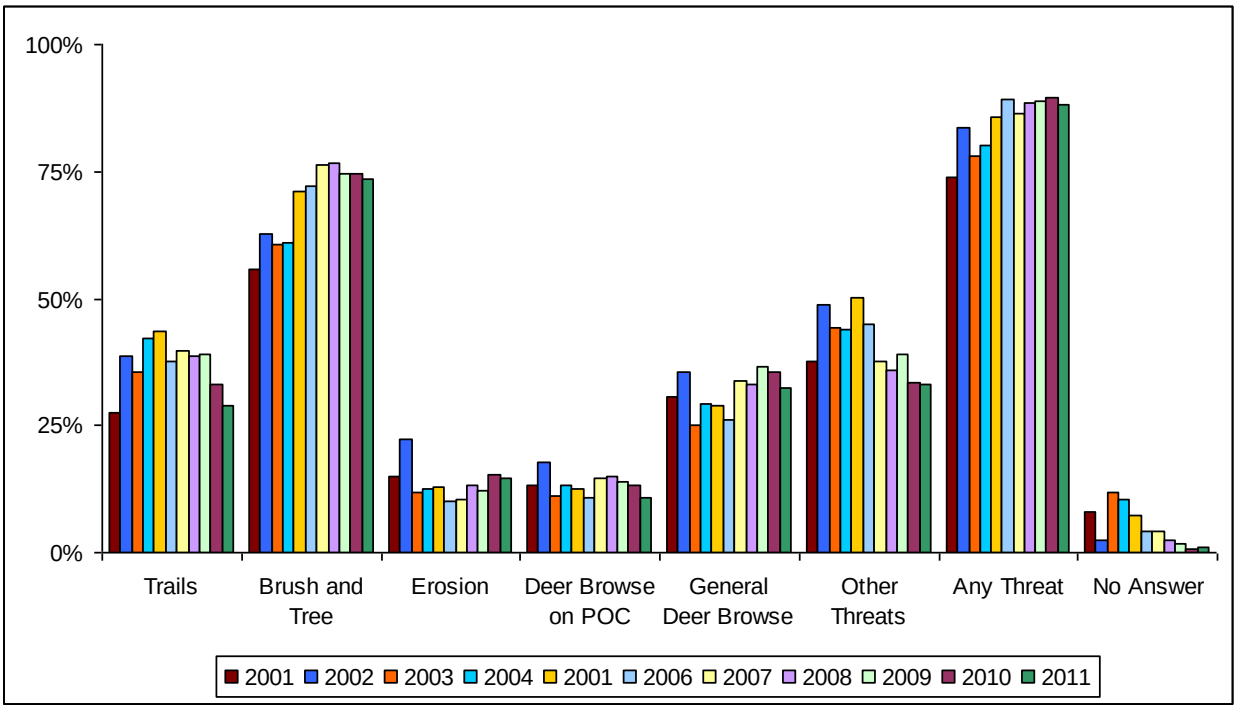



*Figure 2. The percent of subpopulations in each year with a given threat present. The analysis of threats presented here does not reflect the percent impact or magnitude of each threat recorded by monitors, only the presence of the threat.*

Only unauthorized trails were reported in 2001, so no value is indicated for authorized trails in 2001. Authorized and unauthorized trails were lumped into 'total trails' for this analysis. In 2001 and 2002, no distinction was made between brush encroachment of less than or greater than 1 meter in height, so the two categories are combined in the Figure. For most years, separated data is available for the lumped values. The 'No answer' columns indicate the low percent of reports for which no answer was given for this section.

Based on the data in Figure 2, the percentage of subpopulations that were impacted by at least one ecological threat—invasive brush and trees, deer browse, erosion, or trails—was between 72% and 89% from 2001-2011. The number of populations experiencing any threat initially increased from year to year but has leveled out in recent years. It should be noted that the importance of recording threats to populations has been increasingly stressed in POC training.

*Updated 10/11/2012*

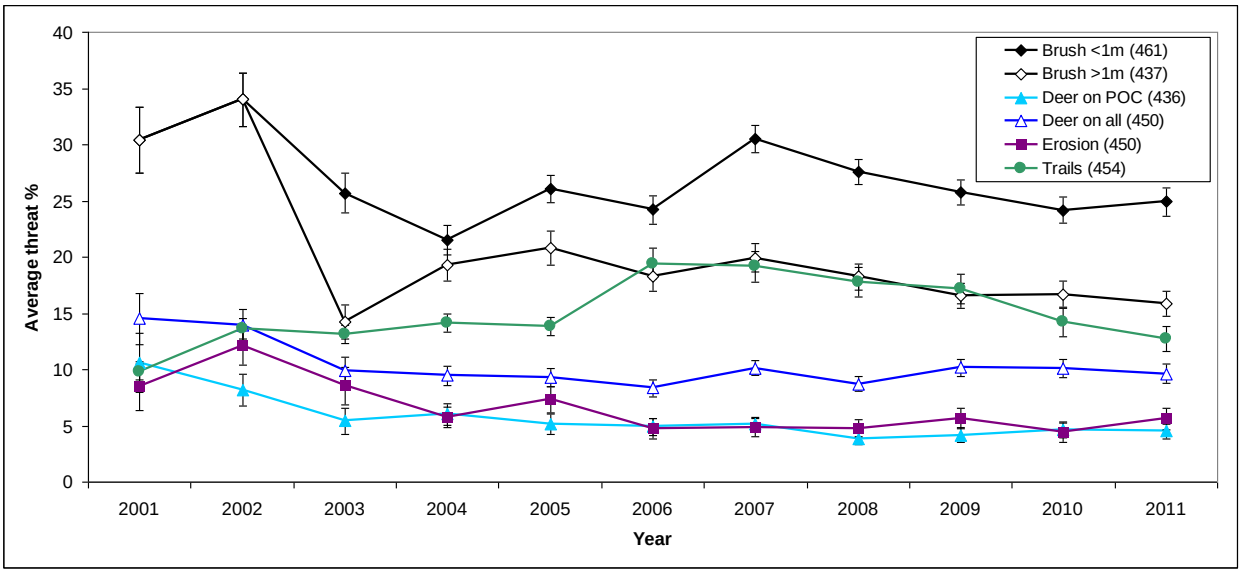



*Figure 3. Trends in threat levels for subpopulations with a recorded threat with 5 or more years of data. Based on classes: 0%, 1-25%, 26-50%, 51-75%, 76-100% (trails based on estimated percentage 0-100%).*

Threats are recorded at five different range levels (see Figure legend). For this analysis, these ranges are equated with 0%, 25%, 50%, 75%, and 100%, respectively. Figure 3 shows changes in the average magnitude of threats in the 461 subpopulations for which POC has five or more years of data. Considerable variability in the data is evident early in the program, but over time a more stable trend has emerged. Encroachment of brush that is less than a meter in height continues to be the largest threat to monitored subpopulations, followed by encroaching brush of more than a meter in height, trails, and deer browse on all species in the subpopulation area. It should be noted that brush threats were separated by height after 2002 only, and brush may include both invasive exotic species and aggressive native species, such as *Cornus racemosa.* Trails were combined (authorized and unauthorized) for this analysis, due to lack of separation early in the program. Interestingly, trails showed an increasing impact on monitored subpopulations through 2006, but the magnitude of trail threats has been declining since then. Considering that the set of monitored occurrences is not the same from year to year, the relative percent of subpopulations impacted by each of the recorded threats appears relatively consistent for the last 6 years.

A prompt to record "other threats" is included on the monitoring form. The most common threats added to the list in descending order of prevalence are: trampling (by humans, deer, dogs, etc.), trash, ATV encroachment, mowing, and browse (such as by insects or small mammals).

*Invasive species*

Because of the large threat they pose, we examined the effect of aggressive native and non-native invasive species. Figure 4 presents the proportion of reports that indicated the presence of the top 10 most reported invasive species in each year of the program. Note that these data do not incorporate the magnitude of effect these species are reported to have.

*Invasive species (updated 10/18/12)*

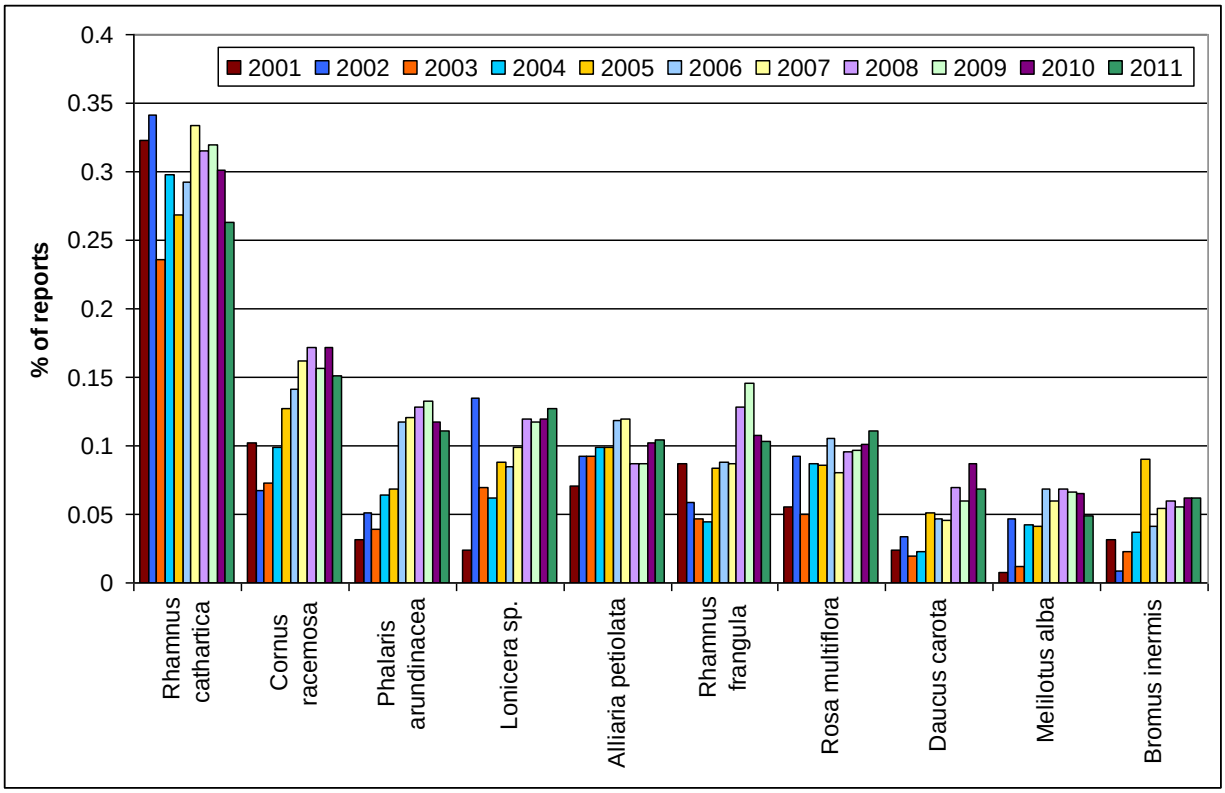



*Figure 4. Top 10 most reported invasive plant species documented by POC monitors from all years. Percentages are based on the ratio of reports indicating presence of an invasive species to the total number of subpopulations with reports submitted that year.*

Monitors have identified 318 distinct species as invasive plants over ten years, some of them native species and many of them having a minor or contextual presence. In previous years, this number has been larger due to inclusion of generic identifications (e.g., *Rhamnus* sp.) which were excluded this year. In 2011, 205 separate invasive species were recorded. Of all monitored subpopulations, 87% had at least one invasive species present in 2011 (similar to 88% in 2010). As with threats, this analysis does not look at the magnitude of impact on the individual subpopulations, but it focuses on the percent of subpopulations with any invasive species presence.

*Management (updated 11/18/12)*

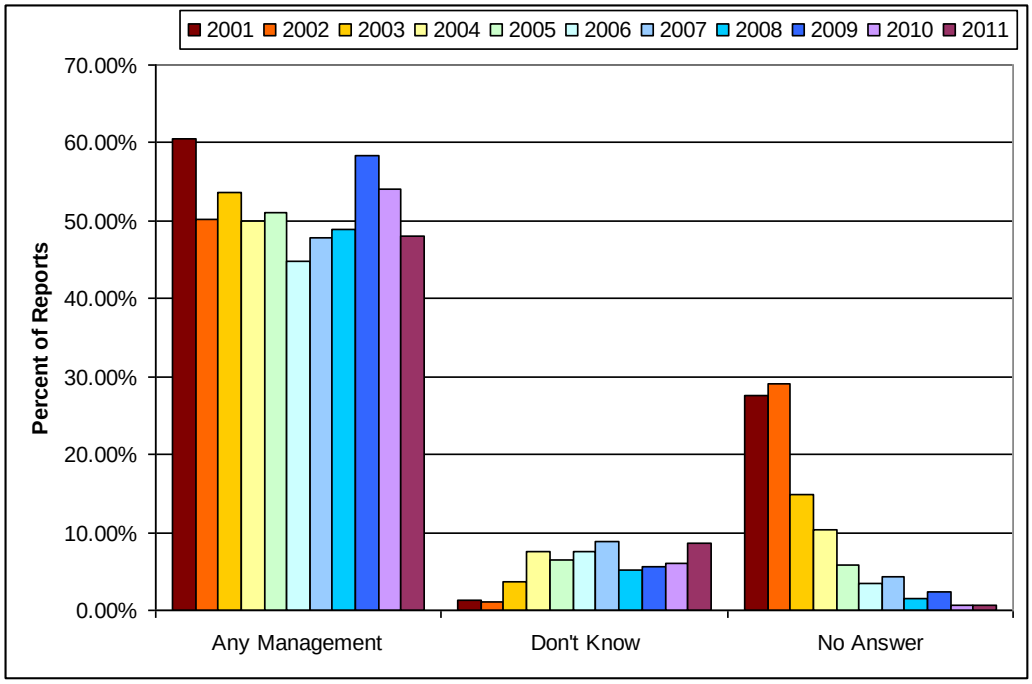



*Figure 5A. Average percent of reports for all years where any management is reported, where 'don't know' is indicated for management, and where no answer is given.*

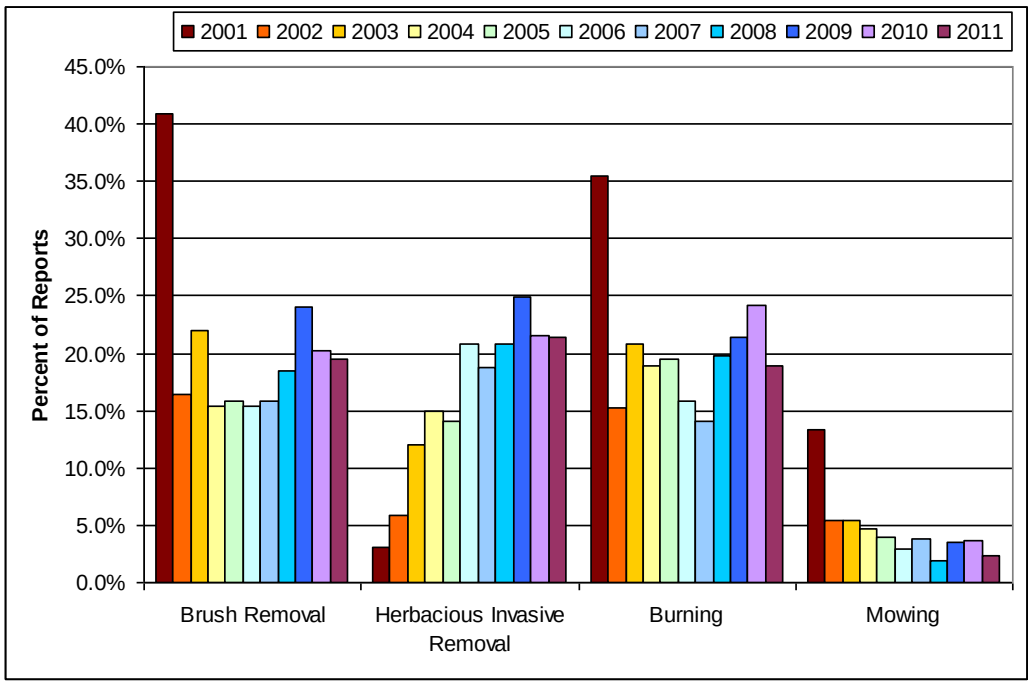
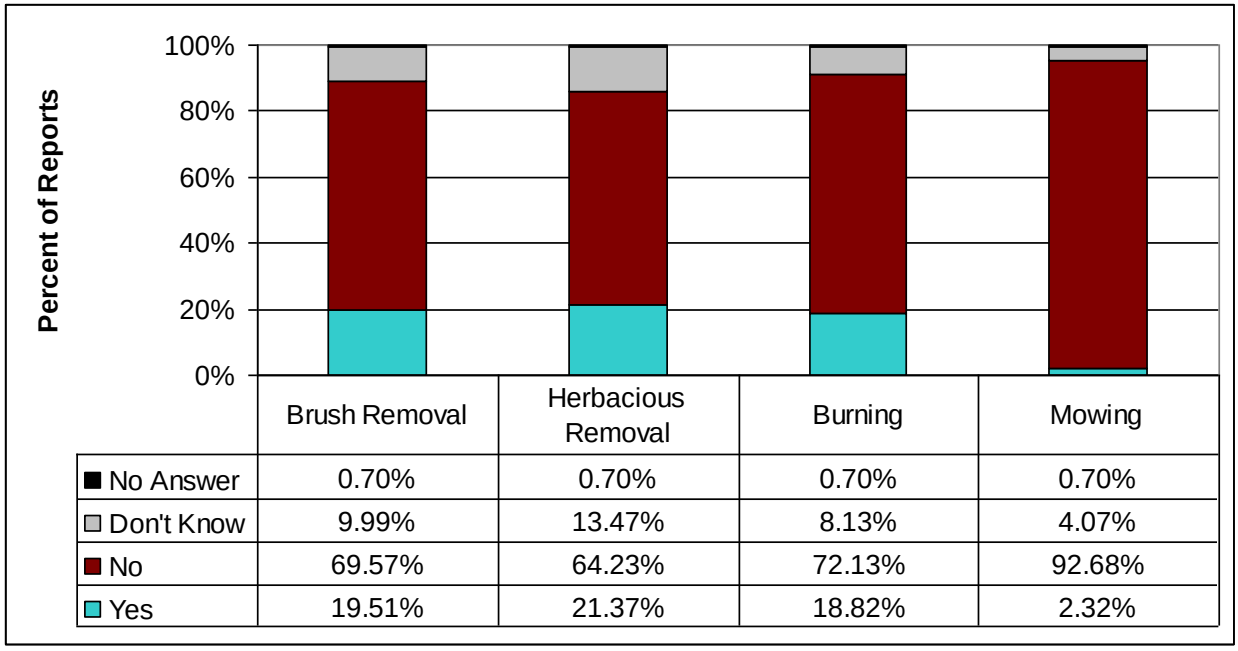



*Figure 5B. Management observed by monitors for all years. Percentages for individual management techniques are based on only those reports for which a "yes" or "no" answer was given for each management activity (as observed or known by the monitor). The percent of reports with blanks or a "don't know" response are shown separately. Herbaceous invasive removal was not recorded in a field in 2001.*




| | Brush Removal | Herbacious Removal | Burning | Mowing |
|---|---|---|---|---|
| No Answer | 0.70% | 0.70% | 0.70% | 0.70% |
| Don't Know | 9.99% | 13.47% | 8.13% | 4.07% |
| No | 69.57% | 64.23% | 72.13% | 92.68% |
| Yes | 19.51% | 21.37% | 18.82% | 2.32% |

*Figure 6. Monitor-observed management for 2011.*

*Evidence of Management*

Based on 861 reports submitted through November of 2012, monitors observed that an average of 47.9% of POC populations showed evidence of some type of management activity in 2011 (Figure 5A), with brush removal, herbaceous removal, and burning all noted in nearly 20% of reports. Mowing is reported much less often, with less than 3% of all reports indicating mowing as a management strategy (Figure 6). The percentage of reports noting management has fluctuated over the course of the program, with a 51% average over all years of reports noting management activities. Only a small percentage of the monitoring forms submitted are left completely blank in the land management section, and just over 5% of all reports indicate that the monitor does not know what management has occurred (Figure 5A).

Different types of management are reported by monitors. A significant number of monitors are also staff, stewards, or restoration volunteers at the sites they monitor, and these individuals are knowledgeable about the management activities on-site. Burning, herbaceous invasive removal, and brush removal are almost evenly reported in recent years (Figure 5B). Reported management was more variable at the beginning of the program. The high percentage of mowing reported in 2001 was most likely due to monitors considering mowing for trail or roadside maintenance to be a management strategy. This type of mowing, however, often poses a threat to the population. Since then, POC training has stressed the difference between mowing as a management strategy (i.e. to control invasives or brush or as a substitute for burning) and unintentional mowing of the population, as may occur along a mown trail side, which may pose a threat. A notable decrease in reported burning and brush clearing occurred from 2001 to 2002, and this may have been due to volunteers largely being assigned to known species locations at sites that were under an active management schedule. Over all years, 51% of all populations have been reported as managed. This number is robust, particularly because annual brush removal or burning within the same population may not be necessary. Other management activities recorded in an open-ended question without quantification include deer culling, fencing/deer exclosures, and hydrological modifications.

*Management analyses*

Performing analyses that integrate population census data with land management information has always been a goal of POC. It is difficult to assign causation to changes in population numbers over time, but it is possible to analyze differences between managed and unmanaged subpopulations. This type of analysis was performed for populations of *Cypripedium candidum* which had more than five years of data. A potential trend was observed where increasing frequency of management (the number of years in which a monitor reported management divided by the number of years of data) tended to coincide with higher slope of plant counts over that time period (Figure 7). Further investigation found that populations that were burned and those that had been cleared of brush tended to have more individuals than unmanaged subpopulations (Figure 8).

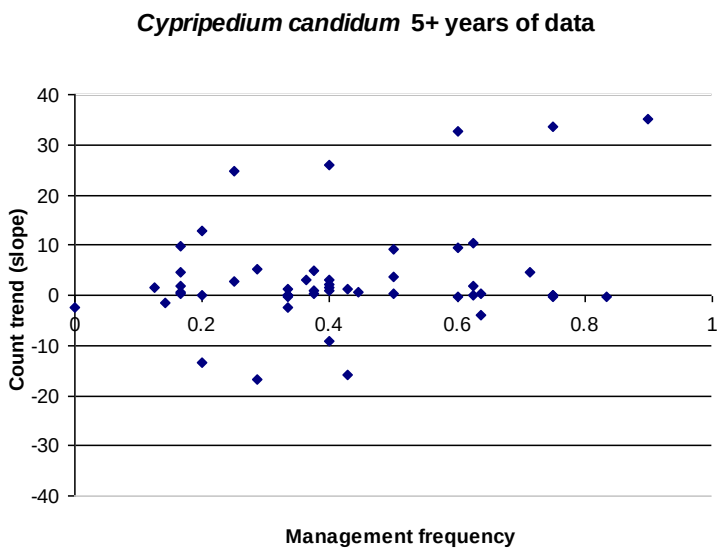



*Figure 7. Relationship between frequency of management and the overall trend (slope) in the number of individuals for 58 subpopulations with greater than 5 years of data.*

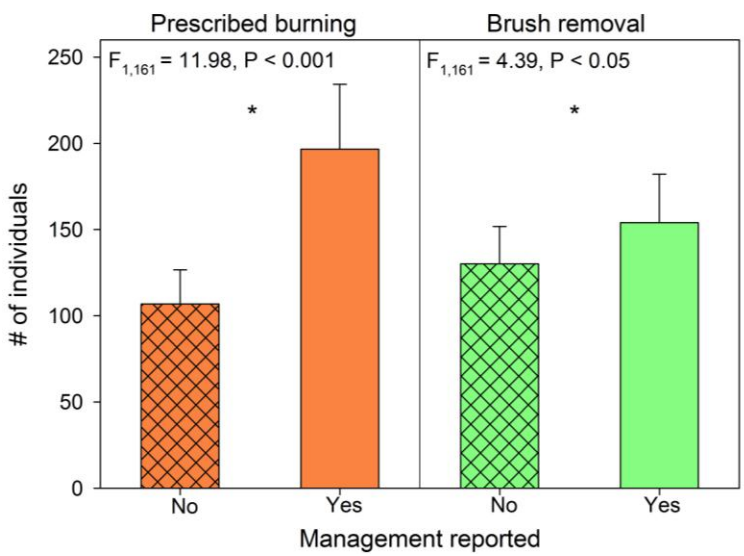



*Figure 8. Management of* Cypripedium candidum *populations by burning or brush clearing relates to the number of individuals found in those populations. Bars indicate one standard error of the mean, and stars denote a significant difference between bars of the same color (a=0.05).*

**Land Management Reports from Managers**
Since 2002, POC has asked land managers to complete Land Management (LM) forms to supplement monitoring reports submitted by volunteers. LM forms provide more detail on the types of management that take place both within the populations and onsite, as well as land use history. While managers report about activities in the area or management unit where the populations occur, monitors often have a more precise understanding of how management affects specific population areas. Therefore, the two reports serve to complement each other.

POC requests the first LM report to include land use history, general management history prior to monitoring, information about adjacent land use, and whether a population has been introduced for each subpopulation. Annually, queries are conducted for population and site management during the past year, including burning, mowing, invasive species management, and deer removal. POC no longer asks for hydrological conditions such as drought or flooding, as this data can be derived from other sources. As data accumulates, the cycles of land management can be compared with population cycles in order to uncover the influence of management on the plants of concern.

All LM reports submitted through 2009 have been entered into the database while 2010-2012 forms are still being entered. The switch to the relational mySQL database halted LM data entry during 2011, resulting in a backlog. POC staff has undertaken a concerted effort to gather LM reports and offer land managers alternate methods of completing the information, including an Excel spreadsheet using a single form for multiple species within a management area. Starting in 2012, on-line submission for LM reports was initiated. Cumulatively, POC has entered at least one report for 760 subpopulations or 44 % of the total subpopulations monitored in the database. Of forms entered in 2011 and 2012, 79% were entered online.

There are admittedly gaps and issues in the LM portion of the program. For example, some managers have commented that completing additional forms is challenging in light of their other responsibilities. To address this issue, managers and POC staff have discussed the possibility of having monitors who are also stewards complete the LM form and submit to the manager for final review. Some managers have already taken advantage of this steward submission alternative. Additionally, POC has not yet conducted an analysis of the management data from LM forms due to limited staff resources and ongoing program priorities. It is the hope of POC to attract other researchers or graduate students to examine closely the patterns being reported about management within populations. Meanwhile, continued collection of management data is imperative. Despite these challenges, specific management responses to POC monitoring are frequently reported by managers, stewards, and volunteers. Examples follow:

In 2008, volunteer Mark Kluge found a second subpopulation of the rare *Swertia caroliniense* (American columbo) at a Cook County preserve where he was already monitoring and searching for new locations of the species. It was nearly hidden in a brush thicket of honeysuckle and barberry, an area not scheduled to be cleared. The plants numbered around 600 and were blooming profusely in 2012. Mark alerted the steward, Joe Neumann, who set in motion an effort to clear the area to release the plants.
Result: Palos Restoration Project volunteers, Audubon Forest Preserve District of Cook County interns, Friends of the Forest Preserve interns, and the Boy Scouts spent 400 hours during September and October to effectively clear the area. Without POC volunteers on the alert for new plant locations, this activity may not have happened.

During a monitoring trip to Boloria Fen and Sedge Meadow in McHenry County with steward Dennis Dreher, POC Research Assistant Rachel Goad spotted a small population of the highly invasive Japanese stiltgrass *(Microstegium vimineum),* a new invader to northeast Illinois. Goad reported the occurrence immediately to the New Invaders Watch Program, and Dreher sent a photo for confirmation.
Result: The Boone Creek Watershed Alliance, Nature Preserves Commission, McHenry County Conservation District, and the Northeast Illinois Invasive Plant Partnership (NIIPP) coordinated to control it. The location will be carefully watched in the spring for a reoccurrence of the stiltgrass. In addition, an alert was sent out to all NIIPP contacts to watch for other occurrences of the new invader. In cases such as this one

when an immediate response is needed, monitors are instructed to contact either POC or the landowner/land manager directly.

Although not directly management focused, volunteer Kathy Garness has developed the first comprehensive list of plant species at Illinois Beach State Park working from several historic sources and also tapping into POC associate lists. This list, now up to more than 530 native and non-native naturalized species, will aid Park managers and stewards in searching and locating plant species.

**Research Outgrowths of POC Data**

With a growing Level 1 data set and the involvement of the joint Chicago Botanic Garden-Northwestern University graduate program, University of Illinois at Chicago, and Loyola University, POC has seen an increased potential to attract graduate students and other researchers to assist with data analysis. These resources can allow POC to gain more information from the data than staff members are able to undertake.

For example, a proposal by researchers at the Chicago Botanic Garden and the University of Illinois – Chicago was approved and funded in 2011 by the Illinois Endangered Species Protection Board to examine pollinator limitation, fruit production/viability and genetic diversity in populations of *Asclepias lanuginosa* that have not produced fruits in many years of monitoring. Wisconsin populations are being compared to Illinois populations. The project continued in 2012 and is set for completion in February 2013. Researchers learned that appropriate pollinators were present, but genetic analysis revealed a high degree of clonality within populations which likely prevents successful pollination and therefore fruit set. Vegetative plants grown from Wisconsin seed were transplanted at two Illinois sites in 2012 to increase genetic diversity and two experimental populations were introduced at the Chicago Botanic Garden. Further field work will track flowering of the introduced plants and possible seed production as a result of cross-pollination. Experimental hand pollination in the nursery will also be conducted. The final objective of the proposed work is to provide actionable recommendations that can be used in a recovery plan for the species.

Northwestern University graduate student, Erin Vander Stelt, is completing her master's thesis on *Isoetes butleri* and what drives its population dynamics. POC monitors this endangered species, endemic to dolomite prairies and glades, at four sites. Vander Stelt is testing four factors: 1) the potential for inbreeding depression for samples taken in 2009 and 2012 using microsatellite markers; 2) soil properties inside and outside the subpopulations; 3) differences between associated vegetation where the species occurs and does not occur; 4) the influence of litter accumulation by removing duff within the plots and seeing if the population size in the test areas increases in 2013.

Northeastern Illinois University student and POC monitor Dan Fink completed his master's thesis on the geographic distribution of *Sarracenia purpurea* (Pitcher Plant) in Illinois. Fink checked locations of all seven recorded EOs from the Illinois Natural Heritage Database and monitored and mapped the five populations he relocated in Lake and McHenry Counties. He also conducted an analysis of variance between plant communities based on species associated with *S. purpurea*. Susanne Masi served on Fink's thesis committee.

Another example is the increased use of GIS in POC monitoring. Land managers and conservation organizations increasingly use spatially referenced data to answer ecological questions, and with the creation of the GIS lab at CBG in 2009, POC's capacity to collect, organize, and analyze spatial data has also increased. GPS coordinates of all POC subpopulations are routinely recorded, and program staff are adding GPS polygons of many populations. Spatial analysis projects, such as the one completed by REU student, Hazel Levine, have also been undertaken. Levine analyzed regional trends in *Oenothera perennis* populations and created a poster detailing these findings. In addition to spatial analyses, improved communication of spatial data to landowners and managers is a high priority. Research Assistant Emma Bialecki has already provided the Cook County FPD with GIS polygons of all monitored species in the district to assist with their management planning. While the POC database contains 11 years of spatial information (i.e. GPS readings), the current structure of the database has made efforts to analyze and communicate this data cumbersome.

POC is now transitioning to a spatial database which will allow this information to be more readily accessed, communicated, and analyzed. A shapefile, a type of data file that allows population boundaries to be projected onto a map, will be attached to each monitoring record. This spatial database has already been created and is in the process of being populated with POC records. A process that automatically turns GPS points into shapefiles is in development, so that volunteer input can be immediately integrated into the database. Potential applications for this database are numerous. In addition to increasing spatial analysis capacity, it could also facilitate the communication of monitoring data to landowners. All shapefiles relevant to a specific landowner could be queried for, and a layer of this data showing spatial relationships between populations and containing monitoring form data could be sent to that landowner. In the future, and with considerable website development, volunteers may be able to see maps created "on the fly" from data they have entered into the database.

## LEVEL 2 DEMOGRAPHIC MONITORING UPDATE

Level 2 demographic monitoring of four species (*Viola conspersa, Cypripedium candidum, Cirsium hillii,* and *Tomanthera auriculata*) was initiated in 2001, and includes tagging individual plants in permanent plots in order to track them over time. In the case of *Tomanthera auriculata*, an annual species, plants are newly tagged each year and are followed from flowering to fruiting stages. Specific protocols vary by species, but plant height, leaf measurements (width or length), number of blooms, and seed set are common measurements. In 2011 and 2012, POC staff and volunteers conducted monitoring of all these species except *Viola conspersa,* because Garden scientist Pati Vitt had previously reached her research goal of collecting 11 years of demographic data needed for population modeling. More intensive research projects have grown out of Level 2 work, and several of these have been reported in past POC reports to the Wildlife Preservation Fund. Dr. Vitt is using 11 years of demographic data on *Viola conspersa* in writing a paper that develops a matrix analysis of the population dynamics of this species. Dr. Jeremie Fant's research on *Cirsium hillii* has involved genetic and seed viability studies, followed by germination and successful introduction of plants with mixed genetic parentage to one experimental site (the Garden's constructed hill prairie), two prairie reconstructions, and five remnant sites with appropriate habitat. Also under current discussion is the analysis and modeling of 11 years of *Cypripedium candidum* data Pati Vitt, CBG researcher, and Steve Kroiss, Ph.D (Washington University in St. Louis), currently a Post-Doc at Washington State University have compiled.

## PROGRAM EVALUATION

*POC met or greatly exceeded nearly all the program objectives as outlined in the WPF proposal and listed below. Most have already been discussed in detail in the preceding text.*

**Objective 1:** *Collect standardized monitoring data on rare plants (population size, location, threats, and management) on a cumulative 55% of northeast Illinois' Element Occurrences (EORs) of listed species. More detailed demographic data will also be collected in selected populations of target species (Viola conspersa, Cypripedium candidum, Cirsium hillii and Tomanthera auriculata.*

From 2001-2011, POC had collected standardized monitoring data on a cumulative 66% (613 of 923) EOs, listed as threatened or endangered (as recorded by the IL Natural Heritage Database through October, 2012) in seven northeast Illinois counties. *(Note: the Natural Heritage Database can include more than one site in a single EO when they are geographically close, whereas POC considers each site as a separate EO.)*

Through 2011, POC monitored 80% of the 169 listed species that occur in the seven counties of northeast Illinois, an increase of 10% from 2010.

In 2011, POC collected standardized monitoring data on 90 (up three from 2010) endangered and threatened Illinois species in 366 EOs (up 44 from 2010) and 86 (up 11 from 2010) rare, non-listed species in 203 EOs (up 46 from 2010).

*Table 3. Percent change in monitored element occurrences in eight Illinois counties. Different EOs may be monitored from year to year, so % change indicates the difference in the total number of EOs monitored.*

| | Cook | DuPage | Kane | Kankakee | Kendall | Lake | McHenry | Will |
|---|---|---|---|---|---|---|---|---|
| 2010 | 131 | 83 | 34 | 0 | 7 | 123 | 73 | 32 |
| 2011 | 130 | 81 | 42 | 1 | 10 | 161 | 86 | 39 |
| % Change | -.8% | -2.4% | 23.5% | - | 42.9% | 30.9% | 17.8% | 21.9% |

Overall, monitored EOs increased from 2010. Declines shown may be due in part to the fact that some occurrences are being monitored in alternate years.

In 2011 and 2012, POC collected demographic data on eight plots of *Cypripedium candidum*, seven plots of *Cirsium hillii* and five plots of *Tomanthera auriculata*. Dr. Vitt decided to discontinue *Viola conspersa* Level 2 monitoring in 2011, because she had reached the goal of a ten-year dataset for that species and had adequate data on which to build a population model. The modeling project is in process, with the intention of eventual publication.

**Objective 2.** *Educate and train adults about rare pants and rare plant monitoring by holding three volunteer training workshops and further supporting volunteers with training in the field. The Garden will also attempt to increase the number of volunteers recruited in cooperation with landowners (an average of five per county in the seven counties of northeast Illinois) for a total of more than 200 active volunteers projected in 2011.*

In 2011, 76 volunteers attended four training workshops, which took place at Edgebrook Volunteer Center (Cook County), Glacial Park (McHenry County), Will County Forest Preserve District Administrative Center (Will County), and the University of Wisconsin Parkside (see Attachment 8 for Workshop Agenda). POC staff mentored volunteer monitors frequently in the field, and also held several group monitoring "forays", which were excellent mentoring opportunities in protocol usage and plant identification. In 2012, 65 volunteers attended four training workshops which were held at the Chicago Botanic Garden (Cook County), Danada Forest Preserve (DuPage County), Plum Creek Nature Center (Will County), and Barker House (Michigan City, Indiana). Many Illinois volunteers attended the Indiana workshop.

Fifty-eight new volunteers were recruited and subsequently conducted monitoring in 2011, an average of 8.3 volunteers across seven northeast Illinois counties. All counties except for Kankakee recruited five or more new volunteers.

On average, Illinois counties (excluding Kankakee) gained three new volunteers in 2011. See Table 4 below for specific Illinois county information. Two volunteers were recruited in Kankakee County which has previously had little involvement in the program. Further, volunteer involvement in Kendall County has increased since POC began working there in 2009, with seven volunteers working alongside Kendall County Forest Preserve staff to monitor 10 EOs at four sites.

High levels of retention increase data reliability. The volunteer retention rate from 2010 to 2011 was 72%, and of the 268 volunteers who monitored in 2011, 142 had monitored for three or more years (53%). Both of these statistics show an increase from 2010.

*Table 4. Percent change of the number of monitors in Illinois counties with Plants of Concern involvement.*

| Year | Cook | DuPage | Kane | Kankakee | Kendall | Lake | McHenry | Will |
|---|---|---|---|---|---|---|---|---|
| 2010 | 96 | 19 | 31 | 0 | 2 | 66 | 42 | 19 |
| 2011 | 89 | 30 | 38 | 2 | 7 | 66 | 37 | 29 |
| % Change | -7.3% | 57.9% | 22.6% | - | 250.0% | 0% | -13.9% | 52.6% |

The decline in volunteer numbers in Cook and McHenry Counties is of concern to POC, although the number of POC volunteers increased in the other counties. In 2012, POC has made great progress in Cook County with the creation of a special internship to act as liaison to volunteers and staff. New volunteers continue to join as evidenced by the 76 attendees at 2011 workshops.

**Objective 3.** *Collaborate with public and private landowners to recruit them into the monitoring fold and place volunteer monitors on their sites. POC will in particular collaborate with the Ilinois Department of Natural Resources(IDNR) (Regional Biologists, Natural Heritage Database, Nature Preserves Commission, and Illinois Endangered Species Protection Board)*

In 2011, POC worked with 79 public and private landowners to prioritize species and to place volunteer monitors on their sites. In October 2011, POC staff met with IDNR staff to discuss program achievements and specific needs of IDNR staff from POC. Notes and commentary from that meeting can be found in Attachment 10. During the winter of 2012, POC held planning meetings with six Forest Preserve District staff and IDNR's Brad Semel, to discuss the 2011 season volunteer assignments. Other landowners in the program and four site superintendents at IDNR-owned sites, were contacted through email and by phone to plan the 2012 monitoring season. (See attachment 6 spreadsheet for partner landowners.)

POC continues to have a strong relationship with IDNR staff. For example, POC collaborated at Illinois Beach State Park in 2012 with Heritage Biologist Brad Semel and held planning meetings with him regarding monitoring assignments at Illinois Beach State Park, Volo Bog, Moraine Hills State Park, and Chain-o-Lakes State Park. Semel received all 2011 monitoring reports for his sites, which he has used in management planning. Semel also serves on the POC Advisory Group. Don McFall, Heritage Division Chief, is invited to Advisory Board meetings and is kept apprised of POC progress. Heritage Biologist Dan Kirk received all reports on sites within his region: Grant Creek Prairie, Blodgett Road Dolomite Prairie, and Des Plaines River Conservation Area. Heritage Program's Maggie Cole has access to the POC database for all IDNR sites in her region and in 2012 she assigned several interns to monitor species at Hitts Siding and William Powers Conservation Area. POC submitted all EOR reports for listed species to the Illinois Natural Heritage Database in 2011.

POC submitted permit applications and follow up monitoring reports for the 2011 monitoring season to the Illinois Nature Preserves Commission (INPC) in 2010 and 2011. Kelly Neal, Stewardship Project Manager for the Commission, also serves on the Advisory Group. POC also applied for permits on IDNR-owned sites to Mike Moomey. In addition, POC has occasional contact with INPC Field Representatives Steve Byers and Kim Roman over issues that arise in monitoring at sites within their regions. Kim Roman also serves on the Advisory Group. (See attachment 10 for IDNR and Nature Preserve Sites monitored.)

John Wilker, the IDNR sponsor of the WPF grant, is a strong supporter of the POC program.

Susanne Masi, POC manager, is an appointed member of the Illinois Endangered Species Protection Board and brings information about listed species from POC monitoring to the group. She also serves as a Technical Expert Consultant for the 2014 listing of endangered and threatened species. Board Chair Dan Gooch also serves on the POC Advisory Group.

**Objective 4.** *Hold an advisory group meeting to assess progress and determine whether any changes should be made.*

POC staff decided not to hold this meeting in 2011, because in-depth planning and evaluation meetings were held with individual landowners over the course of fall 2011 and winter 2012, including a meeting in October 2011 with IDNR staff. Notes from the October meeting are found in Attachment 10. An advisory group meeting is currently scheduled for December 6, 2012.

**Objective 5.** *Record, organize, analyze, interpret and disseminate the collected data to better understand the state of rare plants in the region. POC will share the data by April of 2012 with state agencies and landowners that highlight management impacts on populations or concerns about the absence of management.*

Since Chicago Wilderness ended its grants program in 2009, POC is no longer required to submit an annual report to that coalition. However, this report to the WPF will be shared with the Natural Resource Management Task Force of Chicago Wilderness and with landowner partners, if permitted by IDNR. As mentioned, all 2011 monitoring data has been submitted to state and local agencies and to individual landowners for their sites. In addition, landowners now have immediate access to all reports from their sites as those are submitted through the Plants of Concern website. On the website, landowners are also able to view an excel spreadsheet of all their sites' data combined in a single document, allowing for easier comparison.

Examples of analysis and interpretation of POC data are provided in this report and more have been included in the presentations and posters that have been created for outreach and communication at various venues.

**Objective 6.** *Expand the regional impact of POC by exploring with IDNR staff the possibility of exporting the program to another urban center of Illinois. The Garden will also communicate the POC program to a broader professional and volunteer audience through participation in a regional or national conference.*

In October 2011, Susanne Masi gave an oral presentation on POC at the 38th Natural Areas Conference in Tallahassee, Florida, co-authored by Greg Hitzroth. In August 2012, Susanne Masi and Rachel Goad co-authored a poster on POC and citizen science presented at the Public Participation Scientific Research Conference in Portland, Oregon. Also see listings below for additional regional or national presentations.

As discussed in previous reports, POC discussed with Karen Tharp (Illinois Nature Conservancy Volunteer Stewardship Network) the possibility of exporting the POC program to southern Illinois where there is an active Native Plant Society. However, Tharp's original plan to use an AmeriCorps volunteer to help establish the program did not materialize, as that position was needed for higher priority tasks. In 2012, POC initiated a similar discussion with Chris Benda, president of the Southern Illinois chapter of the Illinois Native Plant Society. He expressed some interest and agreed to present the idea to his board. Additionally in 2012, POC discussed with Dr. Stephen Ebbs, chair of the Southern Illinois University Plant Biology Department, about the possibility of collaborating with the Chicago Botanic Garden on the POC program through professors, graduate students, and classes. As of now, no specific plans have been determined. Finally, efforts to expand the program within Kankakee County in the Kankakee Sands area should bear fruit in 2013. POC has been in positive discussion with The Nature Conservancy's Rob Littiken, land manager at Pembroke Savanna and other sites in the region, about bringing the program the area.

There has been no attempt to establish POC in other parts of Illinois, though IDNR has suggested POC pursue the St. Louis area. An interested local leadership, such as that displayed by Karen Tharp, and an adequate level of funding are needed to initiate this expansion. With current staffing and funding levels, the present POC based in the Chicago region is performing at maximum capacity in terms of volunteer training and support, active monitoring and landowner communication. For more details on expansion, see attachment 10 (POC meeting with IDNR, during which the topic was discussed).

Within the Chicago region itself, the program has created active spinoffs that enhance the overall value of POC and at the same time, provide focus to targeted areas having rich flora and excellent restoration potential. POC's Midewin National Tallgrass Prairie rare plant monitoring program has been in place through a cost share agreement with the US Forest Service continuously since 2003. A second offshoot is the monitoring along the lakefront and rare ravine ecosystems of Lake Michigan in Lake County through several separate, but related programs. POC has monitored at the Ft. Sheridan ravines and lakefront since 2003, through a partnership with the Lake County FPD and at McCormick Ravine since 2008, through

collaboration with the Lake Forest Garden Club and the Lake Forest Open Lands Association. Since 2010, POC has worked at the Openlands Lakeshore Preserve in Highwood through a partnership between the Chicago Botanic Garden and Openlands designed to develop a comprehensive monitoring program to track and guide management. Further expansion of ravine monitoring to the Waukegan area occurred in 2012 through a grant from the Great Lakes Restoration Initiative (GLRI) to the Waukegan Harbor Citizens' Advisory Group, who subcontracted POC to do rare plant monitoring and volunteer training. The Waukegan area is considered a buffer to Illinois Beach State Park. Another ravine monitoring project began in 2012 with the support of a grant from Sustain our Great Lakes (National Fish and Wildlife Foundation) awarded to the Alliance for the Great Lakes for a Northeast Illinois Ravine Restoration and Monitoring Program. POC conducted comprehensive rare plant monitoring and mapping for this project at Ft. Sheridan. Other ravines to the south are already monitored through POC's existing program and the lakefront is monitored through the north suburbs and the Chicago lakefront. Thus, POC ravine and lakefront monitoring extends from Illinois Beach State Park to the Indiana state line.

**Plants of Concern's Public Face: Communication and Outreach**

Highlights of POC's communication and outreach are listed below to demonstrate the extent of the program's influence and networking, starting with an outline of the POC website. Several items are also included as attachments. POC continues to have active partnerships with the following regional groups and projects: The Habitat Project (Audubon-Chicago Region); New Invaders Watch List (Northeast Illinois Invasive Plant Partnership and the Forest Preserve District of Lake County); Chicago Wilderness Natural Resources Management Team; The Volunteer Stewardship Network of The Illinois Nature Conservancy; Alliance for the Great Lakes; Waukegan Harbor Citizens Advisory Group; and the Carol Freeman Photography Endangered Species Project.

Plants of Concern Website

The POC website (www.plantsofconcern.org) was created in late 2003. Since the installation of Joomla, a content management system, all POC staff members are able to manage the web site content. The intent of the website is multi-faceted. It is a way to spread the word about rare plants and the POC program, recruit new volunteers, and provide news and monitoring resources such as downloadable forms, form submittal, and plant information to monitors.

In November 2011, the POC database was moved to a new website service provider and therefore, visitorship information is not available for the year. In 2012, the website has averaged 470 visitors per month, with April having the most visitors at 596.

There are seven menu sections on the website, with two including sub-sections:

- Home (home page) contains introductory paragraphs about the POC program.
- About POC
    - About Us shares background information about the program, its goals and achievements and statistics from previous years.
    - Meet the Staff lists the entire POC staff and contact information.
    - Funders provides a list of partner websites and programs that have funded POC.
- News displays newspaper articles about the program.
- Events displays postings of event announcements for workshops, plant outings and meetings.
- Forms & Protocols lets monitors download up-to-date monitoring forms, land management forms, and guidelines and instructions on GPS usage, and pacing and population estimation guidelines. The Plants of Concern *Volunteer Manual* is also available for download in this section.
- Plant Resources
    - Plant Information Websites provides a list of links to other plant resources that are related to POC or to rare plant monitoring.

- Monitored Species Bloom Times displays the bloom time range of all POC monitored species.
- Monitored Species Photo Gallery consists of individual web pages for each plant monitored by POC as well as photos of the species by Carol Freeman and volunteers and links to various plant resources.

- My POC Account allows monitors the opportunity to view and submit their monitoring forms on-line and lets Land Managers view the monitoring and land management forms pertaining to all of the sites they manage.

Website goals for 2012 and 2013 are to move the entire POC database into a PostgreSQL database with a PostGIS extension installed. This will allow for GIS mapping of all subpopulations using open source programs. The website will also be moved to a new content management system, Drupal, which will be compatible with the POC PostgreSQL database.

*All citations below date from the beginning of the grant period in July 2011 and/or completed after the report submitted in July 2011.*

Publications

**2011**

*Glencoe News*. 2011. News Briefs: Garden awarded grant. October 6, p.14.

Hitzroth, Greg. 2011. Plants of Concern Uses GPS to Protect Rare Plants. *Habitat Herald*. September (Vol 12, Issue 3) p. 6.

Masi, Susanne and Greg Hitzroth. 2011. Wildlife Preservation Fund. Mobilizing Citizen Scientists to Study and Protect Illinois' Rare Plants through Long-term Monitoring. Final report for the 2009-2011 grant. July.

Masi, Susanne, Greg Hitzroth, Pati Vitt, Bianca Rosenbaum, with Anya Maziak. 2011. Final grant report to the Gaylord and Dorothy Donnelley Foundation. December 15.

Skyba, Tatiana. 2011. Plants of Concern's Use of GIS. *Prairie Telegraph*. July-August (Vol 15, No. 5) p 6.

Skyba, Tatiana. 2011. A round of applause for Plants of Concern volunteers. *Prairie Telegraph*. November-December (Vol. 15, No. 6) pp. 1-2.

**2012**

Aaron, J. 2012 Plants of Concern: Showy associates and their rare friends. *Prairie Telegraph* (Midewin). Sept.-Oct (Vol 16, No. 5) pp 1-2.

Aaron, J. 2012. Plants of Concern: a dry, successful year. *Prairie Telegraph* (Midewin). Nov-Dec (Vol 16, No.6) p.4.

Chicago Botanic Garden. 2012. Openlands Lakeshore Preserve: Protecting Nature and Enriching Lives. Article about POC in *Keep Growing*. Fall (Vol. 3, Iss. 3) p. 28.

Citizen Science Central. 2012. POC information page in progress on this website. www.birds.cornell.edu/citscitookkit/projects/plantsofconcern.

Fink, D. (POC monitor) 2012. The geographic distribution of *Sarracenia purpurea* in Illinois and its associated species. Master of Arts thesis for Northeastern Illinois University Department of Geography and Environmental Studies. August. Thesis was based on POC monitoring.

Freeman, Carol. 2012. In beauty I walk. 2013 art calendar featuring several POC species, with 20% of calendar sale profits coming to Plants of Concern.

Garness, K. (POC orchid monitor) 2012. My orchid hobby has affected my life. Essay Contest 2012 3rd Place Winner (Plants of Concern prominent in this article). *Illinois Orchid Society Journal*. July (Vol. 60 No 7) pp. 7-9.

Goad, R. 2012. Rare plants and their monitors cover the Lake Michigan ravines. *Habitat Herald*. September (Vol 13, Iss 3) p. 6.

Havens, K., P. Vitt, and S. Masi. 2012. Citizen Science on a Local Scale: The Plants of Concern Program. *Frontiers in Ecology and the Environment*. August: 6(10): pp. 321-323.

Hitzroth, G. 2012. Long Term Monitoring of *Cypripedium candidum* in the Chicago Wilderness region. *The Native Orchid Conference Journal.* April-June: 9(2): pp. 33-34.

Masi, S. and G. Hitzroth. 2012. Openlands Lakeshore Preserve Monitoring Project. Report submitted to Openlands, February, 2012.

Masi, S. and T. Skyba. 2012. Rare Plant Monitoring at Midewin National Tallgrass Prairie, 2001-2011 Report submitted to the USFS, Midewin. January.

Masi, S. and G. Hitzroth. 2012. *Plants of Concern Volunteer Manual, 2012*. March.

Masi, S. and G. Hitzroth: 2012. Plants of Concern: 11 years, 600 volunteers later – what are we learning. *The Habitat Herald.* April: 13(2): pp. 6-7.

Themer, R. 2012. Field Museum builds links with region. *The Daily Journal* (Kankakee), Outdoors Section. Nov. 2. P. 1 (About Kankakee Sands tour; S. Masi and POC mentioned in article.)

Other publications in 2011 and 2012 included email newsletters from POC to volunteers and announcements of training workshops in stewardship newsletters including *The Habitat Herald*, *Gatherings Online* (VSN), *Acorn-McHenry County Volunteer Newsletter*, *Prairie Telegraph*, and *Grounds Cover* (CBG).

Presentations, Posters, and Events involving Plants of Concern

**2011 and 2012**

Bialecki, M. , S. Masi and R. Goad. 2012. Attended and presented at End of Season Monitor Gathering. Volunteer Resource Center, Forest Preserve District of Cook County, Chicago. Oct. 20.

Garness, K. (POC orchid monitor). 2011. Drawn to Nature. Art exhibit of her work including POC plants. Oak Park Conservatory, Oak Park, IL. August.

Garness, K. 2012. Art of the Land. Juried art show including her POC images. The Land Conservancy of McHenry County, Starline Gallery, Harvard, IL. September.

Garness, K. 2012. Native Plants of the Chicago Region. Art exhibit of her work including POC species. Volo Bog Nature Center, Volo, IL. May.

Garness, K. 2012. Wondrous Things. Art exhibit of her works including POC species. Independence Grove, Forest Preserve District of Lake County, Libertyville, IL. April-July.

Goad, R. 2012 Plants of Concern: A Volunteer-Based Regional Rare Plant Monitoring Program. Presentation for Wild Ones, DuPage County Chapter.. November 15.

Goad, R. and S. Masi. 2012. Led University of Wisconsin, Parkside, Field Methods Class (POC applications) at Chiwaukee Prairie, Kenosha County, Wisconsin , October 9.

Hitzroth, G., S. Masi, and P. Vitt. 2012. Plants of Concern: Monitoring Rare Plant Species in Chicago Wilderness. Presentation at the Illinois Lakes Management Association Conference at Northern Illinois University, DeKalb, IL, March 2.

Masi, S. and G. Hitzroth. 2011. Plants of Concern: citizen scientists I a regional rare plant monitoring program- results and trends after 10 years. Presentation at the 38th Annual Natural Areas Association Conference, Tallahassee, FL. November 1-4.

Masi, S., G. Hitzroth, and R. Goad 2011-2012. Led several rare plant forays with teams of volunteers in monitoring searches over larger areas, at Lyman Woods (in cooperation with DuPage FPD), Braidwood Dunes (in cooperation with Will County FPD), and Illinois Beach State Park (in cooperation with IDNR staff). Aaron, J. led regular monitoring forays at Midewin National Tallgrass Prairie. POC volunteers were notified of these events at workshops, on the website, and by email.

Masi, S. and G. Hitzroth, T. Skyba, R. Goad, E. Bialecki and J. Aaron. 2011-2012. Plants of Concern: Volunteers Monitor Rare Plants in a Standardized Regional Program. Presentation of potential research opportunities to Northwestern University Graduate Students, Chicago Botanic Garden. November 19, 2011 and November 16, 2012.

Masi, S. 2012. Plants of Concern: Citizen Scientists Monitor Rare Species. Presentation to Lake County Audubon Society, May 7.

Masi, S. 2012. Plants of Concern in Kane County. Presentation and wildflower tour at Dixie Briggs Fromm Nature Preserve sponsored by the Kane County Wild Ones, June 30.

Masi, S., assisted by E. Bialecki. 2012. Asters, Goldenrods and More. Presentation and wildflower tour of Dixon Prairie for the North Branch Restoration Project, August 11.

Masi, S. and R. Goad. 2012. POC information table for World Environment Day, Chicago Botanic Garden, June 2.

Masi, S. and R. Goad. 2012. Plants of Concern, a citizen science monitoring program in Chicago Wilderness since 2001. Poster presentation at the Conference on Public Participation in Scientific Research, Portland, OR, August 4-5.

Masi, S. and R. Goad. 2012. Plants of Concern, a citizen science monitoring program in Chicago Wilderness since 2001. Poster presentation at the 2012 Indiana Dunes National Lakeshore Science Conference, Indiana University Northwest, Gary, IN. November 28.

Powell, E. (POC monitor). 2012. Plants of Concern. Presentation to the Kenilworth Garden Club. Kenilworth, IL. June 28.

Community Service – POC Related

Goad, R. 2012. Elected secretary of the Illinois Native Plant Society.

Masi, S. 2011 and 2012. Member, Illinois Endangered Species Protection Board.

Masi, S. 2011 and 2012. Endangered Species Protection Board Technical Expert Consultant (Plants).

Hitzroth, Greg. 2011. Attended Annual Volunteer Stewardship Network (VSN) Gathering, Northern Illinois Groups. The Nature Conservancy VSN. Glacial Park, McHenry County, October 25.

Masi, S. and R. Goad. 2012. Reported on POC at the Annual VSN Gathering, Northern Illinois Groups. The Nature Conservancy VSN. South Shore Cultural Center, Chicago, October 23.

Grants: Current and Pending

- 2011-2013. Cost-Share Agreement from the US Forest Service for monitoring work at Midewin National Tallgrass Prairie.
- 2011 and 2012. Illinois Wildlife Preservation Fund Grant. Current grant extends to 2013.
- 2011. POC completed a two-year award from the Donnelley Foundation at $35,000 per year.
- 2011 and 2012. The Nature Conservancy's Volunteer Stewardship Network.
- 2012-2013. Sustain our Great Lakes (National Fish and Wildlife Foundation): Northeast Illinois Ravine Restoration and Monitoring Program project awarded to the Alliance for the Great Lakes. POC is a subcontracted partner in this grant.
- 2013. Sally Hands Foundation.
- 2011 and 2012. 2013 anticipated. Openlands.
- 2012 and 2013. Waukegan Area Citizen's Advisory Group Great Lakes Restoration Initiative. POC is a subcontracted partner in this grant.
- 2012. 2013 anticipated. Forest Preserve District of Cook County for a POC internship position.

## CONCLUSION AND FUTURE DIRECTIONS

As the discussions in this report demonstrate, Plants of Concern remains strong and continues to grow as an essential source of data on endangered, threatened, and rare plant species. The data serves land managers and the program engages trained volunteers, as they make a meaningful contributions to the regional understanding of rare plant populations, including factors that threaten them and management activities that sustain them. The work initiated in Indiana and Wisconsin to export the program to the Chicago Wilderness regions of those states has proven successful. In Illinois, programs at Midewin, Openlands Lakeshore Preserve, Waukegan Harbor Area of Concern, and the Northeast Illinois Ravine Restoration and Monitoring Program attest to POC's influence and effectiveness. POC also provides updated and valuable data to the Endangered Species Protection Board.

The listings under Objective 6 above demonstrate other examples of POC contributions and recognition on both a regional and national scale. As citizen science becomes more prominent on the national level, POC

is recognized as a successful and established monitoring program. At present, the POC data reservoir is very large, housing 12 years of monitoring data and examples of how the data can be analyzed are presented in this report. POC is making significant progress in its capacity to use GIS to show spatial relationships between population locations and management activities over multiple years. However, these data can be mined for far more analysis than POC staff can undertake with currently available resources. Further exploration of the data has great potential to benefit land managers as they make decisions to protect and manage rare plant populations as a parallel effort to managing communities. POC will continue to be a resource for researchers to further tap into the data and is already working with individuals from several institutions, as described in this report. These research opportunities, which maximize the benefits of POC, are only possible with the assurance of a stable long-term monitoring program.

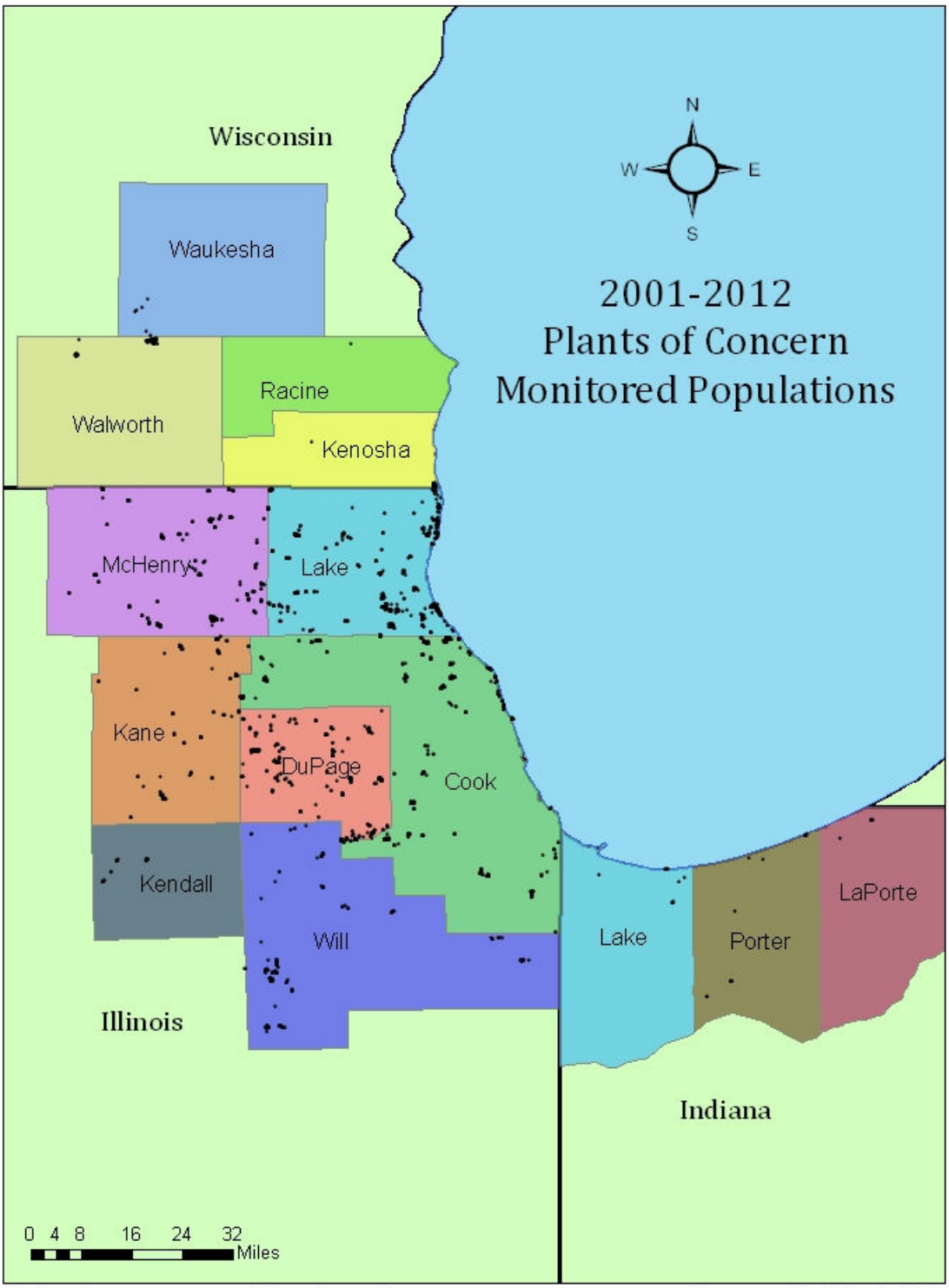
Overall, one of the chief benefits of POC is the collaboration among the many partner agencies and their volunteers in monitoring rare species. In addition to seven forest preserve districts, the US Forest Service, and IDNR, 103 other landowners have been involved in the program. Many of these would not otherwise have the resources to engage in a rare plant monitoring program. Most of these partners are also members of the Chicago Wilderness Alliance. POC, as a priority project of the CW Resource Management Team, has played a key role in helping to implement the Chicago Wilderness Biodiversity Recovery Plan.

The future and scope of Plants of Concern are closely linked to funding. It is critical that this long-term monitoring program continue to provide its demonstrated regional benefits. In the current economic climate, funding has become increasingly uncertain. POC's core program is assured through 2013 through support from the Illinois Department of Natural Resources Wildlife Preservation Fund and the grants listed above. In addition, the Chicago Botanic Garden continues to seek federal and local funding to support a comprehensive analysis of Plants of Concern data.

## ATTACHMENTS

1. GIS Map of POC Monitored Populations
2. Level 1 Monitoring Form
3. Level 1 Land Management Form Parts 1-3
4. Advisory Group Member Listing, 2011
5. Plants of Concern Species List (indicate which are IL, WI, IN)
6. Plants of Concern 2001-2010. Counties, Sites, Landowners & Element Occurrences
7. Plants of Concern 2001-2010. Species EO Frequency by County, a Regional View
8. Example of a POC Training Workshop Agenda
9. POC meeting with IDNR: Susanne Masi and Greg Hitzroth. October 18, 2011
10. Illinois Department of Natural Resources-owned and Nature Preserve Sites Monitored by Plants of Concern
11. Chicago Botanic Garden's Plants of Concern Program Receives Illinois Wildlife Preservation Fund Grant. Press Release issued by the Chicago Botanic Garden, Sept. 25, 2009
12. News Briefs: Garden awarded grant. Glencoe News, October 6, 2011

Attachment 1




*Each point may represent multiple subpopulations

Map created by R.Goad, 2012

Attachment 2

# Plants of Concern Monitoring Form – 2012

☐ **Submitted to POC?** ☐ **Submitted to Land Manager?** ☐ **Submitted online?**

**LEAD MONITOR'S NAME:** _____ **MONITORING DATE:** _____

Use one form for each subpopulation. Subpops are separated by at least 50 meters between the closest plants in each group. Monitor within 10 days of previous year's monitoring date. For comparison, refer to the last recorded monitoring report, which you can access with your login from the website or by contacting POC. Complete every blank. For the GPS, associates, or directions sections **ONLY,** you may write "same as last report" if there are no changes. Review guidelines in the Volunteer Manual or at www.plantsofconcern.org.

## SECTION 1: GENERAL SPECIES AND SITE IDENTIFICATION

**GENUS:** _____ **EOR #:** _____

**SPECIES:** _____ **COUNTY:** _____

**VARIETY:** _____ **LAND OWNER:** _____

**SITE NAME:** _____ **MANAGER:** _____

**SUBPOPULATION #:** _____

PLANTS IN SUBPOP FOUND? ☐ Yes ☐ No*

*If plants are not found, go to Sections 4, 5, 6 and 7 to input information on the area searched.

## SECTION 2: GPS

☆ **POC preferred**

**COORDINATE SYSTEM** ☐ Degree Decimal (e.g. dd.ddddd N) ☆ ☐ Other: _____

**DATUM** ☐ WGS 84 ☆ ☐ Other: _____

**New in 2011: Specify other coordinate systems and Datums that are not Degree Decimal and WGS 84 (see manual for guidelines)**

**North, South, East, and West points needed ONLY if dimensions exceed 13 meters**

GPS same as last report? ☐ Yes ☐ No

**Record new GPS points if "No", new subpop or annual species**

| | LATITUDE | LONGITUDE | ACCURACY (m) |
|---|---|---|---|
| CENTER: | ˚N | ˚W | |
| NORTH: | ˚N | ˚W | |
| SOUTH: | ˚N | ˚W | |
| EAST: | ˚N | ˚W | |
| WEST: | ˚N | ˚W | |

## SECTION 3: SUBPOPULATION INFORMATION

DISTANCE COVERED BY POPULATION IN METERS (**Important:** this should be measured each year if subpop is found):

E-W: _____

N-S: _____

TODAY'S SOIL CONDITION?

☐ Flooded
☐ Saturated
☐ Moist, well-drained
☐ Dry

PLANT COUNT RANGE

☐ < or = 100
☐ 101-200
☐ 201-400
☐ 401- 800
☐ >800

JUVENILES PRESENT?

☐ Yes
☐ No
☐ Annual Species
☐ Don't know how to identify

GROWTH FORM?

☐ Stems
☐ Clumps
☐ Rosettes
☐ Other: _____

REPRODUCTIVE STATE?***

% Reproductive: _____

☐ Flower
☐ Fruit
☐ Flower & Fruit
☐ Vegetative

TOTAL NUMBER?** (include juveniles)

#: _____

COUNT ESTIMATED?

☐ Yes ☐ No

**Please describe estimation method in Notes on p.3**

** Count or **provide a number as close as possible**, also select a range. See population estimation exercise in the Volunteer Manual.

*** % Reproductive can be found by dividing the number of reproductive plants (flowering or fruiting) by the total number of plants.



Mail to: Chicago Botanic Garden attn: POC / 1000 Lakecook Rd / Glencoe, IL 60022

Species: _____ Site: _____ Subpop: _____

## SECTION 4: ASSOCIATE SPECIES INFORMATION

**ASSOCIATES -** list **dominant native** species. List additional ones if you prefer. Write "same as last report" if no change.

**Trees (including saplings and seedlings):**

1 _____
2 _____
3 _____

**Shrubs/Vines:**

1 _____
2 _____
3 _____

**Herbaceous Plants:**

1 _____
2 _____
3 _____
4 _____
5 _____

## SECTION 5: THREATS TO THE SUBPOPULATION (complete each time)

**DEGREE OF THREATS** - Check all that apply**, including if none (0%)**

| | | | | | |
|---|---|---|---|---|---|
| Invasive woody brush encroachment < 1 m tall | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Invasive brush/tree encroachment > 1 m tall | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Deer browse (% of study plants browsed) | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Deer browse (% of all plants browsed) | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Erosion (% of area with visible signs) | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| **Authorized** trails impacting the population | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| **Unauthorized** trails impacting the population | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Other: _____ | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Other: _____ | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |
| Other: _____ | ☐ 0% | ☐ 1-25% | ☐ 26-50% | ☐ 51-75% | ☐ 76-100% |

**OTHER THREATS -** If you notice an immediate threat to the population contact the landowner or POC

**INVASIVE SPECIES -** % of impact of invasive, exotic **OR NATIVE PLANTS** (list additional species as needed)

| | | | | | |
|---|---|---|---|---|---|
| 1 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |
| 2 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |
| 3 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |
| 4 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |
| 5 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |
| 6 _____ | ☐ 1-20% | ☐ 21-40% | ☐ 41-60% | ☐ 61-80% | ☐ 81-100% |



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Species: _____ Site: _____ Subpop: _____

## Section 6: Management within the subpopulation in the past year (complete each time)

**BURNING**

- ☐ Yes
- ☐ No
- ☐ Don't Know

% Monitored population affected:
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-100%
- ☐ Don't Know

EVIDENCE:
- ☐ Ash
- ☐ No leaf litter/duff
- ☐ Steward or manager's word
- ☐ Other: _____

**BRUSH OR INVASIVE TREE REMOVAL**

- ☐ Yes
- ☐ No
- ☐ Don't Know

% Monitored population affected:
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-100%
- ☐ Don't Know

EVIDENCE:
- ☐ Freshly cut stumps
- ☐ Recent brush piles
- ☐ Steward or manager's word
- ☐ Other: _____

**SPECIES REMOVED:** _____

**HERBACEOUS INVASIVE REMOVAL**

- ☐ Yes
- ☐ No
- ☐ Don't Know

% Monitored population affected:
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-100%
- ☐ Don't Know

EVIDENCE:
- ☐ Piles of pulled plants
- ☐ Brown/dying plants
- ☐ Steward or manager's word
- ☐ Other: _____

**SPECIES REMOVED:** _____

**MOWING*****

- ☐ Yes
- ☐ No
- ☐ Don't Know

% Monitored population affected:
- ☐ 1-33%
- ☐ 34-66%
- ☐ 67-100%
- ☐ Don't Know

EVIDENCE:
- ☐ Cut stems
- ☐ Fresh clippings
- ☐ Steward or manager's word
- ☐ Other: _____

*** Include a "Yes" response for mowing only if mowing is done as a management practice. Mowing roadsides or trails is **NOT** a management tool for natural areas, and should be included in threats section.

**OTHER MANAGEMENT WITHIN OR AFFECTING THE SUBPOPULATION AND % OF SUBPOPULATION AFFECTED:**

## SECTION 7: DIRECTIONS TO SUBPOPULATION AND NOTES

Give detailed directions for **new subpopulations** or **changes** in directions. Include: nearest town, route number, parking, major trail, and walking directions. Sketch a simple location map and outline of the population within the site; use landmarks. Use back if needed.

**DIRECTIONS: If unchanged, write same as last report.**

**NOTES (use reverse if necessary):**

| Monitor Names | Roles* | Hours |
|---|---|---|
| | | |
| | | |
| | | |

| Monitor Names | Roles* | Hours |
|---|---|---|
| | | |
| | | |
| | | |

***ROLES-Indicate volunteer, steward, staff or intern. For new volunteers, provide confidentiality form & contact information. Within 3 weeks of monitoring, submit original form to POC, send a copy to the Land Manager, and keep a copy for your records. A scanned image of the completed monitoring form may be e-mailed instead of mailing a paper form. See guidelines in Volunteer Manual for submission procedures. IN ADDITION, on-line submission is strongly urged at http://www.plantsofconcern.org.**



Mail to: Chicago Botanic Garden attn: POC / 1000 Lakecook Rd / Glencoe, IL 60022

Attachment 3a

# PLANTS OF CONCERN LAND MANAGEMENT FORM – 2012
## PART 3: HISTORY

**PERSON COMPLETING FORM:** _____ **DATE SUBMITTED:** _____

This form only needs to be completed once for each EOR or subpopulation. If you previously completed this part of the Land Management form for the subpopulation, only complete Parts 1 and 2. One form may be used for multiple species sharing a management area.

## SECTION 1: GENERAL SITE AND SPECIES IDENTIFICATION

**SITE NAME:** _____ **LAND OWNER:** _____

**COUNTY:** _____ **MANAGER:** _____

**1.TAXON:** _____ **3.TAXON:** _____

**EOR, SUBPOP:** _____ **EOR, SUBPOP:** _____

**2.TAXON:** _____ **4.TAXON:** _____

**EOR, SUBPOP:** _____ **EOR, SUBPOP:** _____

## SECTION 2: POPULATION INFORMATION

HABITAT/COMMUNITY TYPE: _____

(CW CLASSIFICATION from Biodiversity Recovery Plan, starting on p. 140– available at www.plantsofconcern.org)

IS THIS POPULATION:

- ☐ Naturally occurring
- ☐ Introduced through restoration
- ☐ Both
- ☐ Don't know

IF INTRODUCED, PLEASE PROVIDE THE FOLLOWING INFORMATION:

| FROM | | | YEAR | SOURCE |
|---|---|---|---|---|
| SEED | PLANT | BOTH | | |
| ☐ | ☐ | ☐ | | |

**(Indicate which species, if multiples are included on form.)**

## SECTION 3: LAND USE HISTORY OF THE SITE, AS IT MAY AFFECT SUBPOPULATIONS

| PLOWING/AGRICULTURE | GRAZING: | TILING/DITCHING: | Other: _____ |
|---|---|---|---|
| ☐ Yes | ☐ Yes | ☐ Yes | _____ |
| ☐ No | ☐ No | ☐ No | _____ |
| ☐ Don't Know | ☐ Don't Know | ☐ Don't Know | _____ |
| Years: _____ | Years: _____ | Years: _____ | Years: _____ |

## SECTION 3: HISTORY OF GENERAL SITE MANAGEMENT

| BURNING? | INVASIVE BRUSH OR TREE REMOVAL? | HERBACEOUS INVASIVES | MOWING FOR COMMUNITY | HYDROLOGICAL MODIFICATIONS? |
|---|---|---|---|---|
| ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes |
| ☐ No | ☐ No | ☐ No | ☐ No | ☐ No |
| ☐ Don't Know | ☐ Don't Know | ☐ Don't Know | ☐ Don't Know | ☐ Don't Know |

**YEAR MANAGEMENT BEGAN AT THIS SITE:**

**OTHER MANAGEMENT CONDUCTED WITHIN THE SITE:**

Attachment 3b

# PLANTS OF CONCERN LAND MANAGEMENT FORM - 2012
## PART 2: MANAGEMENT IN THE PAST YEAR - SITES

**PERSON COMPLETING FORM:** _____ **DATE SUBMITTED:** _____

**LEAD MONITOR'S NAME:** _____ **YEAR SUBPOP(S) MONITORED:** _____

If you previously completed a Land Management Form for the EOR, or for its subpopulations, only fill in Part 1 and 2 Forms. If you have never completed a Land Management form for the subpopulation, please fill out Part 3. You may include more than one species (list all species) and subpopulation (list all subpops) per form if they occur in the same management location. Please review the Guidelines, available in the POC Manual or on www.plantsofconcern.org.

## SECTION 1: GENERAL SITE AND SPECIES SITE IDENTIFICATION

**SITE NAME:** _____ **LAND OWNER:** _____

**COUNTY:** **MANAGER:** _____

**1.TAXON:** _____ **3.TAXON:** _____

**EOR, SUBPOP:** _____ **EOR, SUBPOP:** _____

**2.TAXON:** _____ **4.TAXON:** _____

**EOR, SUBPOP:** _____ **EOR, SUBPOP:** _____

## SECTION 2: MOST CURRENT GENERAL SITE MANAGEMENT

| BURNING? | INVASIVE BRUSH OR TREE REMOVAL? | HERBACEOUS INVASIVES | MOWING?* | HYDROLOGICAL MODIFICATIONS? |
|---|---|---|---|---|
| ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes | ☐ Yes |
| ☐ No | ☐ No | ☐ No | ☐ No | ☐ No |
| ☐ Don't Know | ☐ Don't Know | ☐ Don't Know | ☐ Don't Know | ☐ Don't Know |

**DEER REMOVAL**

SEASON: _____ YEAR: _____ # OF DEER REMOVED: _____

SIZE OF AREA INVOLVED (# ACRES): _____

OTHER MANAGEMENT CONDUCTED WITHIN THE SITE THIS YEAR:

## SECTION 3: ADDITIONAL COMMENTS

**Mowing denotes clearing of herbaceous material or small brush for community management, in open areas, not trail maintenance. The use of large machinery to remove primarily woody material should be listed below, under invasive species management*

Mail to form to Chicago Botanic Garden attn: POC / 1000 Lakecook Rd / Glencoe, IL 60022 or e-mail copied image to smasi@chicagobotanic.org.
Online entry is now available, see volunteer manual for details.

Attachment 3c

# PLANTS OF CONCERN LAND MANAGEMENT FORM - 2012
# PART 1: MANAGEMENT IN THE PAST YEAR - SUBPOPULATIONS

**PERSON COMPLETING FORM:** _____ **DATE SUBMITTED:** _____

**LEAD MONITOR'S NAME:** _____ **YEARS SUBPOP(S) MONITORED:** _____

If you previously completed a Land Management Form for the EOR, or for its subpopulations, only fill in Forms Part 1 and 2. If you have never completed a Land Management form for the subpopulation, please fill out Form Part 3. Include one species and subpopulation per form. Please review the Guidelines, available in the POC manual or on www.plantsofconcern.org.

## SECTION 1: GENERAL SPECIES AND SITE IDENTIFICATION

**SITE NAME:** _____ **LAND OWNER:** _____

**COUNTY:** _____ **MANAGER:** _____

1.**SPECIES:** _____ **EOR, SUBPOP:** _____

2.**SPECIES:** _____ **EOR, SUBPOP:** _____

3.**SPECIES:** _____ **EOR, SUBPOP:** _____

4.**SPECIES:** _____ **EOR, SUBPOP:** _____

## SECTION 2: MANAGEMENT WITHIN THE MONITORED SUBPOPULATION(S)

If there was a gap since last submission, provide information for intervening years.

**BURNING or MOWING – Please specify: Burning (B) or Mowing (M)** *Mowing denotes clearing of herbaceous material or small brush for community management , in open areas, not trail maintenance. The use of large machinery to remove primarily woody material should be listed below, under invasive species management. Burn intensity uses a range of 1-33% being low, 34-66% moderate, 67-100% high. See page 20 of the volunteer manual for further definition.*

| ACTIVITY (B or M) | DATE (dd/mm/yy) | % AREA AFFECTED | | | % INTENSITY (Burning only) | | | Notes |
|---|---|---|---|---|---|---|---|---|
| | | 1-33 | 34-66 | 67-100 | 1-33 | 34-66 | 67-100 | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

**INVASIVE SPECIES MANAGEMENT (WOODY OR HERBACEOUS): Removal and/or Herbiciding** *% refers to the percent of an invasive species affected (removed and/or herbicided) in the population area, i.e., was it all, or only partly, removed.*

| DATE (dd/mm/yy) | SPECIES BEING REMOVED | % REMOVAL | | | % HERBICIDING | | | Notes |
|---|---|---|---|---|---|---|---|---|
| | | 1-33 | 34-66 | 67-100 | 1-33 | 34-66 | 67-100 | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

**OTHER MANAGEMENT BEING CONDUCTED WITHIN THE SUBPOPULATION(S) AND DATES AND DEGREE TO WHICH IT AFFECTS SUBPOPULATION(S):**

## SECTION 3: ADJACENT LAND USE NOTES

LAND USE ADJACENT TO SITE THAT MIGHT AFFECT MONITORED SUBPOPULATION(S):

**Attachment 4**

## Plants of Concern Advisory Group, 2011

Debra Antlitz, Ecologist
Forest Preserve District of Cook County

Jane Balaban, Regional Steward
North Branch Restoration Project

Jeannie Barnes
Illinois Natural Heritage Database

Robb Cleave, Volunteer Coordinator
Forest Preserve District of Kane County

R. Dan Gooch , Chair
IL Endangered Species Protection Board

Rebecca Grill, Natural Areas Coordinator
Highland Park Park District

Ben Haberthur, Restoration Ecologist
Forest Preserve District

Cindy Hedges, Volunteer Coordinator
Forest Preserve District of DuPage County

Juanita Armstrong, Natural Resources Land Manager
Forest Preserve District of Will County

Kenneth Klick, Ecologist
Forest Preserve District of Lake County

Tara Kieninger , Manager
Illinois Natural Heritage Database

Scott Kobal, Plant Ecologist
Forest Preserve District of DuPage County

Linda Masters, Restoration Specialist
Openlands

Kelly Neal, Stewardship Project Manager
Illinois Nature Preserves Commission

Stephen Packard, Director
Audubon - Chicago Region

Kim Roman, Field Representative
Illinois Nature Preserves Commission

Laurie Ryan, Plant Ecologist
McHenry County Conservation District

Rebecca Schillo, Conservation Ecologist
The Field Museum

Susie Schreiber, President
Waukegan Area Citizens Advisory Group

Brad Semel, Heritage Biologist
Illinois Department of Natural Resources

Dan Spencer, Resource Ecologist
Forest Preserve District of Cook County

Jason Steger, Volunteer Coordinator
Chicago Park District

Karen Tharp, Volunteer Stewardship Network
The Nature Conservancy

Eric Ulaszek, Horticulturist
Midewin National Tallgrass Prairie

Pati Vitt, Conservation Scientist
Chicago Botanic Garden

Attachment 5

# Currently Monitored Plants of Concern

| Species | Common Name | Status* | Species | Common Name | Status* |
|---|---|---|---|---|---|
| *Actaea rubra* | Red Baneberry | R | *Ilex verticillata* | Winterberry | R |
| *Adiantum pedatum* | Maidenhair Fern | R | *Iliamna remota* | Kankakee Mallow | E |
| *Agalinis skinneriana* | Pale False Foxglove | T | *Iodanthus pinnatifidus* | Violet Cress | R |
| *Alnus rugosa* | Speckled alder | E | *Isoetes butleri* | Glade Quillwort | E |
| *Amelanchier interior* | Inland Serviceberry | T | *Jeffersonia diphylla* | Twinleaf | R |
| *Amelanchier sanguinea* | Roundleaf Serviceberry | E | *Juglans cinerea* | Butternut | R |
| *Ammophila breviligulata* | American Beach Grass | E | *Juncus alpinoarticulatus* | Alpine Rush | E |
| *Arabis hirsuta* | Hairy Rock Cress | R | *Juncus articulatus* | Jointed Rush | R |
| *Aralia hispida* | Bristly Sarsaparilla | R | *Juncus scirpoides* | Round-Headed Rush | R |
| *Aralia racemosa* | Spikenard | R | *Juniperus communis* | Common Juniper | T |
| *Arctostaphylos uva-ursi* | Common Bearberry | E | *Juniperus horizontalis* | Creeping Juniper; Carpet Juniper | E |
| *Aristolochia serpentaria* | Virginia Snakeroot | R | *Larix laricina* | American Larch | T |
| *Artemisia serrata* | Saw-toothed Sagebrush | R | *Lathyrus ochroleucus* | Pale Vetchling | T |
| *Asclepias amplexicaulis* | Sand Milkweed | R | *Lechea intermedia* | Savanna Pinweed | T |
| *Asclepias exaltata* | Poke Milkweed | R | *Lespedeza leptostachya* | Prairie Bush Clover | E |
| *Asclepias hirtella* | Tall Green Milkweed | R | *Lespedeza violacea* | Violet Bush Clover | R |
| *Asclepias lanuginosa* | Woolly Milkweed | E | *Liatris scariosa var. nieuwlandii* | Savanna Blazing Star | T |
| *Asclepias meadii* | Mead's Milkweed | E | *Lonicera dioica* | Red Honeysuckle | R |
| *Asclepias ovalifolia* | Oval Milkweed | E | *Luzula acuminata* | Hairy wood rush | E |
| *Asclepias perennis* | White Milkweed | R | *Lycopodium clavatum* | Ground Pine | E |
| *Asclepias viridiflora* | Green Milkweed | R | *Lycopodium complanatum var. flabelliforme* | Trailing Ground Pine | R |
| *Aster furcatus* | Forked Aster | T | *Lycopodium obscurum* | Ground Pine | R |
| *Baptisia leucophaea* | Cream Wild Indigo | R | *Lycopodium tristachyum* | Ground Cedar | R |
| *Beckmannia syzigachne* | American Sloughgrass | E | *Lycopus rubellus* | Stalked Water Horehound | R |
| *Besseya bullii* | Kitten Tails | T | *Lycopus virginicus* | Virginia Water Horehound | R |
| *Betula alleghaniensis* | Yellow Birch | E | *Lysimachia hybrida* | Lowland Yellow Loosestrife | R |
| *Betula papyrifera* | Paperbark Birch | R | *Malvastrum hispidum* | False Mallow | E |
| *Betula populifolia* | Gray Birch | R | *Matteuccia struthiopteris* | Ostrich Fern | R |
| *Bidens discoidea* | Swamp Beggar's Ticks | R | *Medeola virginiana* | Indian Cucumber-root | E |
| *Botrychium campestre* | Iowa Moonwort | E | *Megalodonta beckii* | Water Beggar Tick | E |
| *Botrychium matricariifolium* | Matricary Grapefern | E | *Melanthium virginicum* | Bunch Flower | T |
| *Cakile edentula* | Sea Rocket | T | *Menyanthes trifoliata* | Buckbean, Bogbean | T |
| *Callitriche heterophylla* | Large Water Starwort | R | *Minuartia patula* | Slender Sandwort | T |
| *Callitriche palustris* | Common Water Starwort | R | *Mitella diphylla* | Bishop's Cap, Miterwort | R |
| *Calopogon oklahomensis* | Oklahoma grasspink | E | *Monotropa hypopithys* | Pine Sap | R |
| *Calopogon tuberosus* | Grasspink Orchid | E | *Monotropa uniflora* | Indian Pipe | R |
| *Carex aurea* | Golden Sedge | T | *Oenothera perennis* | Small Sundrops | T |
| *Carex bromoides* | Brome Hummock Sedge | T | *Ophioglossum vulgatum var. pseudopodum* | Northern Adder's Tongue Fern | R |
| *Carex brunnescens* | Green Bog Sedge | E | *Orchis spectabilis* | Showy Orchis | R |
| *Carex canescens* | Gray Bog Sedge | E | *Orobanche uniflora* | One-flowered Cancer Root | R |
| *Carex conoidea* | Prairie Gray Sedge | R | *Oryzopsis racemosa* | Black-Seeded Rice Grass | R |



*E=Endangered, T=Threatened, and R=Locally Rare

# Currently Monitored Plants of Concern

| Species | Common Name | Status* | Species | Common Name | Status* |
|---|---|---|---|---|---|
| *Carex crawei* | Early Fen Sedge | R | *Panax quinquefolius* | Wild Ginseng | R |
| *Carex crawfordii* | Crawford's oval sedge | E | *Pilea fontana* | Clearweed | R |
| *Carex crus-corvi* | Crowfoot Fox Sedge | R | *Pinus banksiana* | Jack Pine | E |
| *Carex cryptolepis* | Small Yellow Sedge | E | *Plantago cordata* | Heart-leaved Plantain | E |
| *Carex disperma* | Shortleaf Sedge | E | *Platanthera clavellata* | Club-spur Orchid | E |
| *Carex echinata* | Prickly Sedge | E | *Platanthera flava var. herbiola* | Tubercled Orchid | T |
| *Carex formosa* | Awnless Graceful Sedge | E | *Platanthera hyperborea var. huronensis* | Northern Bog Orchid | R |
| *Carex frankii* | Bristly Cattail Sedge | R | *Platanthera psycodes* | Purple Fringed Orchid | E |
| *Carex garberi* | False Golden Sedge | E | *Poa sylvestris* | Woodland Blue Grass | R |
| *Carex gracilescens* | Slender Wood Sedge | R | *Pogonia ophioglossoides* | Snake-mouth Orchid | E |
| *Carex intumescens* | Shining Bur Sedge | T | *Polygonatum pubescens* | Downy Solomon's Seal | E |
| *Carex leptalea* | Slender Sedge | R | *Polystichum acrostichoides* | Christmas Fern | R |
| *Carex oligosperma* | Running Bog Sedge | E | *Populus balsamifera* | Balsam Poplar | E |
| *Carex pedunculata* | Long-stalked Hummock Sedge | R | *Potamogeton robbinsii* | Fern Pondweed | E |
| *Carex trisperma* | Three-seeded Bog Sege | E | *Potentilla palustris* | Marsh Cinquefoil | R |
| *Carex tuckermanii* | Bent-Seeded Hop Sedge | E | *Prenanthes aspera* | Rough White Lettuce | R |
| *Carex umbellata* | Early Oak Sedge | R | *Psoralea tenuiflora* | Scurfy Pea | R |
| *Carex utriculata* | Common Yellow Lake Sedge | R | *Pycnanthemum pilosum* | Hairy Mountain Mint | R |
| *Carex viridula* | Green Yellow Sedge | T | *Pyrola elliptica* | Shinleaf | R |
| *Carex woodii* | Wood's Stiff Sedge | T | *Ranunculus rhomboideus* | Prairie Buttercup | T |
| *Cassia hebecarpa* | American Senna | R | *Rhus vernix* | Poison Sumac | R |
| *Castilleja coccinea* | Indian Paintbrush | R | *Rhynchospora alba* | White Beak Rush | T |
| *Castilleja sessiliflora* | Downy Yellow Painted Cup | E | *Rubus odoratus* | Purple Flowering Raspberry | E |
| *Ceanothus herbaceus* | Red Root | T | *Rubus pubescens* | Dwarf Raspberry | T |
| *Chamaedaphne calyculata* | Leatherleaf | T | *Sagittaria calycina* | Hooded Arrowhead | R |
| *Chamaesyce polygonifolia* | Seaside Spurge | E | *Salix candida* | Hoary Willow, Sage Willow | R |
| *Cimicifuga racemosa* | Black Cohosh | E | *Salix serissima* | Autumn Willow | E |
| *Cirsium hillii* | Prairie Thistle, Hill's Thistle | R | *Sanguisorba canadensis* | Canada Burnet | E |
| *Cirsium pitcheri* | Dune thistle | T | *Sarracenia purpurea* | Pitcher Plant | E |
| *Collinsia verna* | Blue-Eyed Mary | R | *Saxifraga pensylvanica* | Swamp Saxifrage | R |
| *Comptonia peregrina* | Sweet Fern | E | *Schoenoplectus hallii* | Hall's Bulrush | T |
| *Conopholis americana* | American cancer-root | R | *Scirpus hattorianus* | Early Dark Green Rush | E |
| *Corallorhiza maculata* | Spotted Coral Root | T | *Scirpus microcarpus* | Reddish Bulrush | E |
| *Corydalis aurea* | Scrambled Eggs Corydalis | E | *Scutellaria ovata var. versicolor* | Heart-leaved Skullcap | R |
| *Cypripedium calceolus var. pubescens* | Large Yellow Lady's Slipper | R | *Shepherdia canadensis* | Buffalo Berry | E |
| *Cypripedium candidum* | White Lady's-Slipper | T | *Silene regia* | Royal Catchfly | E |
| *Cypripedium parviflorum var. makasin* | Small Yellow Lady's Slipper | E | *Silene virginica* | Fire Pink | R |
| *Cypripedium reginae* | Showy Lady's Slipper | E | *Sisyrinchium campestre* | Prairie Blue-Eyed Grass | R |
| *Cypripedium x andrewsii* | Hybrid Lady's Slipper | R | *Sisyrinchium montanum* | Mountain Blue-eyed Grass | E |
| *Dalea foliosa* | Leafy Prairie Clover | E | *Sparganium emersum* | Green-fruited Bur Reed | E |
| *Delphinium tricorne* | Dwarf Larkspur | R | *Spiranthes lacera var. gracilis* | Northern Slender Lady's Tresses | R |



*E=Endangered, T=Threatened, and R=Locally Rare

Attachment 5

# Currently Monitored Plants of Concern

| Species | Common Name | Status* | Species | Common Name | Status* |
|---|---|---|---|---|---|
| *Desmodium canescens* | Hoary Ticktrefoil | R | *Spiranthes lucida* | Early Ladies' Tresses | E |
| *Desmodium cuspidatum* | Bracted Tick Trefoil | R | *Spiranthes magnicamporum* | Great Plains Ladies' Tresses | R |
| *Diarrhena americana* | Beak Grass | R | *Spiranthes ovalis* | October Lady's Tresses | R |
| *Dichanthelium boreale* | Northern Panic Grass | E | *Spiranthes romanzoffiana* | Hooded lady's tresses | E |
| *Diervilla lonicera* | Dwarf Bush Honeysuckle | R | *Stellaria pubera* | Great Chickweed | E |
| *Dirca palustris* | Leatherwood | R | *Swertia caroliniensis* | American Columbo | R |
| *Drosera intermedia* | Narrow-leaved Sundew | T | *Symphoricarpos albus var. albus* | Snowberry | E |
| *Drosera rotundifolia* | Round-Leaved Sundew | E | *Tetraneuris herbacea* | Lakeside Daisy | E |
| *Echinodorus berteroi var. lanceolatus* | Burhead | R | *Thuja occidentalis* | Eastern White Cedar | R |
| *Eleocharis rostellata* | Wicket Spike Rush | T | *Tofieldia glutinosa* | False Asphodel | T |
| *Eleocharis wolfii* | Wolf's Spike Rush | R | *Tomanthera auriculata* | Eared False Foxglove | T |
| *Elymus trachycaulus* | Bearded Wheat Grass | T | *Trientalis borealis* | Starflower | E |
| *Epigaea repens* | Trailing Arbutus | R | *Trifolium reflexum* | Buffalo Clover | T |
| *Epilobium strictum* | Downy Willow Herb | T | *Triglochin maritima* | Common Bog Arrow Grass | T |
| *Equisetum variegatum* | variegated scouringrush | R | *Triglochin palustris* | Slender Bog Arrow Grass | T |
| *Erigenia bulbosa* | Harbinger of Spring | R | *Trillium cernuum* | Nodding Trillium | E |
| *Erigeron pulchellus* | Robin's Plantain | R | *Trillium erectum* | Purple Trillium | E |
| *Eriophorum angustifolium* | Cotton Grass | R | *Trillium sessile* | Toad Trillium | R |
| *Eriophorum virginicum* | Rusty Cotton Grass | E | *Ulmus thomasii* | Rock Elm | E |
| *Erythronium americanum* | Yellow Trout Lily | R | *Utricularia cornuta* | Horned Bladderwort | E |
| *Eupatorium sessilifolium var. brittonianum* | Upland Boneset | R | *Utricularia gibba* | Humped Bladderwort | R |
| *Filipendula rubra* | Queen-of-the-Prairie | E | *Utricularia intermedia* | Flat-leaved Bladderwort | T |
| *Fimbristylis puberula* | Hairy Fimbry | R | *Utricularia minor* | Small Bladderwort | E |
| *Galium labradoricum* | Bog Bedstraw | R | *Utricularia subulata* | zigzag bladderwort | R |
| *Gentiana flavida* | Yellowish Gentian | R | *Vaccinium corymbosum* | Highbush Blueberry | E |
| *Gentiana puberulenta* | Downy Gentian | R | *Vaccinium oxycoccos* | Small Cranberry | E |
| *Gentianopsis crinita* | Fringed Gentian | R | *Valeriana edulis var. ciliata* | Common Valerian | R |
| *Geranium bicknellii* | Northern Cranesbill | E | *Valeriana uliginosa* | Bog Valerian | E |
| *Geum rivale* | Purple Avens | R | *Valerianella umbilicata* | Northern Corn Salad | E |
| *Geum triflorum* | Prairie Smoke | R | *Veronica americana* | American Speedwell | E |
| *Goodyera pubescens* | Downy Rattlesnake Plantain | R | *Veronica comosa* | Water Speedwell | R |
| *Gratiola quartermaniae* | Limestone Hedge-hyssop | R | *Veronica scutellata* | Marsh Speedwell | T |
| *Helianthus giganteus* | Tall Sunflower | E | *Viola blanda* | Hairy White Violet | E |
| *Hepatica nobilis var. obtusa* | Round-lobed Hepatica (Formerly He | R | *Viola canadensis* | Canada Violet | E |
| *Hudsonia tomentosa* | False Heather | E | *Viola conspersa* | Dog Violet | T |
| *Hybanthus concolor* | Green Violet | R | *Viola pallens* | Smooth White Violet | R |
| *Hydrastis canadensis* | Golden Seal | R | *Viola pedatifida* | Prairie Violet | R |
| *Hypericum adpressum* | Shore St. John's Wort | E | *Viola striata* | Cream Violet | R |
| *Hypericum kalmianum* | Kalm St. Johnswort | E | *Zigadenus glaucus* | White Camas | E |
| | | | *Zizania aquatica* | Wild Rice | R |



*E=Endangered, T=Threatened, and R=Locally Rare

Attachment 6

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Illinois** | | | | | | | | | | | | | | |
| Cook | Bemis Woods | FPD Cook County | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | Berger Park/Sheridan Lakeside Condominium Association | Chicago Park District/Sheridan Lakeside Condominium Association and Owners | 1 | | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 |
| Cook | Bergman Slough | FPD Cook County | | | | 2 | 2 | 2 | 2 | 2 | | | 2 | 2 |
| Cook | Big Marsh | Chicago Park District | | | | | | | | | | | | 1 |
| Cook | Black Partridge Fen | FPD Cook County | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | Black Partridge Woods | FPD Cook County | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | Bluff Spring Fen | FPD Cook County and City of Elgin | 9 | 6 | 7 | 8 | 7 | 7 | 7 | 9 | 8 | 9 | 8 | 13 |
| Cook | Brookfield Woods Prairie/Salt Creek Prairie | FPD Cook County | | | | | 3 | 3 | 4 | 4 | 4 | 4 | 5 | 5 |
| Cook | Bunker Hill Prairie and Savanna (Clayton F. Smith Woods) | FPD Cook County | | | | 1 | 1 | | | | | | | 1 |
| Cook | Bunker Hill Prairie and Savanna (Sidney R. Yates Flatwoods) | FPD Cook County | | | | 1 | 1 | | 1 | | | 1 | 1 | 3 |
| Cook | Camp Sagawau | FPD Cook County | | | | 4 | 6 | 6 | 6 | 7 | 6 | 7 | 2 | 7 |
| Cook | Camp Sagawau (CCC Quarry) | FPD Cook County | | | | 3 | 3 | 3 | 3 | 3 | 3 | 1 | 2 | 3 |
| Cook | Cap Sauers Holdings | FPD Cook County | | | | | 1 | | 1 | 1 | | | | 1 |
| Cook | Chicago Ridge Prairie | Oak Lawn Park District | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | | 1 |
| Cook | Chipilly woods | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | Clark Street Beach | City of Evanston | | | | | | | | 1 | 1 | | | 1 |
| Cook | Deer Grove | FPD Cook County | | | | 1 | 3 | 2 | 3 | 2 | 3 | 4 | 2 | 6 |
| Cook | Dixon Prairie, Chicago Botanic Garden | FPD Cook County | 1 | 3 | 2 | 3 | 3 | 4 | 5 | 9 | 9 | 9 | 9 | 10 |
| Cook | Dropseed Prairie | TNC | | | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 |
| Cook | Edgebrook Woods | FPD Cook County | | | | 1 | 1 | | | | | 1 | | 1 |
| Cook | Eggers Woods | FPD Cook County | | | | | | | | | | | 2 | 2 |
| Cook | Elmwood Avenue Beach | Village of Wilmette | | | | | | | | | | | 1 | 1 |
| Cook | Gensburg Markham Prairie | TNC, Northeastern IL Univ, Nat'l Land Institute | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 3 | 2 | 3 | 1 | 3 |
| Cook | Gillson Park Beach | Wilmette Park District | | | | | | | | | 3 | 3 | 3 | 3 |
| Cook | Glenbrook North High School Prairie Nature Preserve | Glenbrook School District 225 | | | | | | 3 | 2 | 1 | | | 3 | 3 |
| Cook | Glencoe Botanical Area (Shelton Park) | Glencoe Park District | | | | 1 | | | | | | | | 1 |
| Cook | Harms Flatwoods | FPD Cook County | | | | | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Cook | Harms Woods | FPD Cook County | | | | | 1 | 1 | | 4 | 3 | 5 | 9 | 10 |

Attachment 6

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cook | Hegewisch Marsh | Chicago Park District | | | | | | | | | | | 1 | 1 |
| Cook | Howard Street Beach | Chicago Park District | | | | | | | 1 | | | | | 1 |
| Cook | Indian Road Woods | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | Jarvis Avenue Park Beach | Chicago Park District | | | | | | | 1 | | | | | 1 |
| Cook | Juneway Terrace Beach | Chicago Park District | | | | | | | 1 | | | | | 1 |
| Cook | Jurgensen Prairie | FPD Cook County | | | | | | 3 | 1 | 3 | 3 | 2 | | 3 |
| Cook | Kathy Osterman Beach/Surfside Condominium Beach | Chicago Park District/Surfside Condominium Association | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | | 3 | 3 |
| Cook | Kennicotts Grove | Glenview Park District | 1 | | | | | | | | | | | 1 |
| Cook | Kent Fuller Air Station Prairie | Glenview Park District | | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cook | Kickapoo Prairie | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | Kloempken Prairie and Savanna | FPD Cook County | | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | LaGrange Road East - Orland Park | Commonwealth Edison/Giannakas Family | | | | | | | | | | | | 1 |
| Cook | Lake Ave. Woods East | FPD Cook County | | | | | | | 1 | 1 | 1 | | 1 | 1 |
| Cook | Lake Cook Metra Station (Metra Prairie) | Deerfield Associates | | | | 1 | 1 | | 1 | | 1 | 1 | | 1 |
| Cook | Lloyd Park Beach Boat Launch | Village of Winnetka | | | | 1 | | | | | | | | 1 |
| Cook | Loyola Beach (Pratt Beach) | Chicago Park District | 1 | 1 | 1 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cook | Markham East | TNC | | | | | | | | | | | | 1 |
| Cook | McCormick Woods | FPD Cook County | | | | | 1 | | 1 | | | | | 1 |
| Cook | McDonald Woods East, Chicago Botanic Garden | FPD Cook County | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | McDonald Woods West, Chicago Botanic Garden | FPD Cook County | 1 | | | 1 | 1 | | 1 | | 1 | 1 | 1 | 1 |
| Cook | McDonald Woods, Chicago Botanic Garden | FPD Cook County | 1 | 2 | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| Cook | McGinnis Slough | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | McMahon Fen | FPD Cook County | | | | | | | 1 | 1 | 1 | 1 | | 1 |
| Cook | Miami Woods Prairie | FPD Cook County | | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 |
| Cook | Midlothian Resevoir | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | Montrose Beach Dunes | Chicago Park District | 3 | 3 | 3 | 4 | 5 | 6 | 6 | 7 | 7 | 5 | 3 | 9 |
| Cook | Northwestern University North | Northwestern University | | | | | | 3 | 2 | 3 | 3 | 3 | 1 | 3 |
| Cook | Northwestern University South | Northwestern University | | | | | 1 | 2 | 2 | 2 | 2 | 3 | 1 | 3 |
| Cook | Oakton Community College Woods | Oakton Community College | | | | 3 | 3 | 3 | 3 | 4 | 3 | 4 | | 4 |
| Cook | Paintbrush Prairie | TNC | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 |
| Cook | Palatine Prairie | Palatine Park District + MWRD | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Cook | Palos Fen | FPD Cook County | | | | | | | 2 | 1 | 1 | 1 | 1 | 2 |

Attachment 6

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Cook | Pioneer Woods | FPD Cook County | | | | | | | | 1 | 2 | 2 | 2 | 2 |
| Cook | Plum Creek Preserve | FPD Cook County | | | | 1 | 1 | | | | | | | 2 |
| Cook | Poplar Creek | FPD Cook County | | | | | 2 | 2 | 3 | 3 | 3 | 3 | 3 | 4 |
| Cook | Powderhorn Prairie | FPD Cook County | | | | | 2 | 2 | 1 | | 2 | 1 | 2 | 3 |
| Cook | Private Property - Forest Park | Privately Owned 2 | | | | | | 1 | 1 | 1 | 1 | 1 | | 1 |
| Cook | Rainbow Beach | Chicago Park District | | 3 | 3 | 3 | 3 | 3 | 3 | | | | | 3 |
| Cook | Rogers Park Beach | Chicago Park District | | | | | | | 1 | | | | | 1 |
| Cook | Sand Ridge Nature Center | FPD Cook County | | | | | | 3 | 3 | 2 | | | 1 | 3 |
| Cook | Sand Ridge Prairie Nature Preserve | FPD Cook County | | | | | | 3 | 3 | 3 | | | | 3 |
| Cook | Sante Fe Prairie | Civic Center Auth of I&M Canal Natl Herit Corridor | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | | 1 |
| Cook | Sauganash Prairie Grove | FPD Cook County | | | | | | | 1 | 2 | 2 | 1 | 2 | 2 |
| Cook | SEPA Station - Lake Calumet | MWRD | 1 | | | | | | | | | | | 1 |
| Cook | Shoe Factory Road Prairie | FPD Cook County | | | | | | | | 1 | 1 | 1 | 1 | 2 |
| Cook | Somme Prairie Grove | FPD Cook County | | | | 4 | 6 | 4 | 6 | 7 | 7 | 8 | 8 | 9 |
| Cook | Somme Prairie Nature Preserve | FPD Cook County | | | | 2 | 2 | 1 | 2 | 1 | 2 | 1 | 3 | 3 |
| Cook | Somme Woods | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | South Boulevard Beach | City of Evanston | | | | | 2 | 2 | 2 | 2 | 2 | | | 2 |
| Cook | Spears Woods | FPD Cook County | | | | | | | | | | | | 1 |
| Cook | Spicebush Woods | FPD Cook County | | | | | | | | | | 1 | 1 | 1 |
| Cook | Spring Creek Forest Preserve | FPD Cook County | | | | | | | | | 1 | 3 | 3 | 3 |
| Cook | St. Paul Woods | FPD Cook County | | | | | 1 | 1 | | 1 | | 1 | | 1 |
| Cook | Sundrop Prairie | TNC | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Cook | Superior Street Land and Water Reserve | Calumet Memorial Park District | | | | | | 1 | 2 | | | | | 2 |
| Cook | Thatcher Woods Forest Preserve | FPD Cook County | | | | | | | | | 4 | 1 | | 5 |
| Cook | Theodore Stone Forest Preserve | FPD Cook County | | | | | | 2 | 3 | 8 | 9 | 7 | 7 | 12 |
| Cook | Thornton-Lansing Road Nature Preserve (Zanders) | FPD Cook County | | | | | | 3 | 2 | 5 | 3 | 2 | | 5 |
| Cook | Tower Road Park Beach | Village of Winnetka | | | | 3 | 3 | | 3 | 3 | 3 | | | 3 |
| Cook | Watersmeet | FPD Cook County | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 3 |
| Cook | Wayside Woods Prairie | FPD Cook County | | | | | 1 | 1 | | | 1 | 1 | 1 | 1 |
| Cook | William Powers Conservation Area (Wolf Lake) | IDNR | | 3 | 1 | 1 | 3 | 3 | 3 | 3 | 3 | | 1 | 3 |
| Cook | Williams/Becker Ravine | Nicole Williams/Larry Becker | | | | | | | | 4 | 5 | 5 | 5 | 5 |
| Cook | Wolf Road Prairie | Village of Westchester | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 2 |
| Cook | Yankee Woods | FPD Cook County | | | | | | | | | | | | 1 |

Attachment 6

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DuPage | Belmont Prairie | Downer's Grove Park District | 2 | 2 | 2 | 2 | | | | 2 | 3 | | | 3 |
| DuPage | Big Woods Forest Preserve | FPD DuPage County | | | | 2 | | | 1 | 1 | 2 | | | 3 |
| DuPage | Blackwell Forest Preserve | FPD DuPage County | 1 | 2 | 2 | 3 | 1 | 4 | 3 | 3 | 4 | 3 | 2 | 5 |
| DuPage | Brush Hill Forest Preserve | FPD DuPage County | | | | | | | 2 | | | 1 | 2 | 2 |
| DuPage | Churchill Woods | FPD DuPage County | 1 | | | 1 | 1 | 1 | 5 | 6 | 3 | 5 | 4 | 8 |
| DuPage | Danada Forest Preserve | FPD DuPage County | | | | | | 1 | | 1 | 1 | 1 | | 1 |
| DuPage | Des Plaines Riverway | FPD DuPage County | | | | 1 | | 2 | 2 | | 2 | 3 | | 3 |
| DuPage | East Branch Forest Preserve | FPD DuPage County | | | | | | 1 | | 1 | | 1 | | 1 |
| DuPage | East Branch Forest Preserve (East Branch Marsh) | FPD DuPage County | | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| DuPage | Fischer Woods | FPD DuPage County | 1 | 2 | 8 | 8 | 4 | 5 | 8 | 6 | 6 | 7 | 2 | 11 |
| DuPage | Fox Hollow | FPD DuPage County | | | | | | | | | | | 1 | 1 |
| DuPage | Fullersburg Woods | FPD DuPage County | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 2 | 3 | 3 | 3 | 4 |
| DuPage | Fullerton Park | FPD DuPage County | | | | | | | | 1 | 1 | 1 | 1 | 2 |
| DuPage | Goodrich Woods | FPD DuPage County | | | | | | 2 | 2 | 2 | | 1 | 2 | 2 |
| DuPage | Greene Valley | FPD DuPage County | | | | | | 3 | 3 | 3 | 1 | 2 | 1 | 4 |
| DuPage | Hawk Hollow | FPD DuPage County | 1 | 1 | 1 | 1 | | 2 | 1 | 2 | 1 | | 2 | 2 |
| DuPage | Heritage Woods | Naperville Park District | | | | | | | | | | | | 1 |
| DuPage | Herrick Lake | FPD DuPage County | | | | | | 2 | 4 | | | 1 | 3 | 5 |
| DuPage | Hickory Grove | FPD DuPage County | | | | | | | 1 | | | | | 1 |
| DuPage | Hidden Lake | FPD DuPage County | | 1 | | 1 | | 1 | | | | | | 1 |
| DuPage | James Pate Philip State Park | IDNR | | 1 | | 1 | | 3 | 1 | 1 | 2 | 1 | 2 | 3 |
| DuPage | Knoch Knolls Park | Naperville Park District | | | | | | | 1 | 1 | 1 | | 2 | 4 |
| DuPage | Lyman Woods | Downer's Grove Park District | 3 | 3 | 1 | 1 | 1 | 4 | 5 | 4 | 4 | 5 | 5 | 9 |
| DuPage | Mallard Lake | FPD DuPage County | 1 | 1 | | | | 2 | 1 | 2 | | | 1 | 2 |
| DuPage | Maple Grove | FPD DuPage County | | 2 | 2 | 2 | 2 | 3 | 2 | 4 | 4 | 3 | | 5 |
| DuPage | McDowell Grove | FPD DuPage County | | | | | | 1 | 1 | 1 | | 1 | | 1 |
| DuPage | Meacham Grove | FPD DuPage County | | 1 | | 1 | | 1 | | | 1 | | 2 | 2 |
| DuPage | Pratts Wayne Woods | FPD DuPage County | 2 | 3 | 2 | | | 2 | 2 | 2 | 1 | 2 | 2 | 6 |
| DuPage | Pratts Wayne Woods (Brewster Creek) | FPD DuPage County | 1 | 1 | | 1 | | | | 1 | 1 | | 1 | 1 |
| DuPage | Saint James Farm | FPD DuPage County | | | | | | 1 | | 1 | | 1 | | 1 |
| DuPage | St. Stephen's Cemetery Praire | The Joliet Diocese of the Catholic Church | | | | | | | | | | | 1 | 1 |
| DuPage | Swift Prairie (Swift Road Meadow) | FPD DuPage County | | 1 | 1 | 2 | 1 | 2 | 3 | 3 | 2 | 3 | 2 | 5 |
| DuPage | Timber Ridge | FPD DuPage County | | | | | | 3 | | | 3 | 5 | 4 | 7 |

Attachment 6

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DuPage | Timber Ridge (Klein Savannah) | FPD DuPage County | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 |
| DuPage | Warrenville Grove Forest Preserve | FPD DuPage County | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | 1 |
| DuPage | Waterfall Glen | FPD DuPage County | 5 | 9 | 1 | 8 | 4 | 12 | 7 | 8 | 11 | 15 | 17 | 28 |
| DuPage | West Branch Forest Preserve | FPD DuPage County | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| DuPage | West Chicago Prairie | FPD DuPage County | 2 | 3 | 2 | 3 | 2 | 3 | 5 | 7 | 4 | 4 | 6 | 14 |
| DuPage | West DuPage Woods | FPD DuPage County | 3 | 1 | 2 | 1 | 2 | 1 | 2 | 1 | 2 | 3 | 3 | 5 |
| DuPage | West DuPage Woods (Elsens Hill) | FPD DuPage County | 2 | 1 | 1 | 1 | 1 | 1 | 4 | 4 | 3 | 4 | | 5 |
| DuPage | Willowbrook Wildlife Center | FPD DuPage County | | | | | | | 2 | 2 | 2 | | 1 | 2 |
| DuPage | Winfield Mounds Forest Preserve | FPD DuPage County | | | | | | | | | | | 1 | 1 |
| DuPage | Wood Dale Grove | FPD DuPage County | 2 | 2 | 2 | 2 | | 2 | | | | | | 4 |
| DuPage | Wood Ridge | FPD DuPage County | | | | | | 4 | 3 | 4 | 6 | 2 | 5 | 8 |
| Kane | Almon Underwood Forest Preserve | FPD Kane County | 1 | | | | | | 1 | 1 | | | 2 | 2 |
| Kane | Big Rock | FPD Kane County | | | | | | 1 | | 1 | 1 | 1 | 1 | 1 |
| Kane | Bliss Woods Forest Preserve | FPD Kane County | | | | 1 | 3 | 2 | 2 | 3 | 2 | 3 | 2 | 4 |
| Kane | Brunner Family Farm Forest Preserve | FPD Kane County | | | | | 1 | 1 | | 1 | | | 1 | 1 |
| Kane | Burlington Prairie | FPD Kane County | 1 | 1 | 1 | 1 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 3 |
| Kane | Burnidge Forest Preserve | FPD Kane County | | | | 2 | 2 | 2 | | | | | | 2 |
| Kane | Campton Forest Preserve | FPD Kane County | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Kane | DeSanto Natural Area | DeSanto Family | | | | | | | | | | | 1 | 1 |
| Kane | Dick Young Forest Preserve | FPD Kane County | | | | | 2 | 2 | | | | | | 2 |
| Kane | Dick Young Forest Preserve (Nelson Lake Marsh) | FPD Kane County | | | 3 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 4 |
| Kane | Dixie Briggs Fromm Nature Preserve | Dundee Township | | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 | 4 | 2 | 5 |
| Kane | Fermilab | US Department of Energy | | | | | | | | | 1 | 4 | 4 | 5 |
| Kane | Fox River Bike Trail | FPD Kane County | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Kane | Freeman Kame | FPD Kane County | 1 | | | 3 | 1 | 1 | 4 | 2 | 3 | 3 | 4 | 5 |
| Kane | Hannaford Forest Preserve | FPD Kane County | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 |
| Kane | Helm Road Woods (Barrington Hills Botanical Area) | FPD Kane County/ComEd | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Kane | Jon Duerr Forest Preserve | FPD Kane County | | | | | | | 1 | 1 | 1 | 1 | 1 | 1 |
| Kane | LeRoy Oakes Forest Preserve | FPD Kane County | 2 | | | 2 | 1 | 2 | 3 | 3 | 3 | 2 | 3 | 4 |
| Kane | LeRoy Oakes Forest Preserve (Murray Prairie) | FPD Kane County | 2 | | | 2 | 2 | 2 | 2 | 2 | 2 | | 2 | 2 |
| Kane | McLean Road Fen | FPD Kane County | | | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| Kane | Meissner-Corron (Russell Fen) | FPD Kane County | 2 | 1 | 1 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 2 |
| Kane | Mooseheart Ravine | Loyal Order of Moose | | 3 | 3 | | | | 3 | | 3 | | 3 | 3 |

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# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kane | Pingree Grove | FPD Kane County | | | | | | | | 1 | | | | 1 |
| Kane | Raceway Woods | Dundee Township | | | | | | | | | 1 | 2 | 1 | 2 |
| Kane | Rohrsen Prairie | Burlington Township | | | | | | | 1 | 1 | 1 | | 1 | 1 |
| Kane | Rutland Bog | Chicago Title and Trust | | 3 | | | | | | | | | | 3 |
| Kane | Sauer Family Prairie Kame FP | FPD Kane County | 1 | | | 1 | | | | 1 | | | | 1 |
| Kane | Schweitzer Forest Preserve (Pothole Marsh) | FPD Kane County | | | 1 | | 1 | | 2 | | | | | 2 |
| Kane | Shaw Family Property | Shaw Family | | | | | | | | | | 3 | 3 | 3 |
| Kane | Sleepy Hollow Ravine | Glen Speigler | | 1 | 1 | 1 | | | | 1 | | 1 | | 1 |
| Kane | Trout Park Nature Preserve | City of Elgin | | 4 | 3 | 2 | 2 | 2 | 2 | 2 | 2 | 1 | 2 | 4 |
| Kane | West Side Community Park (Campton Hills Land and Water Reserve) | St. Charles Park District | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | 1 | 1 |
| Kankakee | Carl Becker Nature Preserve | TNC | | | | | | | | | | | 1 | 1 |
| Kankakee | Sweet Fern Savanna | Marianne Hahn | | 1 | | | | | | 1 | | | | 1 |
| Kendall | Hoover Forest Preserve | FPD Kendall County | | | | | | | | | 3 | 3 | 3 | 3 |
| Kendall | Maramech Forest Preserve | FPD Kendall County | | | | | | | | | 4 | 1 | 4 | 4 |
| Kendall | Millbrook N Forest Preserve | FPD Kendall County | | | | | | | | | 1 | 1 | 1 | 1 |
| Kendall | Millbrook S. Forest Preserve | FPD Kendall County | | | | | | | | | 2 | 2 | 2 | 2 |
| Kendall | Silver Springs State Park | IDNR | | | | | | | | | | | | 1 |
| Lake | Antioch Bog | FPD Lake County | | | | | | | | | | | 1 | 1 |
| Lake | Bakers Lake | Village of Barrington | | | | | | | | 3 | 2 | | | 3 |
| Lake | Berkeley Prairie | FPD Lake County | | 2 | 3 | 3 | 3 | 3 | 5 | 2 | 3 | 4 | 2 | 5 |
| Lake | Beulah Park | City of Zion | | | | | | 1 | 1 | | | | | 1 |
| Lake | Biltmore Way Easement | Village of North Barington | | | | | 1 | | | | | | | 1 |
| Lake | Buffalo Grove Prairie | Commonwealth Edison | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lake | Chain O Lakes State Park (Turner Lake) | IDNR | 1 | 1 | 1 | 1 | | | | 1 | | 4 | 4 | 5 |
| Lake | Cuba Marsh | FPD Lake County | | 1 | | | | | 1 | 2 | 2 | 2 | | 2 |
| Lake | Cuba Marsh (EJ&E Tracks - Barrington) | FPD Lake County/RR Right of Way | | | | | | | | 1 | | | | 1 |
| Lake | Dewitt Property | Dewitt Family | | | | | | | | | | | 1 | 1 |
| Lake | East Skokie Nature Preserve | Lake Forest Open Lands Association | | 1 | | | | 1 | 1 | 1 | | | | 1 |
| Lake | Elm Road Forest | FPD Lake County | | | 4 | 2 | | 1 | 5 | | 3 | 1 | 5 | 7 |
| Lake | Ethels Woods | FPD Lake County | | 1 | | 1 | 1 | | 1 | 1 | | | | 1 |
| Lake | Everett Farm Nature Preserve | Lake Forest Open Lands Association | | | | | | | | | | | 1 | 1 |
| Lake | Farm Trails North Nature Preserve | Village of North Barington | | | | | 1 | | | | | | | 1 |
| Lake | Florsheim Park/North Park | Village of Lincolnshire | 1 | 2 | 2 | 3 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 7 |

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# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lake | Fort Sheridan Bluff (Ft. Sheridan Golf Course) | FPD Lake County | 2 | 6 | 3 | | 8 | 6 | 2 | 5 | 7 | 5 | 4 | 13 |
| Lake | Fort Sheridan Bluff (Jane's Ravine) | FPD Lake County | | 1 | | | | 5 | | 7 | 1 | | 2 | 11 |
| Lake | Fourth Lake Fen | FPD Lake County | | | 1 | | | | 1 | 2 | 2 | 2 | 1 | 2 |
| Lake | Gander Mountain | FPD Lake County | | | | | 3 | 2 | 3 | 6 | 3 | | 5 | 6 |
| Lake | Grainger Flatwoods | FPD Lake County | 1 | 3 | 6 | 3 | 5 | 5 | 6 | 4 | 6 | 6 | 9 | 11 |
| Lake | Grant Woods Forest Preserve | FPD Lake County | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Lake | Grant Woods Forest Preserve (Gavin Bog and Prairie) | FPD Lake County | 2 | 3 | 8 | 4 | 4 | 10 | 4 | 7 | 9 | 4 | 9 | 11 |
| Lake | Grassy Lake (Wagner Fen NP) CFC | FPD Lake County and Citizens for Conservation | | | | | | | | 3 | | | | 3 |
| Lake | Grassy Lake (Wagner Fen NP) FPD | FPD Lake County | 1 | | | | 1 | 1 | 2 | 4 | 2 | | 2 | 4 |
| Lake | Greenbelt Forest Preserve | FPD Lake County | | | 2 | 1 | 2 | 1 | 1 | 2 | 2 | | 2 | 2 |
| Lake | Heller Nature Center | Highland Park/Park District | | | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | | 3 |
| Lake | Highmoor Prairie | Highland Park/Park District | | | | 1 | 1 | 2 | 1 | 2 | 2 | 2 | | 2 |
| Lake | Hosah Prairie | Zion Park District | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Lake | Illinois Beach State Park (North Unit) | IDNR | | | | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 3 |
| Lake | Illinois Beach State Park (North Unit) and Hosah Prairie | IDNR + Zion Park District | | | | 3 | 3 | 5 | 4 | 6 | 5 | 6 | 2 | 7 |
| Lake | Illinois Beach State Park (South Unit) | IDNR | 2 | 3 | 6 | 6 | 8 | 9 | 9 | 10 | 14 | 12 | 6 | 20 |
| Lake | Independence Grove | FPD Lake County | | | | 2 | | | 1 | 3 | 2 | 3 | 1 | 5 |
| Lake | Jerry Kolar Property | Jerry Kolar | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| Lake | Lake Barrington - Flint Creek Savanna | Village of North Barington | | | | | | | 2 | 3 | 3 | | | 3 |
| Lake | Lake Barrington - Lake Barrington Shores | Lake Barrington Community Homeowner's Association | | | | | | | 1 | 2 | 2 | | | 3 |
| Lake | Lakewood Forest Preserve | FPD Lake County | | | | | | | 3 | 1 | 3 | 4 | 3 | 8 |
| Lake | Lakewood Forest Preserve (Wauconda Bog) | FPD Lake County | 1 | | | | 1 | 4 | 2 | 6 | 2 | | 6 | 10 |
| Lake | Leonardi Park | Highland Park/Park District | | | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 1 | | 2 |
| Lake | Liberty Prairie | Libertyville Township | | | | | | 2 | 4 | 4 | 4 | 3 | | 4 |
| Lake | Lyons Prairie and Marsh | CD McHenry County | | | 2 | | 2 | | 1 | 3 | 2 | 2 | 1 | 3 |
| Lake | Lyons Woods | FPD Lake County | | | 2 | 1 | 1 | | | 2 | 1 | | 4 | 4 |
| Lake | MacArthur Woods | FPD Lake County | | 4 | 6 | 5 | 5 | 1 | 2 | 2 | 2 | 2 | 3 | 6 |
| Lake | Marl Flats Forest Preserve | FPD Lake County | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 |
| Lake | McCormick Ravine | City of Lake Forest | | | | | | | | 1 | | 7 | 3 | 7 |
| Lake | Middlefork Savanna | FPD Lake County | | 2 | 1 | | | | | 2 | | | 3 | 6 |
| Lake | Millard Beach | Highland Park/Park District | | | | | | | | | | | 2 | 2 |

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# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lake | North Chicago Wetland Mitigation | IDOT | | | | | | 1 | 1 | | | 2 | | 3 |
| Lake | Openlands Lakeshore Preserve | Openlands | | | | | | | | | | 8 | 8 | 14 |
| Lake | Red Oak Woods | North Shore School District 112 | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Lake | Reed-Turner Woodland and Woodland Ridge Lot 2 | The Long Grove Park District | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 4 | 3 | 3 | 3 | 4 |
| Lake | Rendl Property | Rendl Family | | | | | | | | | 1 | 1 | 1 | 1 |
| Lake | Rollins Savanna | FPD Lake County | | | 1 | | | 3 | 3 | 3 | 3 | 3 | 3 | 4 |
| Lake | Rosewood Park | Highland Park/Park District | | | | | | | | 1 | 1 | | 2 | 2 |
| Lake | Ryerson Conservation Area | FPD Lake County | 1 | 4 | 8 | 7 | 6 | 8 | 7 | 8 | 7 | 5 | 6 | 12 |
| Lake | Singing Hills | FPD Lake County | | | 1 | | 1 | | | | | | | 1 |
| Lake | Spring Bluff | FPD Lake County | | 2 | 4 | 2 | 2 | 3 | 3 | | 2 | | 1 | 5 |
| Lake | St. Francis Woods Forest Preserve | FPD Lake County | | | | | | | | | | | 1 | 1 |
| Lake | Sun Lake | FPD Lake County | | 2 | | | | | | | | | 2 | 2 |
| Lake | Thunderhawk Golf Course | FPD Lake County | | | | | | | | 1 | 1 | 1 | | 1 |
| Lake | Volo Bog | IDNR | | | | | 2 | 3 | 3 | 4 | 5 | 5 | 5 | 6 |
| Lake | Wadsworth Prairie | FPD Lake County/RR Right of Way | 2 | 2 | 2 | 1 | 2 | | | | | 1 | | 2 |
| Lake | Waukegan Bowen Park | Waukegan Park District | | | | | | | | | 1 | | 11 | 15 |
| Lake | Waukegan Dunes | Waukegan Park District/City of Waukegan/Midwest Generation/Johns Manville | | | 2 | 2 | 3 | 3 | 3 | | | 2 | 8 | 13 |
| Lake | Waukegan IBSP Buffer Area (B2) | IDNR/Commonwealth Edison | | | | | | | | | | | 5 | 6 |
| Lake | Waukegan Swimming Beach | Waukegan Park District | | | | | | | | | | | | 4 |
| Lake | Wilmot Woods | FPD Lake County | | | | | | | | | 3 | 2 | 5 | 7 |
| Lake | Wright Woods | FPD Lake County | 1 | 1 | 2 | 3 | 2 | 2 | 1 | 1 | 1 | 2 | 2 | 3 |
| McHenry | Alden Sedge Meadow | CD McHenry County | | | 1 | 2 | 1 | | 2 | 3 | 3 | 4 | 3 | 4 |
| McHenry | Amberin Ash Ridge | Staley Family | | | | | | 1 | | 1 | | | | 1 |
| McHenry | Barber Fen | CD McHenry County | | | | | | 1 | 1 | 1 | 1 | 1 | | 1 |
| McHenry | Boger Bog (Boger Fen) | CD McHenry County | | | | | | | | | | | 1 | 2 |
| McHenry | Boloria Fen and Sedge Meadow | Boone Creek Watershed Alliance | | | | | | 3 | 2 | 3 | 3 | 3 | | 4 |
| McHenry | Boone Creek Fen | O'Donnell Family | | | 1 | | | 1 | | 1 | | | | 1 |
| McHenry | Bystricky Prairie | CD McHenry County/Marty Papanek | 1 | | | | | | 3 | 3 | 3 | 3 | 3 | 3 |
| McHenry | Chain O Lakes State Park (Pike Marsh) | IDNR | | | | | | | | | | | | 1 |
| McHenry | Coral Woods | CD McHenry County | | | | | | | | | | | 1 | 1 |
| McHenry | Cotton Creek Marsh | CD McHenry County | | | | | | 2 | 2 | 3 | 2 | 2 | 2 | 3 |
| McHenry | Dale Shriver's Property | Dale Shriver | | | | | | | | | 1 | 1 | 1 | 1 |

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# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| McHenry | Fel-pro | CD McHenry County | | | | | | | | | 1 | 2 | 2 | 2 |
| McHenry | Frank and Margo Blair Property | Blair Family | | 1 | 1 | 1 | 1 | 1 | | 1 | | | | 1 |
| McHenry | Glacial Park | CD McHenry County | | 1 | 2 | 1 | 2 | 4 | 4 | 5 | 2 | 5 | 4 | 7 |
| McHenry | Gladstone Fen | Lorna Gladstone | | | | | | 1 | 1 | 2 | 4 | 2 | | 4 |
| McHenry | Harvard Savanna | CD McHenry County | | | | | | | | | | | | 1 |
| McHenry | Hickory Grove Tszurz | CD McHenry County | | | | | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| McHenry | Hillside Prairie | Cary Park District | | | | | | | | | | 1 | 1 | 1 |
| McHenry | Hillside Prairie Park | Cary Park District | | | | | | | | | | 1 | 1 | 1 |
| McHenry | HUM Prairie East - Coyne Station | CD McHenry County | | | | 2 | 2 | 2 | 2 | 2 | 5 | 3 | 3 | 5 |
| McHenry | HUM Prairie East - Milepost 58 | CD McHenry County | | | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 |
| McHenry | HUM Prairie East - Milepost 59 | CD McHenry County | | | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 |
| McHenry | HUM Prairie East - Milepost 61 | CD McHenry County | | | | 2 | 2 | | 2 | 2 | 2 | 2 | 2 | 2 |
| McHenry | HUM Prairie West | CD McHenry County | | | | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 |
| McHenry | Jeanine Damman's Property | Jeanine Damman | | | | | | | | | | | 1 | 1 |
| McHenry | Kloempken Prairie | CD McHenry County | | | | | | | 3 | 3 | 3 | 3 | 3 | 3 |
| McHenry | Lake Elizabeth | CD McHenry County | | | | | | | 3 | 2 | 4 | 1 | 7 | 7 |
| McHenry | Lake in the Hills Fen | IDNR/Village of Lake in the Hills | 1 | 5 | 5 | 4 | 5 | 6 | 5 | 6 | 9 | 10 | 10 | 12 |
| McHenry | Lakowski Property | Lakowski Family | | | | | | | | | | 1 | 1 | 1 |
| McHenry | Larsen Prairie | CD McHenry County | | | | | | | | | | | 2 | 2 |
| McHenry | Lind Woods | CD McHenry County | | | | | | | 1 | 1 | 1 | 1 | | 1 |
| McHenry | Lora Petrak's Property | Lora Petrak | | | | | | | | | | 1 | 1 | 1 |
| McHenry | Main Street Prairie Nature Preserve | Cary Park District | | | | | | | | | | 1 | 2 | 2 |
| McHenry | Manuk-Sook Land and Water Reserve | John Clemetsen | | | | | | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| McHenry | Marengo Ridge | CD McHenry County | | | | | | | | | 2 | 2 | 2 | 2 |
| McHenry | Masi/D'Alessandro Property | Masi/D'Alessandro Family | | | | | | | | | | 1 | 1 | 1 |
| McHenry | Moraine Hills State Park | IDNR | | | | | | | | 1 | 1 | 2 | 1 | 4 |
| McHenry | Moraine Hills State Park (Pike's Marsh) | IDNR | | | | | | | | 1 | 1 | 1 | 1 | 1 |
| McHenry | Nippersink Canoe Base | CD McHenry County | | | | | 1 | 1 | 1 | 1 | | | | 1 |
| McHenry | North Branch Preserve | CD McHenry County | | | | | | | 2 | 2 | 2 | 2 | 2 | 3 |
| McHenry | Oakwood Hills Fen | Village of Oakwood Hills | | | | | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| McHenry | Olsson Park | Perle Olsson | | | | | | | | | | | 8 | 8 |
| McHenry | Pioneer Fen | CD McHenry County | | | | | | | | | | | | 2 |
| McHenry | Pleasant Valley | CD McHenry County | | | | | | | | | | 1 | 2 | 2 |
| McHenry | Queen Anne Prairie | CD McHenry County | | | | | | | | | | | 1 | 2 |

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# Counties, Sites, Landowners and Element Occurences 2011

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| McHenry | Rodney & Libby Aavang's Property | Rodney & Libby Aavang | | | | | | | | | | 1 | | 1 |
| McHenry | Silver Creek (Bates Fen) | CD McHenry County | | | | | | | 1 | 2 | 1 | 1 | 1 | 2 |
| McHenry | Solon Prairie (Keenan section) | Keenan Family | | | | | | | | 1 | 1 | 1 | 2 | 2 |
| McHenry | Solon Prairie (Marsh section) | Marsh Famliy | | | | | | | | 1 | 1 | 2 | 2 | 2 |
| McHenry | Stickney Run | CD McHenry County | | | | | | | | 1 | 1 | | 1 | 2 |
| McHenry | Tauck Easement | Sue Tauck | | | | | | | | | | | | 3 |
| McHenry | The Hollows | CD McHenry County | | | | | | | | 1 | | | | 1 |
| McHenry | Tom Burroughs Property | Tom Burroughs | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 |
| McHenry | Wildlife Resource Center (Grundstrum Woods) | CD McHenry County | | | | | | | | | 1 | 1 | 1 | 1 |
| McHenry | Winding Creek/Bailey Woods | CD McHenry County | | | | | | | | | | | | 2 |
| Ogle | Fred Wiederholtz Farm | Fred Wiederholtz | | | | | | | | | 1 | | | 1 |
| Pike | Walnut Grove Hill Prairie | Privately Owned 3 | 1 | | | | | | | | | | | 1 |
| Will | Allessio Prairie | FPD Will County | | | | | | | | | | | 1 | 1 |
| Will | Birds Junction Marsh | FPD Will County | | | | | | | | | | | 1 | 1 |
| Will | Blackburn Property | Andrew Blackburn | | | | | | | | | | | 1 | 1 |
| Will | Blodgett Road Dolomite Prairie (Des Plaines River Conservation Area) | IDNR | | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 1 | 1 | 2 |
| Will | Braidwood Dunes and Savanna | FPD Will County | | | | | 4 | | 3 | 2 | 3 | | | 4 |
| Will | Dellwood Park West Nature Preserve/Lockport Prairie East | Lockport Township Park District/FPD Will County | | | | 4 | 2 | 2 | 3 | 2 | 3 | 2 | 3 | 4 |
| Will | Durkee Road | Privately Owned 1 | | | | | | | | | | 1 | | 1 |
| Will | Fiddyment Creek | FPD Will County | | | | | | | | | | | 1 | 1 |
| Will | Fountaindale Woods | Michel-Perry Family | | | | | | | | | 1 | | 1 | 1 |
| Will | Four Seasons Park | Plainfield Park District | | | 1 | 1 | 1 | 1 | 1 | | | 1 | 2 | 2 |
| Will | Goodenow Grove Nature Preserve | FPD Will County | | | | 3 | 2 | 1 | 1 | 1 | 1 | 2 | 1 | 4 |
| Will | Grant Creek Prairie | IDNR | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 1 | 1 | 1 | 3 |
| Will | Grant Creek Prairie and Midewin National Tallgrass Prairie | IDNR + U.S. Forest Service | | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Will | Hickory Creek Barrens | FPD Will County | | | | 1 | | | 1 | 1 | 1 | 1 | 1 | 2 |
| Will | Hitt's Siding Prairie | IDNR | | | | | | | | 1 | 1 | | | 2 |
| Will | Lily Cache Prairie | Nelsons | | | | | | | | | | 1 | 1 | 1 |
| Will | Lockport Prairie | FPD Will County | | | | | | | | | 1 | 1 | | 1 |
| Will | McKinley Woods | FPD Will County | | | | | | | | | 1 | 1 | 3 | 3 |
| Will | Messenger Woods | FPD Will County | | | | | 1 | | | | | | | 1 |

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Will | Midewin National Tallgrass Prairie (Blodgett Road) | U.S. Forest Service | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 1 | 1 | 1 | 2 |
| Will | Midewin National Tallgrass Prairie (Drummond Prairie)(Joliet Army Ammunition Plant) | U.S. Forest Service | | | 2 | 3 | 3 | 4 | 4 | 4 | 3 | 4 | 4 | 4 |
| Will | Midewin National Tallgrass Prairie (Joliet Army Ammunition Plant) | U.S. Forest Service | | | | 2 | 2 | 3 | 3 | 2 | 1 | 2 | 2 | 4 |
| Will | Midewin National Tallgrass Prairie and Des Plaines River Conservation Area: Foxglove Prairie (Joliet Army Ammunition Plant) | U.S. Forest Service/IDNR | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Will | Pilcher Park | Joliet Park District | | | | | | | | 1 | 2 | 3 | 3 | 5 |
| Will | Romeoville Prairie Nature Preserve | FPD Will County | | 1 | 1 | 5 | 5 | 3 | 2 | 3 | 2 | 3 | 2 | 5 |
| Will | Sand Ridge Savanna | FPD Will County | | | | | | 2 | | | | 2 | 1 | 2 |
| Will | Sand Ridge Savanna/Com Ed Property | Commonwealth Edison | | | | | | | | | | | 1 | 1 |
| Will | Springbrook Parkway | Naperville Park District | | | | | | | | | | | | 1 |
| Will | Thorn Creek Woods | FPD Will County, IDNR, Villages of Park Forest and University Park | | | 2 | | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| Will | Thorn Grove Forest Preserve | FPD Will County | | | | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 |
| Will | Vermont Cemetery | FPD Will County | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Indiana** | | | | | | | | | | | | | | |
| Lake | Ambler Flatwoods | Shirley Heinze Land Trust | | | | | | | | | | | 1 | 2 |
| Lake | Calumet Prairie | IDNR | | | | | | | | | | | 1 | 1 |
| Lake | Cressmoor Prairie | Shirley Heinze Land Trust | | | | | | 1 | | | | | 2 | 2 |
| Lake | Indiana Dunes National Lakeshore (Tolleston A) | National Park Service | | | | | | | | 1 | | | | 1 |
| Lake | Martin Oil | Save the Dunes Conservation Fund | | | | | | | | | | | 1 | 1 |
| LaPorte | Barker Woods | Shirley Heinze Land Trust | | | | | | | | | | | 1 | 2 |
| Porter | Cowles Bog Trail (Indiana Dunes National Lakeshore) | National Park Service | | | | | | 1 | 1 | 1 | | | | 1 |
| Porter | Dawson Property | Dawson Family | | | | | | | | | | | 2 | 2 |
| Porter | Hidden Prairie | Shirley Heinze Land Trust | | | | | | | | | | | 1 | 1 |
| Porter | Indiana Dunes National Lakeshore | National Park Service | | | | | | | | | | | 1 | 1 |
| Porter | Indiana Dunes National Lakeshore (Beverly Shores) | National Park Service | | | | | | 1 | | | | | | 1 |
| Porter | Indiana Dunes National Lakeshore (Furnessville F) | National Park Service | | | | | | | | 1 | | | | 1 |
| Porter | Indiana Dunes National Lakeshore (Miller) | National Park Service | | | | | | | | | | | 1 | 1 |
| Porter | John Merle Coulter Nature Preserve | Shirley Heinze Land Trust | | | | | | | | | | | 2 | 2 |

# Counties, Sites, Landowners and Element Occurences 2011

| County | SiteName | LandOwnerName | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Porter | Mohar Property | Mohar Family | | | | | | | | | | | 2 | 2 |
| Porter | Swanson Woods | Susan Swanson et.al. | | | | | | | 1 | 1 | | | | 1 |
| **Wisconsin** | | | | | | | | | | | | | | |
| Kenosha | Chiwaukee Prairie | Chiwaukee Prairie State Natural Area Landowners | | | | | | | 9 | 5 | 10 | | | 13 |
| Walworth | Crooked Creek Preserve | TNC | | | | | | | | | 1 | 1 | | 1 |
| Walworth | Kettle Moraine State Forest - Southern Unit | WDNR | | | | | | | 1 | 1 | 2 | | | 2 |
| Walworth | Lulu Lake Preserve | TNC | | | | | | | 7 | 10 | 14 | 12 | 3 | 16 |
| Walworth | Lulu Lake SNA | WDNR | | | | | | | 1 | 4 | 4 | 4 | 1 | 4 |
| Waukesha | Natura Property (Private Property) | Heidi and Dan Natura | | | | | | | 2 | 1 | 2 | 1 | 1 | 2 |

Attachment 7

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Actaea rubra | Rare | 2 | | 2 | | | 5 | | | | | | | 2 | | | |
| 6 | Adiantum pedatum | Rare | | 4 | 2 | | 1 | 3 | 3 | | | | | | 1 | | | |
| 3 | Agalinis skinneriana | Threatened | 1 | | | | | 2 | | | | | | | | 1 | | |
| 1 | Alnus rugosa | Endangered | | | | | | | 2 | | | | | | | | | |
| 4 | Amelanchier interior | Threatened | 3 | 6 | 1 | | | 1 | | | | | | | | | | |
| 2 | Amelanchier sanguinea | Endangered | 2 | | | | | 1 | | | | | | | | | | |
| 2 | Ammophila breviligulata | Endangered | 11 | | | | | 6 | | | | | | | | | | |
| 1 | Arabis hirsuta | Rare | | 2 | | | | | | | | | | | | | | |
| 1 | Aralia hispida | Rare | | | | | | | | | | | | | 1 | | | |
| 1 | Aralia racemosa | Rare | | | | | | 2 | | | | | | | | | | |
| 1 | Arctostaphylos uva-ursi | Endangered | | | | | | 2 | | | | | | | | | | |
| 2 | Aristolochia serpentaria | Rare | | 5 | 1 | | | | | | | | | | | | | |
| 1 | Artemisia serrata | Rare | | | 1 | | | | | | | | | | | | | |
| 2 | Asclepias amplexicaulis | Rare | 1 | | 2 | | | | | | | | | | | | | |
| 5 | Asclepias exaltata | Rare | 1 | | 1 | | | 5 | 2 | | | 1 | | | | | | |
| 3 | Asclepias hirtella | Rare | 1 | 1 | | | | | | | | | | | | 1 | | |
| 3 | Asclepias lanuginosa | Endangered | 3 | | 1 | | | | 3 | | | | | | | | | |
| 1 | Asclepias meadii | Endangered | | 1 | | | | | | | | | | | | | | |
| 2 | Asclepias ovalifolia | Endangered | 1 | | | | | | | | | | | | | | 1 | |
| 1 | Asclepias perennis | Rare | | | | | | | | | | 1 | | | | | | |
| 2 | Asclepias purpurascens | Rare | | | | | | | | | | | | | | 1 | 2 | |
| 5 | Asclepias viridiflora | Rare | 2 | 5 | 4 | | | | | | | | | | | 1 | 2 | |
| 5 | Aster furcatus | Threatened | 2 | | 3 | | | 4 | 2 | | | | | | | | 1 | |
| 3 | Baptisia leucophaea | Rare | 1 | 5 | | | | 1 | | | | | | | | | | |
| 1 | Beckmannia syzigachne | Endangered | 4 | | | | | | | | | | | | | | | |
| 4 | Besseya bullii | Threatened | 1 | | 1 | | | | | | | | | | | | 1 | 1 |
| 3 | Betula alleghaniensis | Endangered | | | | | | 1 | | | | | 1 | | 1 | | | |
| 1 | Betula papyrifera | Rare | | | | | | 4 | | | | | | | | | | |
| 1 | Betula populifolia | Rare | | | | | | | | | | 1 | | | | | | |
| 1 | Bidens discoidea | Rare | | 4 | | | | | | | | | | | | | | |

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Bolboschoenus maritimus | Rare | | 3 | | | | | | | | | | | | | | |
| 1 | Botrychium campestre | Endangered | | | 1 | | | | | | | | | | | | | |
| 1 | Botrychium matricariifolium | Endangered | | | | | | | | | | | | | 1 | | | |
| 2 | Cacalia plantaginea | Rare | 1 | | | | | | | | | | | | | 1 | | |
| 2 | Cakile edentula | Threatened | 17 | | | | | 8 | | | | | | | | | | |
| 1 | Callitriche heterophylla | Rare | | 3 | | | | | | | | | | | | | | |
| 1 | Callitriche palustris | Rare | | 3 | | | | | | | | | | | | | | |
| 1 | Calopogon oklahomensis | Endangered | | | | | | | | | | 1 | | | | | | |
| 5 | Calopogon tuberosus | Endangered | 7 | | | | | 5 | 2 | | | 1 | | | | 1 | | |
| 1 | Cardamine pratensis var. palustris | Endangered | | | | | | | 1 | | | | | | | | | |
| 1 | Carex alata | Endangered | | | | | | | | | | 1 | | | | | | |
| 4 | Carex aurea | Threatened | 6 | | 1 | | | 8 | | | | | | | 1 | | | |
| 3 | Carex bromoides | Threatened | 5 | 1 | | | | 7 | | | | | | | | | | |
| 1 | Carex brunnescens | Endangered | | | | | | 2 | | | | | | | | | | |
| 1 | Carex canescens | Endangered | | | | | | 1 | | | | | | | | | | |
| 1 | Carex conoidea | Rare | 1 | | | | | | | | | | | | | | | |
| 6 | Carex crawei | Rare | 3 | 3 | 1 | | | 1 | | | | 5 | | | | 1 | | |
| 1 | Carex crawfordii | Endangered | 1 | | | | | | | | | | | | | | | |
| 2 | Carex crus-corvi | Rare | | 5 | | | | 1 | | | | | | | | | | |
| 2 | Carex cryptolepis | Endangered | | 1 | | | | 3 | | | | | | | | | | |
| 1 | Carex disperma | Endangered | | | | | | 2 | | | | | | | | | | |
| 1 | Carex echinata | Endangered | | | | | | 1 | | | | | | | | | | |
| 2 | Carex formosa | Endangered | 5 | | | | | 1 | | | | | | | | | | |
| 2 | Carex frankii | Rare | 1 | 8 | | | | | | | | | | | | | | |
| 2 | Carex gracilescens | Rare | 1 | 2 | | | | | | | | | | | | | | |
| 2 | Carex intumescens | Threatened | 2 | | | | | 1 | | | | | | | | | | |
| 2 | Carex leptalea | Rare | 1 | | | | | 1 | | | | | | | | | | |
| 1 | Carex oligosperma | Endangered | | | 1 | | | | | | | | | | | | | |
| 1 | Carex pedunculata | Rare | | | | | | 2 | | | | | | | | | | |
| 2 | Carex richardsonii | Rare | | 1 | | | | | | | | | | | | 1 | | |
| 1 | Carex trisperma | Endangered | | | | | | 1 | | | | | | | | | | |
| 1 | Carex tuckermanii | Endangered | | 4 | | | | | | | | | | | | | | |
| 2 | Carex umbellata | Rare | | 1 | | | | 2 | | | | | | | | | | |
| 1 | Carex utriculata | Rare | | 1 | | | | | | | | | | | | | | |

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | Carex viridula | Threatened | 3 | 6 | | | | 6 | | | | 1 | | | | 1 | | |
| 5 | Carex woodii | Threatened | 3 | 7 | | | 2 | 8 | | | | 2 | | | | | | |
| 2 | Cassia hebecarpa | Rare | 1 | 1 | | | | | | | | | | | | | | |
| 1 | Castilleja coccinea | Rare | | | | | | | | | | 1 | | | | | | |
| 1 | Castilleja sessiliflora | Endangered | | | | | | 2 | | | | | | | | | | |
| 2 | Ceanothus americanus | Rare | 1 | | | | | 2 | | | | | | | | | | |
| 1 | Ceanothus herbaceus | Threatened | | | | | | 1 | | | | | | | | | | |
| 4 | Chamaedaphne calyculata | Threatened | | | 1 | | | 2 | 1 | | | | 1 | | | | | |
| 2 | Chamaesyce polygonifolia | Endangered | 13 | | | | | 8 | | | | | | | | | | |
| 1 | Cicuta bulbifera | Rare | | 5 | | | | | | | | | | | | | | |
| 2 | Cimicifuga racemosa | Endangered | | | | | | 1 | 1 | | | | | | | | | |
| 5 | Cirsium hillii | Rare | | 5 | 2 | | | | 7 | | 1 | 2 | | | | | | |
| 1 | Cirsium pitcheri | Threatened | 1 | | | | | | | | | | | | | | | |
| 1 | Cladium mariscoides | Rare | | | | | | 1 | | | | | | | | | | |
| 2 | Collinsia verna | Rare | | 1 | 1 | | | | | | | | | | | | | |
| 2 | Comptonia peregrina | Endangered | 2 | | | 1 | | | | | | | | | | | | |
| 5 | Conopholis americana | Rare | 3 | | 1 | | | 4 | | | | 1 | | | 1 | | | |
| 2 | Corallorhiza maculata | Threatened | | | | | | | 1 | | | 3 | | | | | | |
| 1 | Corallorhiza odontorhiza | Rare | | | 1 | | | | | | | | | | | | | |
| 1 | Cornus rugosa | Rare | | | | | | 4 | | | | | | | | | | |
| 1 | Corydalis aurea | Endangered | | | | | | | | | | 1 | | | | | | |
| 5 | Cypripedium calceolus var. pubescens | Rare | | | | | | 2 | 2 | | | 1 | 1 | | | | 2 | |
| 7 | Cypripedium candidum | Threatened | 14 | 8 | 5 | | | 7 | 22 | | | 3 | | | | | 3 | |
| 5 | Cypripedium parviflorum var. makasin | Endangered | 1 | | | | | 2 | 5 | | | | | | | 1 | 1 | |
| 2 | Cypripedium reginae | Endangered | | | 1 | | | 3 | | | | | | | | | | |
| 2 | Cypripedium x andrewsii | Rare | | | | | | | 2 | | | | | | | | 2 | |
| 3 | Dalea foliosa | Endangered | 2 | 1 | | | | | | | | 1 | | | | | | |
| 1 | Delphinium tricorne | Rare | 1 | | | | | | | | | | | | | | | |
| 1 | Desmodium canescens | Rare | | 4 | | | | | | | | | | | | | | |
| 1 | Desmodium cuspidatum | Rare | | 3 | | | | | | | | | | | | | | |

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Diarrhena americana | Rare | 1 | 2 | 1 | | | 1 | | | | | | | | | | |
| 1 | Dichanthelium boreale | Endangered | 1 | | | | | | | | | | | | | | | |
| 3 | Diervilla lonicera | Rare | 1 | 1 | | | | 5 | | | | | | | | | | |
| 1 | Dirca palustris | Rare | | | 3 | | | | | | | | | | | | | |
| 3 | Drosera intermedia | Threatened | 2 | | 1 | | | | | | | 1 | | | | | | |
| 2 | Drosera rotundifolia | Endangered | | | | | | 2 | 1 | | | | | | | | | |
| 1 | Dulichium arundinaceum | Rare | | | 1 | | | | | | | | | | | | | |
| 1 | Echinodorus berteroi var. lanceolatus | Rare | | | 2 | | | | | | | | | | | | | |
| 1 | Eleocharis olivacea | Endangered | 1 | | | | | | | | | | | | | | | |
| 1 | Eleocharis pauciflora | Endangered | | | | | | 1 | | | | | | | | | | |
| 1 | Eleocharis rostellata | Threatened | | | | | | | 2 | | | | | | | | | |
| 1 | Eleocharis wolfii | Rare | | | | | | 1 | | | | | | | | | | |
| 3 | Elymus trachycaulus | Threatened | 2 | 1 | | | | 2 | | | | | | | | | | |
| 1 | Epigaea repens | Rare | | | | | | | | | | | | | 2 | | | |
| 2 | Epilobium strictum | Threatened | | | | | | 2 | | | | 1 | | | | | | |
| 1 | Equisetum variegatum | Rare | | | | | | 2 | | | | | | | | | | |
| 2 | Erigenia bulbosa | Rare | | | | | | | | | | 1 | | | 1 | | | |
| 2 | Erigeron pulchellus | Rare | | 3 | | | | | 1 | | | | | | | | | |
| 3 | Eriophorum angustifolium | Rare | | 2 | 2 | | | | | | | | | | | 1 | | |
| 2 | Eriophorum virginicum | Endangered | | | | | | 1 | 1 | | | | | | | | | |
| 5 | Erythronium americanum | Rare | 1 | 1 | | | | 1 | | | | 1 | | | 1 | | | |
| 1 | Eupatorium sessilifolium var. brittonianum | Rare | | 1 | | | | | | | | | | | | | | |
| 3 | Filipendula rubra | Endangered | 2 | | | | | 1 | 3 | | | | | | | | | |
| 1 | Fimbristylis puberula | Rare | | | | | | | | | | | | | | 1 | | |
| 2 | Galium labradoricum | Rare | | | | | | 5 | 1 | | | | | | | | | |
| 6 | Gentiana flavida | Rare | 2 | 3 | | | | 3 | 1 | | | | | | | | 2 | 1 |
| 2 | Gentiana procera | Rare | | | | | | 1 | | | | | | | | 1 | | |
| 1 | Gentiana puberulenta | Rare | | | | | | | | | | | 1 | | | | | |
| 5 | Gentianopsis crinita | Rare | 2 | | 1 | | | 4 | | | | | | | 1 | 1 | | |
| 2 | Geranium bicknellii | Endangered | 2 | | | | | 4 | | | | | | | | | | |
| 1 | Geum rivale | Rare | | | 1 | | | | | | | | | | | | | |
| 4 | Geum triflorum | Rare | 1 | | 1 | | | 1 | | | | | | | | 1 | | |

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | Goodyera pubescens | Rare | | 2 | 1 | | | | 1 | | | | 1 | | | | | |
| 1 | Gratiola quartermaniae | Rare | | | | | | | | | | 2 | | | | | | |
| 3 | Helianthus giganteus | Endangered | 1 | | | | | | 1 | | | 1 | | | | | | |
| 1 | Hepatica nobilis var. obtusa | Rare | | | | | | 9 | | | | | | | | | | |
| 1 | Hudsonia tomentosa | Endangered | | | | | | | | | | | | | 1 | | | |
| 2 | Hybanthus concolor | Rare | 1 | | | | | | | | | 1 | | | | | | |
| 5 | Hydrastis canadensis | Rare | 3 | 1 | 2 | | | 2 | | | | 1 | | | | | | |
| 1 | Hypericum adpressum | Endangered | | | | | | | | | | 2 | | | | | | |
| 3 | Hypericum kalmianum | Endangered | 3 | | | | | 5 | | | | | | | | 1 | | |
| 3 | Ilex verticillata | Rare | 1 | 1 | | | | 1 | | | | | | | | | | |
| 1 | Iliamna remota | Endangered | | 1 | | | | | | | | | | | | | | |
| 3 | Iodanthus pinnatifidus | Rare | 1 | 2 | | | | | | | | 1 | | | | | | |
| 2 | Isoetes butleri | Endangered | | 1 | | | | | | | | 3 | | | | | | |
| 7 | Jeffersonia diphylla | Rare | 2 | | 1 | | 1 | 1 | 1 | | | 1 | | | 1 | | | |
| 5 | Juglans cinerea | Rare | 1 | 16 | | | 1 | 4 | | | | 1 | | | | | | |
| 5 | Juncus alpinoarticulatus | Endangered | 1 | 2 | 2 | | | 3 | | | | 1 | | | | | | |
| 1 | Juncus articulatus | Rare | | 1 | | | | | | | | | | | | | | |
| 1 | Juncus scirpoides | Rare | | | | | | | | | | | | | 1 | | | |
| 2 | Juniperus communis | Threatened | 2 | | | | | 6 | | | | | | | | | | |
| 1 | Juniperus horizontalis | Endangered | | | | | | 1 | | | | | | | | | | |
| 1 | Larix laricina | Threatened | | | | | | 4 | | | | | | | | | | |
| 5 | Lathyrus ochroleucus | Threatened | 1 | 1 | | | | 10 | 7 | | | | | | | 1 | | |
| 2 | Lechea intermedia | Threatened | | | 2 | | | | 2 | | | | | | | | | |
| 2 | Lespedeza leptostachya | Endangered | 2 | | | | | | 2 | | | | | | | | | |
| 1 | Lespedeza violacea | Rare | | | | | | 4 | | | | | | | | | | |
| 4 | Liatris scariosa var. nieuwlandii | Threatened | 10 | | 1 | | | | | | | 2 | 1 | | | | | |
| 1 | Lonicera dioica | Rare | | | | | | 3 | | | | | | | | | | |
| 1 | Luzula acuminata | Endangered | | | | | | | | | | 1 | | | | | | |
| 2 | Lycopodium clavatum | Endangered | | 1 | | | | | | | | | 1 | | | | | |
| 3 | Lycopodium complanatum var. flabelliforme | Rare | | 8 | 1 | | | | | | | | 1 | | | | | |
| 1 | Lycopodium obscurum | Rare | | | | | | | | | | | 1 | | | | | |

# 2001-2011
## Species EO Frequency by County

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Lycopodium tristachyum | Rare | | | | | | | | | | | 1 | | | | | |
| 1 | Lycopus rubellus | Rare | | | 1 | | | | | | | | | | | | | |
| 1 | Lycopus virginicus | Rare | 2 | | | | | | | | | | | | | | | |
| 1 | Lysimachia hybrida | Rare | | 1 | | | | | | | | | | | | | | |
| 1 | Malvastrum hispidum | Endangered | | | | | | | | | | 1 | | | | | | |
| 1 | Matteuccia struthiopteris | Rare | | | | | | | 1 | | | | | | | | | |
| 3 | Medeola virginiana | Endangered | 1 | | | | | | | | | | 1 | 1 | | | | |
| 1 | Megalodonta beckii | Endangered | | | | | | 3 | | | | | | | | | | |
| 1 | Melanthium virginicum | Threatened | | | 1 | | | | | | | | | | | | | |
| 3 | Menyanthes trifoliata | Threatened | | | 2 | | | 3 | 2 | | | | | | | | | |
| 3 | Minuartia patula | Threatened | 2 | 1 | | | | | | | | 4 | | | | | | |
| 6 | Mitella diphylla | Rare | 1 | | 1 | | 1 | 6 | 1 | | | | | | 1 | | | |
| 1 | Monotropa hypopithys | Rare | | | | | | 1 | | | | | | | | | | |
| 3 | Monotropa uniflora | Rare | | | | | | 3 | 1 | | | | | | 1 | | | |
| 1 | Morus rubra | Rare | | 1 | | | | | | | | | | | | | | |
| 1 | Muhlenbergia cuspidata | Rare | | | 1 | | | | | | | | | | | | | |
| 1 | Napaea dioica | Rare | | | | | | | | | | 1 | | | | | | |
| 6 | Oenothera perennis | Threatened | 13 | 1 | | | | 11 | 1 | | | 1 | 1 | | | | | |
| 2 | Ophioglossum vulgatum var. pseudopodum | Rare | 1 | 2 | | | | | | | | | | | | | | |
| 3 | Orchis spectabilis | Rare | | 2 | | | | | 3 | 1 | | | | | | | | |
| 1 | Orobanche fasciculata | Endangered | | | | | | 1 | | | | | | | | | | |
| 6 | Orobanche uniflora | Rare | 1 | 3 | 1 | | | 3 | | | | | | | | 1 | 1 | |
| 3 | Oryzopsis racemosa | Rare | | 1 | 1 | | | 4 | | | | | | | | | | |
| 5 | Panax quinquefolius | Rare | | 5 | 1 | | 2 | 1 | | | | | | | 1 | | | |
| 3 | Parnassia glauca | Rare | | | | | | 2 | 2 | | | | | | | 1 | | |
| 2 | Penstemon pallidus | Rare | | 3 | | | | | | | | | | | | 1 | | |
| 1 | Penstemon tubaeflorus | Endangered | | 3 | | | | | | | | | | | | | | |
| 1 | Physocarpus opulifolius | Rare | | | | | | 1 | | | | | | | | | | |
| 2 | Pilea fontana | Rare | 2 | | | | 1 | | | | | | | | | | | |
| 1 | Pinus banksiana | Endangered | 1 | | | | | | | | | | | | | | | |

# 2001-2011
## Species EO Frequency by County

| # of Counties | Species | Species status | Cook (IL) | DuPage (IL) | Kane (IL) | Kankakee (IL) | Kendall (IL) | Lake (IL) | McHenry (IL) | Ogle (IL) | Pike (IL) | Will (IL) | Lake (IN) | LaPorte (IN) | Porter (IN) | Kenosha (WI) | Walworth (WI) | Waukesha (WI) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Plantago cordata | Endangered | 1 | 1 | | | | | | | | 1 | | | | | | |
| 2 | Platanthera ciliaris | Endangered | 1 | | | 1 | | | | | | | | | | | | |
| 2 | Platanthera clavellata | Endangered | | | | | | 1 | | | | | 1 | | | | | |
| 5 | Platanthera flava var. herbiola | Threatened | 1 | | | | | 5 | | | | 3 | | | 1 | | 1 | |
| 3 | Platanthera hyperborea var. huronensis | Rare | 1 | 1 | | | | | 5 | | | | | | | | | |
| 2 | Platanthera lacera | Rare | | | | | | | | | | 1 | | | | 1 | | |
| 2 | Platanthera psycodes | Endangered | | | | | | 4 | | | | | 1 | | | | | |
| 2 | Poa sylvestris | Rare | | 5 | | | | 1 | | | | | | | | | | |
| 3 | Pogonia ophioglossoides | Endangered | 1 | | | | | 4 | 3 | | | | | | | | | |
| 5 | Polygonatum pubescens | Endangered | 6 | 1 | | | | 2 | | | | | 3 | 1 | | | | |
| 3 | Polystichum acrostichoides | Rare | | 2 | | | | | 1 | | | | | | 1 | | | |
| 2 | Populus balsamifera | Endangered | 1 | | | | | | 1 | | | | | | | | | |
| 1 | Potamogeton robbinsii | Endangered | | | | | | 4 | | | | | | | | | | |
| 1 | Potentilla palustris | Rare | | | | | | | 1 | | | | | | | | | |
| 4 | Prenanthes aspera | Rare | 3 | 1 | 1 | | | | | | | 1 | | | | | | |
| 4 | Psoralea tenuiflora | Rare | 1 | 2 | 1 | | | 1 | | | | | | | | | | |
| 1 | Pycnanthemum pilosum | Rare | | 1 | | | | | | | | | | | | | | |
| 6 | Pyrola elliptica | Rare | 1 | 2 | 1 | | | 5 | 1 | | | | | | 1 | | | |
| 3 | Ranunculus rhomboideus | Threatened | 1 | | 1 | | | | 6 | | | | | | | | | |
| 3 | Rhus vernix | Rare | | | 2 | | | | 3 | | | | | | 1 | | | |
| 1 | Rhynchospora alba | Threatened | | | | | | | 2 | | | | | | | | | |
| 5 | Rubus odoratus | Endangered | 1 | 1 | 2 | | | 4 | 4 | | | | | | | | | |
| 2 | Rubus pubescens | Threatened | 4 | | | | | 4 | | | | | | | | | | |
| 1 | Rudbeckia fulgida var. sullivantii | Rare | | | | | | | | | | 1 | | | | | | |
| 1 | Sagittaria calycina | Rare | | | 2 | | | | | | | | | | | | | |
| 2 | Salix candida | Rare | | 2 | 2 | | | | | | | | | | | | | |
| 1 | Salix serissima | Endangered | | | | | | | 1 | | | | | | | | | |
| 2 | Sanguisorba canadensis | Endangered | | | | | | | 1 | | | 1 | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 | Sarracenia purpurea | Endangered | | | | | | 2 | 3 | | | | | | | | | |
| 3 | Saxifraga pensylvanica | Rare | | | 1 | | | 1 | | | | | | | 1 | | | |
| 2 | Schoenoplectus hallii | Threatened | | | | | | | | | | | 1 | | 1 | | | |
| 3 | Scirpus hattorianus | Endangered | | 3 | | | 1 | 1 | | | | | | | | | | |
| 1 | Scirpus microcarpus | Endangered | | | | | | 4 | | | | | | | | | | |
| 1 | Scleria verticillata | Rare | | | | | | 2 | | | | | | | | | | |
| 1 | Scutellaria ovata var. versicolor | Rare | | | | | | 4 | | | | | | | | | | |
| 1 | Shepherdia canadensis | Endangered | | | | | | 3 | | | | | | | | | | |
| 2 | Silene regia | Endangered | 1 | | 3 | | | | | | | | | | | | | |
| 4 | Silene virginica | Rare | 4 | 3 | | | | 1 | | | | 1 | | | | | | |
| 1 | Sisyrinchium campestre | Rare | 1 | | | | | | | | | | | | | | | |
| 3 | Sisyrinchium montanum | Endangered | 13 | 1 | | | | 1 | | | | | | | | | | |
| 3 | Sparganium emersum | Endangered | | 2 | 1 | | | | 1 | | | | | | | | | |
| 2 | Spiranthes lacera var. gracilis | Rare | | | 1 | | | 3 | | | | | | | | | | |
| 3 | Spiranthes lucida | Endangered | 2 | | 1 | | | | | | | 1 | | | | | | |
| 1 | Spiranthes magnicamporum | Rare | | | | | | | | | | | | | 1 | | | |
| 5 | Spiranthes ovalis | Rare | 1 | | 2 | | | 1 | 2 | | | | | | 1 | | | |
| 1 | Spiranthes romanzoffiana | Endangered | 1 | | | | | | | | | | | | | | | |
| 1 | Stellaria pubera | Endangered | 1 | | | | | | | | | | | | | | | |
| 2 | Swertia caroliniensis | Rare | 2 | 1 | | | | | | | | | | | | | | |
| 1 | Symphoricarpos albus var. albus | Endangered | | | 1 | | | | | | | | | | | | | |
| 3 | Tetraneuris herbacea | Endangered | 2 | 1 | | | | | | | | 1 | | | | | | |
| 2 | Thuja occidentalis | Rare | | | 1 | | | 1 | | | | | | | | | | |
| 5 | Tofieldia glutinosa | Threatened | 1 | | | | | 3 | 2 | | | | | | | 1 | 1 | |
| 6 | Tomanthera auriculata | Threatened | 11 | 3 | | | | 1 | | | | 4 | 1 | | 1 | | | |
| 5 | Trientalis borealis | Endangered | 2 | | | | | 2 | 1 | | | | 1 | 1 | | | | |
| 1 | Trifolium reflexum | Threatened | | | | | | | | | | 1 | | | | | | |
| 4 | Triglochin maritima | Threatened | | | | | | 4 | 3 | | | | | | | 1 | 1 | |
| 7 | Triglochin palustris | Threatened | 1 | | 2 | | | 2 | 3 | | | 1 | | | | 1 | 1 | |
| 4 | Trillium cernuum | Endangered | 1 | | | | | | 4 | | | 1 | | | | | 1 | |
| 2 | Trillium erectum | Endangered | | | | | | 1 | 1 | | | | | | | | | |

Attachment 7

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Trillium flexipes | Rare | 1 | | | | | | | | | | | | | | | |
| 4 | Trillium sessile | Rare | 1 | 2 | | | 1 | | | | | | | | 1 | | | |
| 1 | Ulmus thomasii | Endangered | | | | | | | | | | 1 | | | | | | |
| 3 | Utricularia cornuta | Endangered | | | | | | 1 | 1 | | | | | | | 1 | | |
| 1 | Utricularia gibba | Rare | | | | | | | 1 | | | | | | | | | |
| 4 | Utricularia intermedia | Threatened | 3 | | 1 | | | 2 | 4 | | | | | | | | | |
| 2 | Utricularia minor | Endangered | 1 | | | | | | 1 | | | | | | | | | |
| 1 | Utricularia subulata | Rare | | | | | | 1 | | | | | | | | | | |
| 1 | Vaccinium corymbosum | Endangered | | | | | | 1 | | | | | | | | | | |
| 1 | Vaccinium oxycoccos | Endangered | | | | | | 2 | | | | | | | | | | |
| 4 | Valeriana edulis var. ciliata | Rare | | 2 | | | | 2 | | | | 1 | | | | 1 | | |
| 2 | Valeriana uliginosa | Endangered | 1 | | | | | | 2 | | | | | | | | | |
| 1 | Valerianella umbilicata | Endangered | | | | | | | | | | 1 | | | | | | |
| 2 | Veronica americana | Endangered | | | | | 1 | | 1 | | | | | | | | | |
| 2 | Veronica comosa | Rare | 1 | | | | | | 2 | | | | | | | | | |
| 6 | Veronica scutellata | Threatened | 6 | 6 | 1 | | | 7 | | | | 1 | 1 | | | | | |
| 1 | Viola blanda | Endangered | | | | | | | 1 | | | | | | | | | |
| 3 | Viola canadensis | Endangered | 1 | | | | | | 1 | | | | | | 1 | | | |
| 5 | Viola conspersa | Threatened | 8 | 1 | | | | 11 | 1 | | | | | | 1 | | | |
| 1 | Viola pallens | Rare | | | | | | 2 | | | | | | | | | | |
| 1 | Viola pedatifida | Rare | | | | | | | | | | | | | 1 | | | |
| 3 | Viola striata | Rare | 2 | | | | | | 1 | | | | | | 1 | | | |
| 1 | Zigadenus glaucus | Endangered | | | | | | | | | | | | | | | 2 | |
| 5 | Zizania aquatica | Rare | | 1 | 1 | | | 1 | 1 | | | | 1 | | | | | |

Attachment 8

# PLANTS OF CONCERN: TRAINING WORKSHOP AGENDA

**April 18, 2012: Bowen Park, Jack Benny Center**
**1800 N. Sheridan Rd.**
**Waukegan, Lake County, IL**
**(see map)**
**9:30 a.m. – 1:30 p.m.**
**Morning coffee, tea and refreshments will be served. Please bring a lunch.**
**Dress for outdoor activities.**

- **Welcome and Introductions**
- **Background on Plants of Concern, 2001- 2011: Purpose and Accomplishments** (Susanne Masi and Greg Hitzroth, Chicago Botanic Garden)
- **Monitoring opportunities presented by partner, Waukegan Area Citizens Advisory Group** (Natalie Dutack and Tori Trauscht)
- **Monitoring opportunities at Illinois Beach State Park** (Don Wilson, site steward)

**BREAK**

- **Review of common invasive species** (Susanne Masi and Greg Hitzroth)
- **How the program works:** Linking volunteers with POC, landowners, partners, College of Lake County interns, sites and species; how to access equipment: GPS units, tapes, compasses; permits (Susanne Masi); special focus on Waukegan area sites
- **Forays –** group monitoring expeditions (Susanne Masi)

**LUNCH BREAK: Networking and exploring assignments**

- **On-line form submission and POC website** (Greg Hitzroth)
- **Step by step introduction to Level 1 Monitoring – reviewing the protocols** (Susanne Masi)
- **Outdoor field exercises:** Separate into small groups to practice using the GPS unit, pacing, and measuring populations.
- **Sign-up for species, sites, partners, and forays**
- **Complete application forms, Confidentiality forms, Log-in forms**

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**Handouts**

- POC Volunteer Training Manual
- Level 1 Monitoring Form
- Confidentiality Form
- On-line Log-in Form
- Evaluation Form
- CBG Volunteer Application Form

**On table**

- Sign-in spreadsheet – **please sign in with contact information and preferences**
- County application forms
- Foray sign-up sheets
- POC poster

Attachment 9

**POC meeting with IDNR: Susanne Masi and Greg Hitzroth**

October 18, 2011

Springfield, IDNR offices. Staff in attendance: Mike Moomey (in for Don McFall), John Wilker (POC sponsor for IDNR), Kelly Neal (Nature Preserves Commission), Randy Heidorn (Nature Preserves Commission), Maggie Cole, Lamma (Grants Administrator), Lamma's Intern, Ann Mankowski (Endangered Species Protection Board), Tara Kieninger (Natural Heritage Database), Jeannie Barnes (Natural Heritage Database), Ben Dolbeare (IDNR Invasive Species Coordinator)

Questions that were raised about POC

**Setting up POC in other parts of the state. A long time interest on the part of IDNR.** Can NE Illinois become more independent – work through established volunteer groups (like the VSN) and use CBG staff/resources to work in other parts of the State (e.g. St. Louis area of IL which has a strong volunteer group in place).

Response: Need funds and local leadership to take a coordinating role – POC can't do this from Chicago area. Regarding independence of county groups, we don't feel it is possible to let up on the centralized coordination and support of volunteers – too many landowners are involved besides the FPDs and IDNR. This needs a more thoughtful and detailed response.

*Comment by Susanne Masi, November 2012: We've had discussions with the Southern Chapter of the Illinois Native Plant Society and with SIU. Nothing concrete yet at this time.*

**Can many species be monitored every second or third year. This would reduce workload.**

Response: we are doing this already in many cases for perennial species. It is important for annual species to be monitored each year. We pointed out that the volunteers are attached to their species and may wish to check on them annually. We don't want to lose their interest. It was suggested they be assigned to other species in alternate years, and this is being done in some cases. We need to work out a scientific rationale for frequency of monitoring.

*Comment by Greg Hitzroth: We could look into a measurement of stability. Populations that are more stable could be monitored less. I guess we could also include size into the estimate. Large stable populations could be monitored every so often while small stable populations would be monitored more frequently. Less stable populations would be monitored more frequently. I suspect that population size could be incorporated into our estimates of stability. One way to look at this is that the high frequency of monitoring is intended to capture the amount of variability in a population but there is little variability we would need less data to capture it.*

**IDNR has questions about how species are doing on their lands (and on Nature Preserve sites). Can we do queries for them to get some of their specific answers?**

Response: POC has responded to specific questions and can accommodate these requests. Jeannie Barnes mentioned that the Natural Heritage Database has the POC database through 2009, and that she will be able to access this information via the new POC web database. She can help IDNR staff with queries. *Comment: John Wilker and all the site managers in NE Illinois can have immediate access to all their site reports with a logon code that POC can help with.*

**Can POC include a field for the natural area quality of a population? Can volunteers be trained to do this? IDNR can provide the revised protocol for assessing quality for the INAI to assist with this.**

Response: POC would like to build this into the dataset and will have to determine how best to do this. Some volunteers would be qualified, but many would not be and we don't want them to be daunted. Landowners (ecologists) who do a lot of monitoring may be willing to help. POC asked for the current listing of INAI sites and their quality that may be plugged in to start this process. *Comment: POC was sent this listing, but the format was difficult to work with to tease the information out and the project was put on the to-do list.*

**Can POC data from NE IL habitats and natural communities be comparable across the state.**

Response: We think so. POC monitors prairie in rural areas, such as Midewin and the outlying areas of counties, including hill prairies. These communities are found throughout the state. We don't monitor the loess bluffs along the Mississippi or the glades and forest of the southern part of the state, but we think the protocols are applicable anywhere. We are able to pull out community types and analyze species in those communities (though there are some gaps in the database for these.)

*Greg's Comment: This seems like a good argument for creating a GIS of POC data to start to incorporate other environmental data into our analysis. This maybe something that an IDNR intern (more skilled labor than the typical volunteer) can do if they have a background in GIS.*

**Has POC done anything to analyze climate in relation to population trends?**

Response: thus far we have done this (rather successfully) with Midewin data, but not yet beyond that.

*Greg's comment: does Pati have a model in mind for analyzing our data in climate change context. I guess if we knew what the model we wanted to gear our data too we could start working towards that goal since we do have tons of data! This would also allow us to start saying that we are working towards this end. If it's going to be a GIS model we have been starting down that path with Ocatvio and Emily's work this summer.*

**Does POC have a long range business plan, to sustain the program? State funding isn't guaranteed and foundations seem to like start-up programs rather than sustained programs. (POC should continue to apply for the WPF funds in any case.)**

Response: we have discussed this at CBG and thus far have successfully relied on grants to sustain the program. We would like to see a private donor "adopt" this program. We will

bring this question back to CBG for broader discussion. *Comment: this is an ongoing discussion. We are set thought 2013, but need to plan beyond that.*

**Is there a possibility that one of the IDNR interns be assigned (in part) to POC?**

Response: POC would welcome that opportunity. John Wilker said he would keep that in mind. Much would depend on IDNR priorities and needs for these positions, as resources are very scant for them as well. *Comment, November 2012. Four IDNR interns attended the POC workshop in Spring 2012 and participated in some monitoring at two IDNR sites. We would welcome additional participation!*

Overall there was positive support for the POC program and acknowledgement that POC data is one of the most important and prolific sources of reporting for the Natural Heritage Database for NE IL.

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**Attachment 10**

**Nature Preserves/Land and Water Reserves and IDNR-owned or managed sites: 2001-2011**

**<u>Nature Preserves/Land and Water Reserves</u>**

Almon Underwood Forest Preserve – Kane
Amberin Ash Ridge – McHenry
Baker's Lake – Cook
Barber Fen – McHenry
Belmont Prairie – DuPage
Blodgett Road Dolomite Prairie -Will
Bliss Woods – Kane
Bluff Spring Fen – Cook
Boloria Fen and Sedge Meadow – McHenry
Boone Creek Nature Preserve – McHenry
Braidwood Dunes and Savanna – Will
Burlington Prairie – Kane
Bystricky Prairie – McHenry
Cap Sauers Holdings – Cook
Camp Sagawau Nature Preserve – Cook
Carl Becker Nature Preserve - Kankakee
Cedar Lake Bog-Marsh - Lake
Chain o Lakes State Park (Turner Lake) - Lake
Chicago Ridge Prairie – Cook
Churchhill Woods – DuPage
Cotton Creek Marsh – McHenry
Deer Grove - Cook
Dellwood Park West – Will
Des Plaines Dolomite Prairies Land and Water Reserve – Will
Dick Young Forest Preserve, Nelson Lake Marsh – Kane
Dixie Briggs Fromm – Kane
Dropseed Prairie - Cook
East Skokie Nature Preserve – Lake
Farms Trails North Nature Preserve - Lake
Fel-Pro - McHenry
Florsheim Park and North Park – Lake
Fourth Lake Fen - Lake
Freeman Kame - Kane
Gensburg Markham Prairie – Cook
Glacial Park – McHenry
Gladstone Fen – McHenry
Glenbrook North H.S. Prairie Nature Preserve- Cook
Goodenow Grove Nature Preserve – Will
Grainger Flatwoods - Lake
Grant Creek Prairie Nature Preserve – Will
Grant Woods Forest Preserve - Lake
Illinois Beach State Park (North and South Units) – Lake
James Pate Phillips State Park Land and Water Reserve – Tri County
Lake Elizabeth – McHenry
Lake in the Hills Fen – McHenry
Lakewood Forest Preserve- Kane
LeRoy Oakes Forest Preserve – Kane
Liberty Prairie – Lake
Lind Woods - McHenry
Lockport Prairie – Will
Lyons Prairie and Marsh – McHenry
MacArthur Woods - Lake
Main Street Nature Preserve – McHenry
Manuk Sook Land and Water Reserve - McHenry
Maramech Forest Preserve – Kendall
Meissner – Corron (Russell Fen) – Kane
Messenger Woods – Will
Middlefork Savanna - Lake
Oakwood Hills Fen – McHenry
Paintbrush Prairie – Cook
Palatine Prairie – Cook
Palos Fen – Cook
Powderhorn Prairie – Cook
Prairie Hill School (Cary Junior High School Prairie Nature Preserve) - McHenry
Reed Turner Woodland and Woodland Ridge Lot 2– Lake
Romeoville Prairie – Will
Ryerson Conservation Area - Lake
Sand Ridge Prairie – Cook
Sand Ridge Savanna – Will
Santa Fe Prairie – Cook
Shoe Factory Road Prairie – Cook
Silver Creek (Bates Fen) – McHenry
Sleepy Hollow Ravine - Kane
Somme Prairie Nature Preserve –Cook
Spring Bluff – Lake
Sternes Woods Fen - McHenry
Sundrop Prairie - Cook
Sweet Fern Savanna - Kankakee

**Attachment 10**

Superior Street Prairie Land and Water Reserve – Cook
Thorn Creek Woods – Will
Tower Lake Fen – Cook and Lake
Trout Park Nature Preserve– Kane
Vermont Cemetery – Will
Volo Bog State Park – Lake
Wadsworth Prairie – Lake
West Chicago Prairie – DuPage
West Side Community Park (Campton Hills Prairie Land and Water Reserve) – Kane
Wolf Road Prairie – Cook

**IDNR-owned or managed sites**

Bailey Easement: Boone Creek - McHenry
Blodgett Road Dolomite Prairie - Will
Boone Creek Fen - McHenry
Chain-o-Lakes State Park (Turner Lake) - McHenry
Des Plaines River Conservation Area: Foxglove Prairie – Will
Grant Creek Prairie – Will
Hitt's Siding Prairie – Will
Hosah Prairie - Lake
Illinois Beach State Park (North and South Units (Lake)
James Pate Phillips State Park Land and Water Reserve – Tri County
Moraine Hills State Park – McHenry
Volo Bog State Park– Lake
William Powers Conservation Area – Cook
Wolf Road Prairie - Cook

CHICAGO BOTANIC GARDEN

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gciaccio@chicagobotanic.org

**For Immediate Release**

# Chicago Botanic Garden's Plants of Concern Program Receives Illinois Wildlife Preservation Fund Grant

*$14,000 grant to go toward studying Illinois' rare plants*

**GLENCOE, Ill. (Sept. 15, 2011)** –The Chicago Botanic Garden's Plants of Concern (POC) program was recently awarded a $14,000 Wildlife Preservation Fund Grant from the Illinois Department of Natural Resources. This grant is designed to preserve, protect, perpetuate and enhance non-game wildlife and native plant resources of Illinois through preservation of a satisfactory environment and an ecological balance. POC is a regional rare plant monitoring program designed to assess long-term trends in the state's rarest plant species.

Co-founded in 2000 by Susanne Masi, manager of regional floristics at the Chicago Botanic Garden, POC monitors plants in eight counties of northeastern Illinois including Cook, Lake, DuPage, McHenry, Kane, Will, Kendall and Kankakee. It is a collaboration of trained volunteers, "citizen scientists," working together with land managers and scientists. The data collected provides land managers with information that helps them set management goals for species within a community context and evaluate management practices.

"POC was created to meet the needs expressed in Chicago Wilderness' Biodiversity Recovery Plan (1999) to monitor endangered and threatened species throughout the region. We also update Illinois' Natural Heritage database records for endangered and threatened plants," said Ms. Masi. "Nothing of this scale and scope had been done before. We rely on our citizen scientists to leverage the scarce resources of public and private agencies."

The POC program is founded on four core tenets:

- Monitor endangered, threatened, and locally rare plant species using standardized protocols.
- Assess long-term trends in rare plant populations in response to management activities and/or threats to populations.
- Train volunteers as citizen scientists to monitor rare plant populations and become conservation advocates.
- Provide information on population trends and potential threats to the populations to public and private landowners, land managers, and agencies as feedback to help determine future management practices.

Since its inception in 2000, the program has grown exponentially. POC has trained more than 600 citizen scientists; accumulated 14,860 volunteer hours; coordinated with 101 landowners; and monitored 226 endangered, threatened and rare species. The importance of POC's citizen scientists can not be stressed enough. It is because of the dedication and perseverance of the volunteers that the program continues to thrive.

The opening of the Daniel F. and Ada L. Rice Plant Conservation Science Center enhances the visibility of the program and help it continue to grow. The Plant Science Center showcases the program as part of the multifaceted approach to plant science undertaken by Garden scientists, which includes ecology, population biology, genetics, and soil science. Additionally, the Plant Science Center's expanded Herbarium will help POC with identifying monitored species and their associate species.

Admission to the Chicago Botanic Garden is free. Select event fees apply. Parking is $20 per car; free for Garden members. For more information about the Garden's Plants of Concern program visit www.chicagobotanic.org/research/plant_conservation/rare_plant or www.plantsofconcern.org; or call Susanne Masi at (847) 835-8269.

# # #

**Editors, please note:** The Chicago Botanic Garden's newsroom is online at www.chicagobotanic.org/pr. For digital images, contact Julie McCaffrey at (847) 835-8213 or at jmccaffrey@chicagobotanic.org.

*The Chicago Botanic Garden, one of the green treasures of the Forest Preserve District of Cook County, is a 385-acre living plant museum featuring 24 distinct display gardens surrounded by lakes, as well as a prairie and woodlands. With events, programs and activities for all ages, the Garden is open every day of the year, except Dec. 25. Admission is free; select event fees apply. Parking is $20 per car; free for Garden members. The Garden is located at 1000 Lake Cook Road in Glencoe, Ill. Visit www.chicagobotanic.org, or call (847) 835-5440 for seasonal hours, images of the Garden and commuter transportation information.*

*The Chicago Botanic Garden is managed by the Chicago Horticultural Society. It opened to the public in 1972 and is home to the Joseph Regenstein, Jr. School of the Chicago Botanic Garden, offering a broad array of adult classes in plant science, landscape design and gardening arts. Nearly 200 Garden scientists work on plant conservation, research and environmental initiatives that have local, regional and global impact. The Center for Teaching and Learning brings the wonder of nature and plants to children, teens and teachers with hundreds of summer camp, family and teacher training programs. The Garden's Horticultural Therapy and Community Gardening programs provide nationally recognized community outreach and service programs. The Garden is also breaking new ground in urban horticulture and jobs training through its Windy City Harvest program, which offers a certificate in Sustainable Horticulture and Urban Agriculture in cooperation with City Colleges of Chicago. The Chicago Botanic Garden is accredited by the American Association of Museums and is a member of the American Public Gardens Association (APGA). In 2006, the Chicago Botanic Garden received the Award for Garden Excellence, given yearly by the APGA and Horticulture magazine to a public garden that exemplifies the highest standards of horticultural practices and has shown a commitment to supporting and demonstrating best gardening practices.*

GLENCOE NEWS

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# NEWS BRIEFS

## Garden awarded grant

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"POC was created to meet the needs expressed in Chicago Wilderness' Biodiversity Recovery Plan (1999) to monitor endangered and threatened species throughout the region." said Masi. "We also update Illinois' Natural Heritage database records for endangered and threatened plants. Nothing of this scale and scope had been done before. We rely on our citizen scientists to leverage the scarce resources of public and private agencies."

Since its inception in 2000, the program has grown exponentially. POC has trained more than 600 citizen scientists; accumulated 14,860 volunteer hours; coordinated with 101 landowners; and monitored 226 endangered, threatened and rare species. The importance of POC's citizen scientists can not be stressed enough. It is because of the dedication and perseverance of the volunteers that the program continues to thrive.

The opening of the Daniel F. and Ada L. Rice Plant Conservation Science Center enhances the visibility of the program and help it continue to grow. The Plant Science Center showcases the program as part of the multifaceted approach to plant science undertaken by Garden scientists, which includes ecology, population biology, genetics, and soil science. Additionally, the Plant Science Center's expanded Herbarium will help POC with identifying monitored species and their associate species.

For more information about the Garden's Plants of Concern program visit www.chicagobotanic.org/research/plant_conservation/rare_plant or www.plantsofconcern.org; or call Susanne Masi at (847) 835-8269.

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