



**Illinois**  
**Department of**  
**Natural Resources**  
**Division of Natural Heritage**

8916 Wilmot Road Spring Grove, IL 60081 (815) 675-2386 FAX (815) 675-0103

RECEIVED

MAR 14 2005

DEBRA NELSON

MEMO

Date: March 8, 2005

To: Kathy Barker  
IDNR - ORC operations  
One Natural Resources Way  
Spring field, IL 62702-1271

From: Debra Nelson  
IDNR Natural Heritage Biologist  
8916 Wilmot Road  
Spring Grove, IL 60081

Phone: (815) 675-2386 x 321  
Fax: (815) 675-0103  
e-mail: dnelson@dnrmail.state.il.us

Subject: Wildlife Preservation Fund Grant 04-L34W - Volo Bog SNA

I have enclosed the signed request for reimbursement for threatened and endangered plant species survey work at Volo Bog State Natural Area completed by Margo Milde as contracted. This packet also contains maps, hard copies of all data and reports, and a floppy disk containing all data and reports in MS Word and excel format as received from Ms. Milde.

Hard copies of the data, maps and reports are on file here in my office at Chain O'Lakes. They have also been sent to the Natural Heritage Database manager, Tara Kieninger. The spreadsheets containing the element occurrence data has also been provided to the database staff (Jeanie Barnes), electronically via e-mail. I will also provide one copy of the entire packet to be held at the site by the site interpreter, Stacy Iwanicki.

Ms. Milde did some exceptional work in areas of the park that are very difficult to access and navigate due to thick vegetation, unstable floating mat, and poison sumac. She spent many more hours than anticipated and found, mapped and GPS'ed many populations of state listed species that had not been verified for over 10 years. One species not previously documented in the data base (*Utricularia intermedia*), was also found at the site during her surveys.

Please let me know if there is anything else needed to process the request for reimbursement.

THANKS!

**Volo Bog 2003 – Days in the field – Margo Milde**

- Feb 15 (approx) – winter bog walk with Deb Nelson
- June 29 – boardwalk
- July 4 – boardwalk
- Aug 28 – Volo Pond and boardwalk, including kayak
- Aug 29 – Pistakee Bog sedge meadow
- Sept 10 – Brandenburg Bog and S Sedge meadow
- Sept 27 – Brandenburg Bog E and nearby old field/brush edge
- Sept 29 - Pistakee Bog NW corner, including “2<sup>nd</sup> sedge meadow” south of stables
- Oct 1 – Pistakee Bog – walk from Bat Barn to Visitor Center through bog center
- Oct 4 – Volo Bog, berm N of Visitor Center and nearby areas of Tamarack View trail
- Oct 22 – Brandenburg Bog, SE portion
- Oct 24 – N Brandenburg Bog, shrub/carr and ruderal areas to N (access from residential street)
- Oct 29 – Pond and nearby areas in Mgmt unit 13 (across road from visitor center)
- Nov 1 – Mesic woods on slope S of Brandenburg Lake, old field in Mgmt unit #10
- Nov 29 – Inventoried recently cleared area SW of Pistakee Bog (N Wilson tract)
- Nov 30 – Woods S of bat barn; old field, pine plantation, and degraded woods in units # 26 and 27
- Dec 27 – N Wilson tract, S edge of Pistakee Bog (give info to Deb for management work)
- Dec 28 – Tamarack View Trail – esp. brush edges next to moat and long plastic boardwalk

**Volo Bog 2004 – Days in the field – Margo Milde**

- Feb 12 – Tamarack View Trail, general
- Feb 13 – Winter Tamarack Zone/Low Shrub Zone survey, Volo Bog
- Feb 14 – Survey marsh, shrub-carr S of Volo Bog
- Feb 16 – Winter Tamarack Zone/Low Shrub Zone survey, Volo Bog
- Feb 17 – Winter outer marsh survey, Volo Bog
- Feb 18 – Winter survey – shrub/carr and marsh SW of Volo Bog, incl. Oak Island
- Feb 19 – Winter survey of “dead tamaracks” area N of Volo Bog
- Apr 22 – Tamarack View Trail, emphasis on spring ephemerals
- Apr 23 – Woods on slope S and SW of Brandenburg Bog
- Apr 26 – Wilson Tract, including recently cleared area
- May 10 – Sedge meadow SE of Bat Barn and shrub/carr (Pistakee Bog)
- May 24 – Volo Bog boardwalk
- May 26 – Volo Tamarack View trail and neighboring woodlands, meadows
- May 28 – Deerpath Trail (S of Brandenburg Bog) and nearby woods, fields, brush
- May 29 – Marshes S, SE, and E of Brandenburg Bog
- June 2 – Volo Bog pond survey by kayak
- June 3 – Kayak “Bird Blind and berm” marsh
- June 4 – S central portion, Brandenburg Bog
- June 5 – Marsh edge and meadows NE of Volo Bog
- June 7 – Woods S of Bat Barn, and native prairie in N Wilson Tract
- June 9 – S and SE Brandenburg Bog

- June 29 – N Wilson Tract, Sedge meadow, mesic prairie, wet prairie  
July 3 – Volo “biodiversity day, looked at boardwalk plus ruderal areas near Visitor Center for their list!  
July 18 – NW and W portion of Pistakee Bog; mesic and wet prairie – Wilson tract; old field NW of Wilson Tract  
July 28 – Kayak Brandenburg Lake with Deb Nelson to visit mat (NW corner) and bog inlet (SW corner)  
Sept 11 – Volo Bog boardwalk and Tamarack View Trail (emphasis on long plastic boardwalk on Tamarack View trail for future management activities)

ADDITIONAL:

Separate project funded with Region 2 contractual funds:

Transects through Sedge Meadow SE of Bat Barn (July 10) and NE of Long Plastic Boardwalk towards Volo Bog (July 11 2004); additional information used in inventory.

**FINAL REPORT  
VOLO BOG STATE NATURAL AREA**

**Grant Title:**

“Endangered and threatened plant species at Pistakee Bog and Volo Bog Nature Preserves: location, field verification, and GPS”  
Wildlife Preservation Fund, FY04 Large Project Proposal

**Completed By:**

Margo R. Milde  
1206 Raleigh Road  
Glenview, IL 60025  
Phone (847) 724-4716  
Email: mrm1206@yahoo.com

**Cost: \$3,200**

**Dates of Project: July 1 2003 – December 31, 2004**

**IDNR Contact: Debra Nelson, Natural Heritage Biologist, District 8**

**SUMMARY of FINDINGS:**

**Species List:**

A comprehensive species list was completed for the entire site (see attached spreadsheet, “Volo Species List – VOLO BOG STATE NATURAL AREA”). Information pertaining to population size and locations (for the more uncommon species) was included for each element. Only species observed by me at this site during the period of time covered by this project were included in this list (this list is *not* a compilation of previous lists.) 493 species were found during the project period, of which 378 are native species, and 115 are non-natives. Shorter lists are included separately for species established in the site’s prairie restorations, and for introduced plantings.

**Illinois Listed Plant Species (Endangered and Threatened):**

I found a total of 21 listed plant species on this site during the project period as follows:

**Endangered:**

*Betula alleghaniensis*

*Calla palustris*

*Calopogon tuberosus*

*Carex canescens* var. *disjuncta*

*Carex chordorrhiza*

*Carex disperma*

*Carex trisperma*

*Cypripedium parviflorum* var. *makasin*

*Cypripedium reginae*

Yellow Birch

Water Arum

Grass Pink Orchid

Silvery Sedge

Cordroot Sedge

Shortleaf Sedge

Three-seeded Sedge

Small Yellow Lady's Slipper

Showy Lady's Slipper

*Eriophorum virginicum*  
*Pogonia ophioglossoides*  
*Sarracenia purpurea*  
*Schoenoplectus smithii*  
*Trientalis borealis*  
*Vaccinium corymbosum*  
*Vaccinium oxycoccos*

Rusty Cotton Grass  
Snake-mouth  
Pitcher Plant  
Smith's Bulrush  
Star-flower  
Highbush Blueberry  
Small Cranberry

**Threatened:**

*Chamaedaphne calyculata*  
*Epilobium strictum*  
*Larix laricina*  
*Menyanthes trifoliata*  
*Utricularia intermedia*

Leatherleaf  
Downy Willow Herb  
Tamarack  
Buckbean  
Flat-leaved Bladderwort

Listing and nomenclature for these species is that used by the Illinois Endangered Species Protection Board in their 2004 update. I developed a spreadsheet for each listed species, detailing each occurrence of that species, along with the date found, population estimate, GPS coordinates, habitat, associates, and threats or other observations. These are attached to this correspondence and will be submitted to the Natural Heritage Database in Springfield. GIS mapping was done separately by District Natural Heritage Biologist Deb Nelson and will also be submitted to the Natural Heritage Database in Springfield.

**Days in the field:**

I spent 18 partial (at least 4 hours) or full days in the field at this site in 2003, and 26 partial or full days in 2004 in the field. (See attached listing, "List of Partial or Full Days in the Field at Volo Bog State Natural Area".) This well exceeds the minimum number of visits required as stated in the project description.

**Conclusion:**

Although Volo Bog State Natural Area faces threats on many fronts in the upcoming decade, many of its listed and otherwise uncommon plant species still remain. Additionally, it appears that many of the plant communities are still relatively intact and worthy of future protection and attention.

Should you have any questions, please do not hesitate to contact me.

Sincerely yours,

Margo R Milde  
1206 Raleigh Road  
Glenview, IL 60025  
Phone (847) 724-4716  
Email: mrm1206@yahoo.com

**VOLO BOG SNA**  
 Including Volo Bog State Nature Preserve and Pistakee Bog State Nature Preserve  
 Lake and McHenry Counties, Illinois  
 Comprehensive Site Inventory Dates: 2003 - 2004 By: Margo Milde for WFP Grant 04-L34W

SPECIES NAME	FAMILY	COMMON NAME	CONTRIBUTOR OF COLLECTORS	POPULATION SIZE (EST.)	HABITATS
<i>Acalypha fruticosa</i>	Euphorbiaceae	Three-seeded mercury	0	Infrequent	Moist woods edge
<i>Acer negundo</i>	Aceraceae	Box elder	0	Common	Moist woods edge
<i>Acer rubrum</i>	Aceraceae	Red maple	7	Infrequent	Tamarack Zone - all tree bogs, low woods edge and floating mat - B Lake
<i>Acer saccharinum</i>	Aceraceae	Silver maple	0	Common	Moist edges
<i>Acer saccharum</i>	Aceraceae	Sugar maple	3	Common	Mesic woodland
<i>Achillea millefolium</i>	Compositae	Common yarrow, milfoil	-	Occasional	Various, mostly ruderal
<i>Adiantum alatum</i>	Marattiaceae	Water hemp	0	Infrequent	Ruderal wetlands
<i>Adiantum purpureum</i>	Marattiaceae	Purple false foxglove	7	Infrequent	Floating mat - Volo Bog and Brandenburg Lake
<i>Agrimonia gryosepala</i>	Rosaceae	Tail grommery	2	Infrequent	Disturbed woodlands, woods edges
<i>Agrivium repens</i>	Gramineae	Quack grass	-	Occasional	Old field, ruderal
<i>Agrostis alba</i>	Gramineae	Redtop grass	-	Abundant	Various, mostly ruderal
<i>Agrostis alba</i> var. <i>ballistis</i>	Gramineae	Creeping bent	10	Infrequent	B and P bogs
<i>Agrostis hyemalis</i>	Gramineae	Tickle grass	1	Infrequent	Floating mat - Volo Bog
<i>Alisma subcordatum</i>	Alismaceae	Common water plantain	4	Common	Bogs, marshes, sedge meadows
<i>Alisma vivale</i>	Alismaceae	Large-flowered water plantain	4	Common	Bogs, marshes, sedge meadows
<i>Alliaria petiolata</i>	Cruciferae	Garlic mustard	-	Abundant	Mesic woodland, edges
<i>Allium cernuum</i>	Liliaceae	Nodding wild onion	7	Occasional	Prairie, woodland edges
<i>Amaranthus powellii</i>	Amaranthaceae	Tail amaranth	-	Occasional	Old field, ruderal
<i>Ambrosia artemisiifolia</i> var. <i>elatio</i>	Compositae	Common ragweed	0	Abundant	Various, mostly ruderal
<i>Ambrosia trifida</i>	Compositae	Giant ragweed	0	Common	Ruderal wetlands
<i>Ampelodesmos brevifolius</i>	Leguminosae	Upland hog peanut	4	Occasional	Mesic woodland, edges
<i>Ampelodesmos brevifolius</i> var. <i>complanatus</i>	Leguminosae	Lowland hog peanut	4	Occasional	Mesic woodland, edges
<i>Andropogon gerardii</i>	Gramineae	Big bluestem grass	5	Infrequent	Marsh edges
<i>Anemone quinquefolia</i>	Ranunculaceae	Wood anemone	7	Infrequent	Native prairie
<i>Anemone virginiana</i>	Ranunculaceae	Thimbleweed	5	Occasional	Mesic woodland
<i>Anemone thalictroides</i>	Ranunculaceae	Rue anemone	7	Infrequent	Mesic woodland
<i>Angelica atropurpurea</i>	Umbelliferae	Great angelica	7	Occasional	Mesic sloping woods near bogs
<i>Antennaria plantaginifolia</i>	Compositae	Pussy toes	3	Infrequent	Sedge meadows, shrub-car
<i>Apocynum cannabinum</i>	Apocynaceae	Indian hemp	4	Infrequent	Old field S of Bat Barn, moist meadow W of berm
<i>Apocynum sibiricum</i>	Apocynaceae	Prairie Indian hemp, dogbane	2	Occasional	Old field, ruderal
<i>Arabis laevigata</i>	Cruciferae	Smooth bank cress	5	Infrequent	Moist woods edge
<i>Arabis nudicaulis</i>	Araceae	Wild sarsaparilla	8	Infrequent	Moist woods edge
<i>Arisaema triphyllum</i>	Araceae	Jack-in-the-pulpit	4	Infrequent	Moist woods on slope near bogs, bogs
<i>Artemisia tridentata</i>	Araceae	Chokeberry	6	Occasional	Woods on slope S of Brandenburg Lake
<i>Asclepias incarnata</i>	Asclepiadaceae	Swamp milkweed	4	Occasional	Bogs - Tamarack and Tall Shrub Zones
<i>Asclepias syriaca</i>	Asclepiadaceae	Common milkweed	0	Common	Marshes, sedge meadows
<i>Asclepias verticillata</i>	Asclepiadaceae	Whorled milkweed	1	Occasional	Old field, ruderal, native prairie
<i>Asparagus officinalis</i>	Liliaceae	Asparagus	-	Infrequent	Dry old field
<i>Aster azureus</i>	Compositae	Sky-blue aster	8	Infrequent	Ruderal
<i>Aster borealis</i>	Compositae	Rush aster, Northern bog aster	10	Infrequent	Native mesic prairie
<i>Aster lateriflorus</i>	Compositae	Side-flowering aster	4	Infrequent	Bog (Low Shrub Zone, Tamarack Zones), Tamarack Zone - P Bog
<i>Aster novae-angliae</i>	Compositae	New England aster	4	Occasional	Moist woodlands bordering on marshes
<i>Aster pilosus</i>	Compositae	Hairy aster	0	Abundant	Marshes, sedge meadows
<i>Aster puniceus</i>	Compositae	Bristly aster	8	Common	Old field, ruderal
<i>Aster puniceus</i> var. <i>firmus</i>	Compositae	Shining aster	7	Occasional	Marshes, sedge meadows, bogs
<i>Aster sagittifolius</i> var. <i>drummondii</i>	Compositae	Drummond's aster	2	Infrequent	Marshes, sedge meadows, bogs
<i>Aster simplex</i>	Compositae	Marsh aster, panicked aster	3	Occasional	Mesic woodland
<i>Athyrium filix-femina</i> var. <i>michauxii</i>	Polypodiaceae	Lady fern	8	Occasional	Moist edges
<i>Barbarea vulgaris</i>	Cruciferae	Winter cress, yellow rocket	-	Common	Woods on slope S of Brandenburg Lake
<i>Berberis thunbergii</i>	Berberidaceae	Japanese barberry	-	Common	Old field, ruderal
<i>Betula alleghaniensis</i>	Betulaceae	Yellow birch	10	Infrequent	Disturbed woodland
<i>Betula pumila</i>	Betulaceae	Dwarf birch, bog birch	10	Occasional	Bog - Tamarack Zone, Tall Shrub Zone
<i>Bidens cernua</i>	Compositae	Nodding bur marigold	5	Occasional	Bog (Low Shrub and Tamarack Zones), shrub-car
<i>Bidens comosa</i>	Compositae	Swamp tickseed	5	Occasional	Bog (Mat, Low Shrub Zones)
					Bog (Mat, Low Shrub Zones), marsh, sedge meadow

<i>Bidens connata</i>	Compositae	Purple-stemmed tickseed	5	Occasional	Bog (Mat, Low Shrub Zones), marsh, sedge meadow	2, 4, 6, 15
<i>Bidens coccinea</i>	Compositae	Tall swamp marigold	9	Infrquent	Marsh	4, 15
<i>Bidens frondosa</i>	Compositae	Common beggar's ticks	1	Common	Ruderal wetlands	throughout
<i>Boehmeria cylindrica</i>	Urticaceae	False nettle	2	Common	Marshes, sedge meadows, moist woods edges	throughout
<i>Boyerhavia virginiana</i>	Rubiaceae	Rattlesnake fern	6	Infrquent	Sloping moist woods near the bogs	4, 15
<i>Braselia schreberi</i>	Nymphaeaceae	Water shield	10	Infrquent	Voio pond center	15
<i>Braselia kaber</i>	Chlorofrae	Charlock	0	Occasional	Old field, ruderal	throughout
<i>Bromus ciliatus</i>	Gramineae	Fringed brome	10	Infrquent	Marshes, sedge meadows	2, 4, 6, 15
<i>Bromus inermis</i>	Gramineae	Hungarian brome	-	Common	Old field, ruderal	throughout
<i>Bromus japonicus</i>	Gramineae	Japanese chess	-	Infrquent	Old field, ruderal	throughout
<i>Calamagrostis canadensis</i>	Gramineae	Blue joint grass	3	Abundant	Marsh, sedge meadows, shrub-car	2, 3, 4, 6, 15
<i>Calla palustris</i>	Alaceae	Water arum	10	Infrquent	Tall shrub Zone and Tamarack Zone - Voio Bog	15
<i>Callitropis tuberosus</i>	Orchidaceae	Grass pink orchid	10	Rare	Floating mat - Voio pond center	15
<i>Callitropis palustris</i>	Ranunculaceae	Marsh marigold	5	Common	Marsh areas bordering bogs	2, 4, 15
<i>Campánula aparinoides</i>	Campánulaceae	Marsh bellflower	8	Occasional	Marshes, sedge meadows, Low Shrub and Mat zones - Voio	2, 4, 15
<i>Capsella bursa-pastoris</i>	Chlorofrae	Shepherd's purse	-	Occasional	Ruderal	15
<i>Cardamine bulbosa</i>	Chlorofrae	Bulbous cress	6	Occasional	Marshes, sedge meadows, bogs (Tall Shrub and Tamarack Zones)	2, 4
<i>Cardamine pennsylvanica</i>	Chlorofrae	Pennsylvania bitter cress	4	Occasional	Moist old fields, moist woods edges	4
<i>Carex nutans</i>	Compositae	Nodding thistle	-	Common	Old field, ruderal	throughout
<i>Carex aquatilis</i> var. <i>altior</i>	Cyperaceae	Long-bracted tussock sedge	5	Infrquent	Sedge meadows S and E of B Bog	4
<i>Carex athartodes</i>	Cyperaceae	Hair-leaved lake sedge	5	Infrquent	Sedge meadow	6 (North Wilson tract)
<i>Carex bebbii</i>	Cyperaceae	Bebb's oval sedge	6	Occasional	Marshes, sedge meadows	2, 4, 6, 15
<i>Carex bicknellii</i>	Cyperaceae	Copper-shouldered oval sedge	10	Infrquent	Native mesic prairie	6 (North Wilson tract)
<i>Carex blanda</i>	Cyperaceae	Common wood sedge	1	Occasional	Mesic woodlands, woods edge	1, 9, 12, 16, 20
<i>Carex canescens</i> var. <i>disjuncta</i>	Cyperaceae	Gray bog sedge	10	Occasional	Bog (Voio only) - Tall Shrub, Tamarack, and Low Shrub Zones	15 (099)
<i>Carex cephalophora</i>	Cyperaceae	Short-headed bracted sedge	3	Infrquent	Mesic woodland	9, 12, 16, 20
<i>Carex chortorthiza</i>	Cyperaceae	Concord sedge	10	Rare	Low Shrub Zone - Voio Bog only	15 (b9)
<i>Carex corymbosa</i>	Cyperaceae	Bristly sedge	5	Common	Marsh, sedge meadows, shrub-car	2, 5, 15
<i>Carex cristatella</i>	Cyperaceae	Crested oval sedge	4	Common	Marsh, sedge meadows, moist fields	2, 4, 6, 8, 13, 15
<i>Carex diandra</i>	Cyperaceae	Two-seeded sedge	10	Infrquent	Tamarack Zones - bog	2, 4, 15 - bogs
<i>Carex granulata</i>	Cyperaceae	Pale sedge	4	Occasional	Moist old field, mesic prairie, moist woods edges	2, 4, 6, 8, 15
<i>Carex hystericina</i>	Cyperaceae	Porcupine sedge	5	Occasional	Marsh, sedge meadow, shrub-car	2, 4, 15
<i>Carex interior</i>	Cyperaceae	Prairie star sedge	10	Infrquent	Tall Shrub and Tamarack Zones - B and P bogs; Low Shrub Zone - Voio	2, 4, 15
<i>Carex lasiocarpa</i>	Cyperaceae	Narrow-leaved sedge	6	Occasional	Marsh, sedge meadow, shrub-car	2, 4, 15
<i>Carex lasiocarpa</i> var. <i>americana</i>	Cyperaceae	Narrow-leaved woolly sedge	10	Infrquent	Tamarack and Low Shrub Zones - bogs; sedge meadows	2, 4, 15
<i>Carex leptalea</i>	Cyperaceae	Slender sedge	10	Occasional	Tall Shrub, Tamarack, and Low Shrub Zones - bogs	2, 4, 15
<i>Carex normalis</i>	Cyperaceae	Spreading oval sedge	5	Infrquent	Woods edges	9, 12, 16, 20
<i>Carex pellita</i>	Cyperaceae	Broad-leaved woolly sedge	4	Occasional	Marshes, sedge meadows, moist old fields	2, 4, 6, 8, 13, 15
<i>Carex pensylvanica</i>	Cyperaceae	Common oak sedge	5	Occasional	Mesic woods, woods edges	9, 11, 12, 16, 20
<i>Carex radiata</i>	Cyperaceae	Straight-styled wood sedge	6	Infrquent	Mesic woodland	12, 16, 20
<i>Carex roosa</i>	Cyperaceae	Curly-styled wood sedge	4	Infrquent	Mesic woodland	12, 16, 20
<i>Carex saxatilis</i>	Cyperaceae	Running marsh sedge	6	Occasional	Sedge meadows, Wet prairie	12, 16, 20
<i>Carex scoparia</i>	Cyperaceae	Lance-fruited oval sedge	7	Rare	Floating mat - Voio Bog	6 (North Wilson tract)
<i>Carex spatarioides</i>	Cyperaceae	Loose-headed bracted sedge	3	Infrquent	Mesic woods N of Voio Bog	15
<i>Carex sterilis</i>	Cyperaceae	Fan star sedge	10	Rare	Floating Mat - Voio Bog	12, 15
<i>Carex stricta</i>	Cyperaceae	Common tussock sedge	3	Common	All wetlands including bogs	15
<i>Carex stricta</i>	Cyperaceae	Common tussock sedge	5	Occasional	Marshes, sedge meadows	throughout
<i>Carex trispirma</i>	Cyperaceae	Three-seeded bog sedge	10	Infrquent	Tall Shrub, Tamarack, and Low Shrub Zones - bogs	2, 4, 15
<i>Carex villoinoides</i>	Juglandaceae	Brown fox sedge	2	Occasional	Disturbed moist areas, roadside ditches	throughout
<i>Carva ovata</i>	Juglandaceae	Shagbark hickory	5	Occasional	Mesic and dry woods	1, 4, 9, 12, 16, 20
<i>Catalpa speciosa</i>	Bignoniaceae	Hardy catalpa	-	Infrquent	Woods edges	4, 7
<i>Celastrus orbiculus</i>	Celastraceae	Oriental bittersweet	-	Common	Woods and woods edges	throughout
<i>Celtis occidentalis</i>	Ulmaceae	Hackberry	3	Occasional	Moist woods edges	2, 4, 15
<i>Ceryopteris villosa</i>	Polypodiaceae	Woods-ear fern	-	Occasional	Ruderal areas, dry old fields	1, 4 (Bar Barn), 15
<i>Ceratothylacum demersum</i>	Ceratothylacaceae	Cornball hornwort	5	Occasional	Marsh moat around Voio Bog	15
<i>Chamaedaphne calyculata</i>	Ericaceae	Leatherleaf	10	Occasional	Low Shrub Zone - Voio Bog only	15
<i>Chelone glabra</i>	Scrophulariaceae	Turtlehead	8	Infrquent	Marshes, sedge meadows, shrub-car	2, 4
<i>Chenopodium album</i>	Chenopodiaceae	Lamb's quarters	-	Occasional	Ruderal areas, dry old fields	2, 4 (Bar barn), 15
<i>Cichorium intybus</i>	Compositae	Chicory	-	Common	Ruderal	throughout

<i>Cicuta bulbifera</i>	Umbelliferae	Bulblet-bearing water hemlock	8	Occasional	Marshes, sedge meadows	2, 4, 15
<i>Cicuta maculata</i>	Umbelliferae	Spotted water hemlock	6	Occasional	Sedge meadows, wet prairie, moist old field	2, 4, 6, 7, 8, 15
<i>Cinna arundinacea</i>	Gramineae	Common wood reed grass	5	Occasional	Mesic woodlands, woods edge	4, 9, 15, 16
<i>Cirsaea luteiflora</i> var. <i>canadensis</i>	Cyrtocarpaceae	Echanter's nightshade	1	Common	Disturbed woodland and woods edges	throughout
<i>Cirsium arvense</i>	Compositae	Field thistle, Canada thistle	-	Common	Ruderal areas, dry old fields	throughout
<i>Cirsium muticum</i>	Compositae	Swamp thistle	10	Occasional	Marshes, sedge meadows, shrub-carr	2, 4, 6, 15
<i>Cirsium vulgare</i>	Compositae	Bull thistle	-	Occasional	Ruderal, dry old fields	throughout
<i>Comandra umbellata</i>	Samolaceae	Bastard leadlax	7	Infrequent	Native mesic prairie	6 (North Wilson tract)
<i>Convallaria marialis</i>	Liliaceae	European lily-of-the-valley	-	Occasional	Disturbed woodland (W of P Bog), P and B Bogs	1, 2, 4, 6
<i>Convovulvis arvensis</i>	Convovulaceae	Field bindweed	-	Common	Ruderal areas, dry old fields	throughout
<i>Convovulvis sepium</i>	Convovulaceae	Hedge bindweed	1	Common	Disturbed moist areas, marsh edges, sedge meadows	2, 4, 6, 15
<i>Cornus obliqua</i>	Cornaceae	Blue-fruited dogwood	6	Common	Shrub-carr, marsh edges, and Tall Shrub Zone in bogs	2, 4, 6, 15
<i>Cornus racemosa</i>	Cornaceae	Gray dogwood	1	Common	Disturbed woodland and woods edges	throughout
<i>Cornus stolonifera</i>	Cornaceae	Red-osier dogwood	6	Common	Shrub-carr, marsh edges, and Tall Shrub Zone in bogs	2, 4, 5, 15
<i>Coronilla varia</i>	Leguminosae	Crown vetch	-	Occasional	Ruderal areas, dry old fields	throughout
<i>Corylus americana</i>	Betulaceae	American hazelnut	5	Occasional	Dry woods, woods edges, also Tall Shrub Zone in B Bog	4, 11, 12
<i>Cryptotaenia canadensis</i>	Betuliferae	Honeysuckle	2	Infrequent	Disturbed woods S of Bat Barn	1
<i>Cuscuta groenovi</i>	Convovulaceae	Common dodder	4	Common	Marshes, sedge meadows, wet prairie	2, 4, 6, 15
<i>Cyperus ferrugineosens</i>	Cyperaceae	Rusty nut sedge	2	Infrequent	Marsh mat - Volo Bog, floating mat, Volo Pond Center, dat. moist areas	15
<i>Cyperus fluitans</i>	Cyperaceae	Brook nut sedge	4	Infrequent	Floating mat - Volo Pond center	15
<i>Cyperus strigosus</i>	Cyperaceae	Long-scaled nut sedge	1	Occasional	Marsh edges, floating mat - Volo Bog	2, 4, 15
<i>Cyrtopodium parviflorum</i> var. <i>makr</i>	Orchidaceae	Small yellow lady's slipper	10	Infrequent	Tamarack and Tall Shrub Zones - B Bog	4
<i>Cyrtopodium reginae</i>	Orchidaceae	Showy lady's slipper	10	Infrequent	Tamarack and Tall Shrub Zones - B and P Bogs	2, 4
<i>Dactylis glomerata</i>	Gramineae	Orchard grass	-	Occasional	Ruderal	throughout
<i>Dasycis cervicis</i>	Umbelliferae	Queen Anne's lace	-	Common	Ruderal, dry old fields	throughout
<i>Decodon verticillatus</i>	Lythaceae	Swamp loosestrife	8	Infrequent	Marsh mat NW of Volo Bog, floating mat - Brandenburg Lake	4, 15
<i>Desmodium glutinosum</i>	Leguminosae	Pointed tick trefoil	5	Occasional	Dry woods, woods edges	1, 9, 12, 16
<i>Dianthus armeria</i>	Caryophyllaceae	Deepford pink	-	Occasional	Ruderal, dry old fields	throughout
<i>Digitaria ischaemum</i>	Gramineae	Smooth crab grass	-	Occasional	Ruderal	throughout
<i>Digitaria sanguinalis</i>	Gramineae	Hairy crab grass	-	Occasional	Ruderal	throughout
<i>Dioscorea villosa</i>	Dioscoreaceae	Wild yam	7	Infrequent	Woods S of Brandenburg Lake	4
<i>Dodecatheon meadia</i>	Primulaceae	Shooting star	6	Occasional	Mesic open wood, edges	4, 9, 12
<i>Dryopteris cristata</i>	Polypodiaceae	Created wood fern	10	Infrequent	Tamarack and Tall Shrub Zones - all three bogs	2, 4, 15
<i>Dryopteris spinulosa</i>	Polypodiaceae	Spirinose shield fern	8	Infrequent	Tamarack and Tall Shrub Zones - all three bogs, low woods	2, 4, 15
<i>Dryopteris thelypteris</i> var. <i>pubesc</i>	Polypodiaceae	Marsh shield fern	6	Common	Marshes, sedge meadows, Shrub-carr, all Bog Zones	2, 6, 4, 15
<i>Duchesnea indica</i>	Rosaceae	Indian strawberry	-	Occasional	Ruderal, dry old fields	throughout
<i>Dulichium arundinaceum</i>	Cyperaceae	Three-way sedge	9	Infrequent	Low Shrub Zone and Floating Mat - Volo Bog, "2nd Sedge Meadow" - P Bog	2, 15
<i>Echinochloa crusgalli</i>	Gramineae	Barnyard grass	0	Infrequent	Low Shrub Zone, Volo pond and moist edges	15
<i>Echinochloa lobata</i>	Cucurbitaceae	Wild cucumber	5	Occasional	Marsh and moist edges	2, 4, 15
<i>Elaeagnus umbellata</i>	Elaeagnaceae	Autumn olive	-	Occasional	Ruderal, dry old fields	throughout
<i>Eleocharis acicularis</i>	Cyperaceae	Needle spike rush	2	Occasional	Marshes, Floating mats (Volo and B Bogs), Tamarack Zone (P Bog)	2, 4, 15
<i>Eleocharis elliptica</i>	Cyperaceae	Golden-seeded spike rush	8	Infrequent	Native mesic prairie	6 (North Wilson tract)
<i>Eleocharis erythropoda</i>	Cyperaceae	Red-rooted spike rush	2	Common	Common in all wetlands	2, 4, 6, 15
<i>Eleocharis intermedia</i>	Cyperaceae	Matted spike rush	8	Infrequent	Floating mat - Volo pond center, SW corner - B Lake	4, 15
<i>Eleocharis smallii</i>	Cyperaceae	Marsh spike rush	5	Infrequent	Marsh Zone - Volo Bog	15
<i>Elymus villosus</i>	Gramineae	Silky wild rye	5	Occasional	Mesic and dry woods	1, 20
<i>Eriogonum coloratum</i>	Cornaceae	Cinnamon willow herb	3	Common	Common in all wetlands	2, 4, 6, 15
<i>Eriogonum leptophyllum</i>	Onagraceae	Fen willow herb	10	Occasional	Marshes, sedge meadows, shrub-carr, Low Shrub Zone of Volo Bog	2, 4, 6, 15
<i>Eriogonum stritum</i>	Onagraceae	Downy willow herb	10	Rare	Sedge meadow S of stables, Low Shrub Zone of Volo Bog	2, 15
<i>Equisetum arvense</i>	Equisetaceae	Field horsetail	0	Occasional	Ruderal areas, dry old fields, dry woods edges	throughout
<i>Equisetum x ferrissi</i>	Equisetaceae	Johel horsetail	2	Occasional	Ruderal	8, 15
<i>Equisetum filivatile</i>	Equisetaceae	Pipes, water horsetail	7	Common	Marshes, all Volo Bog Zones	2, 4, 15
<i>Equisetum laevigatum</i>	Equisetaceae	Smooth scouring rush	2	Infrequent	Native mesic prairie	6 (North Wilson tract)
<i>Eragrostis pectinacea</i>	Gramineae	Small love grass	0	Infrequent	Ruderal	throughout
<i>Erechtites hieracifolia</i>	Compositae	Fireweed	2	Occasional	Sedge meadows, marshes W and SW of P Bog	2, 6
<i>Eriogonum annuus</i>	Compositae	Annual fleabane	0	Common	Ruderal, dry old fields	throughout
<i>Eriogonum canadensis</i>	Compositae	Horseweed	0	Occasional	Ruderal, dry old fields (noted old fields near Bat Barn)	1, 2
<i>Eriogonum philadelphicus</i>	Compositae	Philadelphia fleabane, marsh fl.	4	Occasional	Marsh edges, sedge meadows, lower areas in mesic woodlands	throughout



<i>Eriogon strigosus</i>	Compositae	Daisy fleabane	5	Inrequent	Old field S of Bat Barn	1
<i>Eriophorum virginicum</i>	Cyperaceae	Rusty cotton grass	10	Inrequent	Low Shrub and Tamarack Zones - Voio Bog	15
<i>Erysimum cheiranthoides</i>	Cruciferae	Wormseed mustard	-	Inrequent	Ruderal, old field, woods edges	15
<i>Eriogonys elaeagnus</i>	Celastraceae	Winged euonymus	-	Occasional	Disturbed woodlands	4, 12, 16
<i>Eriogonys eurypaeus</i>	Celastraceae	European spindle tree	-	Inrequent	Ruderal, woods edges	4, 15
<i>Eriogonys forsteri</i>	Celastraceae	Winter creeper	-	Inrequent	Disturbed woodlands	12, 16
<i>Eriogonum alissinum</i>	Compositae	Tall boneset	0	Inrequent	Ruderal, dry old fields	throughout
<i>Eriogonum maculatum</i>	Compositae	Spotted Joe Pye weed	4	Common	Marshes, sedge meadows, shrub-carr, floating mats (Voio and B bogs)	2, 4, 6, 15
<i>Eriogonum perfoliatum</i>	Compositae	Common boneset	4	Occasional	Marshes, floating mats (Voio and B bogs)	2, 4, 15
<i>Eriogonum rugosum</i>	Compositae	White snakeroot	4	Common	Dry woods	9, 12, 16, 20
<i>Eriogonum serotinum</i>	Compositae	Late boneset	0	Inrequent	Lower slope of woods near Voio marsh moat, Oak Island	14, 15, 20
<i>Euphorbia corollata</i>	Euphorbiaceae	Flowering spurge	2	Inrequent	Old field	1
<i>Euphorbia esula</i>	Euphorbiaceae	Leafy spurge	-	Occasional	Ruderal, old field	20, 21, 22
<i>Euphorbia supina</i>	Euphorbiaceae	Spotted creeping spurge	0	Occasional	Ruderal areas	15
<i>Festuca elatior</i>	Gramineae	Tall fescue	-	Occasional	Ruderal, dry old fields	throughout
<i>Festuca obtusa</i>	Gramineae	Nodding fescue	5	Inrequent	Woods S of B Lake	4
<i>Fraxinea virginiana</i>	Rosaceae	Wild strawberry	1	Occasional	Moist woods edges, moist fields	throughout
<i>Fraxinus pennsylvanica</i> var. <i>subin</i>	Oleaceae	Green ash	1	Occasional	Disturbed mesic woodlands, marsh edges	throughout
<i>Gallium aparine</i>	Rubiaceae	Annual bedstraw, cleavers	1	Common	Disturbed mesic woodlands, marsh edges	throughout
<i>Gallium boreale</i>	Rubiaceae	Northern bedstraw	7	Inrequent	Native mesic prairie	6 (North Wilson tract)
<i>Gallium concinnum</i>	Rubiaceae	Shining bedstraw	5	Occasional	Dry woods	9, 11, 12, 20
<i>Gallium labradoricum</i>	Rubiaceae	Bog bedstraw	10	Inrequent	Sedge meadow	6 (North Wilson tract)
<i>Gallium obtusum</i>	Rubiaceae	Wild madder	5	Occasional	Marshes, sedge meadows	2, 4, 6, 15
<i>Gallium tinctorium</i>	Rubiaceae	Stiff bedstraw	8	Common	Marshes, sedge meadows	2, 4, 15
<i>Gallium triflorum</i>	Rubiaceae	Small bedstraw	10	Inrequent	Marshes, sedge meadows	2, 4, 15
<i>Gentiana andrewsii</i>	Rubiaceae	Sweet-scented bedstraw	5	Common	Mesic woodlands, Tamarack and Tall Shrub Zones - all Bogs	2, 4, 15
<i>Gentiana aureovirens</i>	Gentianaceae	Closed bottle gentian	8	Inrequent	Moist meadow - E end of long plastic boardwalk - Tamarack View trail	18, 20
<i>Gaum alepicum</i> var. <i>strictum</i>	Geraniaceae	Wild geranium	4	Occasional	Dry woods	9, 11, 12, 20
<i>Gaum album</i>	Geraniaceae	Yellow avens	7	Occasional	Marshes, sedge meadows, Tamarack Zones - P and B bogs	2, 4, 6
<i>Gaum canadense</i>	Rosaceae	White avens, wood avens	1	Common	Mesic and dry woods	1, 4, 9, 11, 12, 14, 20
<i>Glechoma hederacea</i>	Labiatae	Creeping Charlie	-	Inrequent	Ruderal	15
<i>Gleditsia thacanthos</i>	Leguminosae	Honey locust	2	Occasional	Woods and woods edges	1, 4, 9, 11, 12, 14, 20
<i>Glyceria striata</i>	Gramineae	Fowl meadow grass	4	Common	Marshes, sedge meadows, lower wooded slopes	throughout
<i>Glyceria max</i>	Leguminosae	Soybean	2	Inrequent	Ruderal, old ag fields	7
<i>Gnaphalium obtusifolium</i>	Compositae	Old-field balsam	2	Inrequent	Woods edges	14
<i>Habenaria hyperborea</i> var. <i>huronae</i>	Orchidaceae	Northern bog orchid	10	Inrequent	Tall Shrub and Tamarack Zones - B Bog	4
<i>Habenaria lacerata</i>	Orchidaceae	Ragged fringed orchid	10	Rare	Tamarack Zone - Voio Bog	15
<i>Hackelia virginiana</i>	Botanidaceae	Slitseed	0	Occasional	Disturbed woodlands	1, 4, 9, 11, 12, 14, 20
<i>Hedecoma pulegioides</i>	Labiatae	American pennyroyal	3	Occasional	Dry woods, Oak Island	1, 9, 15
<i>Helianthus grosseserratus</i>	Compositae	Sawtooth sunflower	2	Common	Marshes, sedge meadows, disturbed wetlands	2, 4, 6, 15
<i>Helianthus hirsutus</i>	Compositae	Hispid sunflower	5	Occasional	Dry woods edges	4, 8
<i>Hemerocallis fulva</i>	Liliaceae	Orange day lily	-	Inrequent	Ruderal	4 (N), 15
<i>Hepatica americana</i>	Ranunculaceae	Round-lobed hepatica	9	Rare	Upper wooded slopes S of B Bog	4
<i>Hesperis matronalis</i>	Cruciferae	Dam's rocket	-	Common	Ruderal, disturbed woodlands	throughout
<i>Heuchera richardsonii</i>	Saxifragaceae	Prairie alum root	8	Inrequent	Native mesic prairie	6 (North Wilson tract)
<i>Hibiscus trionum</i>	Malvaceae	Flower-of-an-hour	-	Inrequent	Ruderal	15
<i>Hieracium caespitosum</i>	Compositae	Field hawkweed	-	Occasional	Ruderal, old field	15, 6
<i>Hieracium libanum</i>	Gramineae	Squirrel-tail grass	-	Occasional	Ruderal	15
<i>Hieracium malus</i>	Hypericaceae	Large St. Johnswort	6	Inrequent	Marsh moat NW of Voio Bog	15
<i>Hieracium petroralum</i>	Hypericaceae	Common St. John's wort	-	Occasional	Ruderal, old field	1, 6, 11, 12, 16
<i>Hieracium virginicum</i> var. <i>fraseri</i>	Hypericaceae	Marsh St. John's wort	8	Occasional	Low Shrub and Floating Mat Zones - Voio Bog, NW floating mat - B Lake, Sedge Mea 2, 4, 15	15 (long plastic boardwalk)
<i>Hypoxis hirsuta</i>	Amaryllidaceae	Yellow star grass	9	Inrequent	Moist meadow S of Voio Bog	1, 4, 20
<i>Ilex verticillata</i>	Aquifoliaceae	Black holly, winterberry	5	Occasional	Mesic woodlands	2, 4, 15
<i>Impatiens capensis</i>	Baselliniaceae	Orange jewelweed, spotted tou	3	Common	Tall Shrub Zones - all three bogs	throughout
<i>Iris virginica</i> var. <i>shrevei</i>	Iridaceae	Blue flag	5	Occasional	Marshes, sedge meadows, mesic woodlands, all bog zones	2, 4, 15
<i>Juglans nigra</i>	Juglandaceae	Black walnut	5	Occasional	Marshes	1, 3, 12, 14
<i>Juncus acuminatus</i>	Juncaceae	Sharp-fruited rush	6	Inrequent	Floating mat - Voio pond center	15

<i>Juncus dudleyi</i>	Juncaceae	Dudley's rush	4	Common	Sedge meadows, native mesic prairie, moist old fields	throughout
<i>Juncus nodosus</i>	Juncaceae	Joint rush	6	Infrrequent	dry B Lake, moist meadow by Long plastic boardwalk E of Voio Bog	4, 15
<i>Juncus tenuis</i>	Juncaceae	Path rush	0	Common	Disturbed mesic woodlands, ruderal areas	throughout
<i>Juncus torreyi</i>	Juncaceae	Torrey's rush	4	Occasional	Marshes, disturbed wetlands	2, 4, 15
<i>Juncus virginiana</i> var. <i>crebra</i>	Juncaceae	Red cedar	2	Occasional	Ruderal, dry old fields	1, 6, 11, 12, 14
<i>Lactuca biennis</i>	Compositae	Tall blue lettuce	4	Infrrequent	Moist woods edges	4, 14
<i>Lactuca canadensis</i>	Compositae	Wild lettuce	2	Infrrequent	Moist woods edges	4, 14
<i>Lactuca scariola</i>	Compositae	Prickly lettuce	4	Occasional	Ruderal	4, 15
<i>Lamium amplexicaule</i>	Labiatae	Dead nettle, herbitt	-	Infrrequent	Ruderal	1
<i>Lathyrus latifolius</i>	Leguminosae	Tamarack, American larch	10	Common	Tamarack Zones - all three bogs	2, 4, 15
<i>Lathyrus palustris</i>	Leguminosae	Winged marsh vetchling	8	Occasional	Marshes, sedge meadows	2, 4, 6
<i>Lathyrus palustris</i> var. <i>myrtifolius</i>	Leguminosae	Marsh vetchling	6	Occasional	Marshes, sedge meadows	2, 4, 6
<i>Leersia oryzoides</i>	Graminaeae	Rice cut grass	4	Common	Marshes	2, 4, 6
<i>Lemna minor</i>	Lemnaceae	Small duckweed	5	Abundant	Present in all wetland habitats	2, 4, 13, 15
<i>Lemna trisulca</i>	Lemnaceae	Forked duckweed	7	Infrrequent	Marsh moat - Voio Bog	15
<i>Leonurus cardiaca</i>	Labiatae	Motherwort	-	Occasional	Ruderal	throughout
<i>Leptidium campyloste</i>	Cruciferae	Field cress	-	Occasional	Ruderal, old field	throughout
<i>Leptidium densiflorum</i>	Cruciferae	Small peppergrass	-	Occasional	Ruderal	throughout
<i>Leptidium virginicum</i>	Cruciferae	Common peppergrass	0	Infrrequent	Ruderal, old field	throughout
<i>Ligustrum vulgare</i>	Oleaceae	Common privet	-	Infrrequent	Ruderal	8
<i>Lilium michiganense</i>	Liliaceae	Michigan lily, turk's cap lily	6	Rare	Native mesic prairie	15
<i>Lilium vulgare</i>	Scrophulariaceae	Butter-and-eggs, toadflax	-	Occasional	Ruderal	6 (North Wilson tract)
<i>Liparia loeselii</i>	Orchidaceae	Green twayblade	7	Infrrequent	Tall Shrub Zones - all three bogs, sedge meadows	2, 4, 6, 15
<i>Lithospermum canescens</i>	Borraginaceae	Hoary puccoon	8	Infrrequent	Native mesic prairie	2, 4, 6, 15
<i>Lobelia siphilitica</i>	Lobeliaceae	Great blue lobelia	7	Occasional	Marsh edges, shrub-carr, Tall Shrub Zone - all three bogs	6 (North Wilson tract)
<i>Lobelia spicata</i>	Lobeliaceae	Pale spiked lobelia	6	Infrrequent	Native mesic prairie, moist meadows	2, 4, 6, 15
<i>Lonicera x bella</i>	Caprifoliaceae	Showy fly honeysuckle	-	Common	Disturbed woodlands	6 (North Wilson tract), 14
<i>Lonicera maackii</i>	Caprifoliaceae	Amur honeysuckle	-	Occasional	Disturbed woodlands, woods edges	12, 16
<i>Lotus corniculatus</i>	Leguminosae	Birds foot trefoil	-	Infrrequent	Ruderal	16
<i>Lychnis alba</i>	Caryophyllaceae	White campion	-	Common	Ruderal	throughout
<i>Lycopus americanus</i>	Labiatae	Common water horehound	5	Common	Marshes, sedge meadows	2, 4, 6, 15
<i>Lycopus uniflorus</i>	Labiatae	Northern bugle weed	7	Common	Marshes, sedge meadows, all Bog Zones	2, 4, 6, 15
<i>Ysyrachia quadriflora</i>	Primulaceae	Narrow-leaved loosestrife	9	Infrrequent	Native mesic prairie, moist meadow by long plastic boardwalk E of Voio	6 (North Wilson tract), 15
<i>Ysyrachia terrestris</i>	Primulaceae	Swamp candles	8	Rare	Floating mat - Voio Pond center	6 (North Wilson tract)
<i>Ysyrachia thyrsiflora</i>	Primulaceae	Ufted loosestrife	9	Common	Marshes, all Voio, P, and B Bog Zones	2, 4, 15
<i>Lythrum alatum</i>	Lythraceae	Winged loosestrife	7	Infrrequent	Native mesic prairie	6 (North Wilson tract)
<i>Lythrum salicaria</i>	Lythraceae	Purple loosestrife	-	Common	All wetlands, including bogs	throughout
<i>Malus baccata</i>	Rosaceae	Siberian crab	-	Infrrequent	Woods edges	4, 10
<i>Malus dumalis</i>	Rosaceae	Apple	-	Occasional	Ruderal	throughout
<i>Malva neglecta</i>	Malvaceae	Common mallow	-	Infrrequent	Ruderal	15
<i>Mastigicaria mastiganticoides</i>	Compositae	Pineapple weed	-	Infrrequent	Ruderal	throughout
<i>Medicago lupulina</i>	Leguminosae	Black medick	-	Common	Ruderal, old field	throughout
<i>Medicago sativa</i>	Leguminosae	Alfalfa	-	Occasional	Ruderal, old field	throughout
<i>Medicago alba</i>	Leguminosae	White sweet clover	-	Abundant	Ruderal, old field	throughout
<i>Medicago officinalis</i>	Leguminosae	Yellow sweet clover	-	Abundant	Ruderal, old field	throughout
<i>Mentha arvensis</i> var. <i>villosa</i>	Labiatae	Wild mint	5	Common	Marshes, sedge meadows	2, 4, 6, 15
<i>Mentha arvensis</i> var. <i>trifoliata</i>	Labiatae	Peppermint	10	Occasional	Low Shrub and Floating Mat Zones - Voio Bog	15
<i>Mimulus ringens</i>	Scrophulariaceae	Monkey flower	6	Occasional	Marshes, sedge meadows	2, 4, 15
<i>Mirabilis nyctaginea</i>	Nyctagineae	Wild four o'clock	-	Infrrequent	Ruderal	15
<i>Monarda fistulosa</i>	Labiatae	Wild bergamot	4	Infrrequent	Native mesic prairie	6 (North Wilson tract)
<i>Monarda uniflora</i>	Pyrolaceae	Indian pipe	10	Infrrequent	Tamarack Zone - Voio Bog	15
<i>Morus alba</i>	Moraceae	White mulberry	-	Occasional	Disturbed woodlands	throughout
<i>Muhlenbergia mexicana</i>	Gramineae	Leathly sedge grass	5	Common	Marshes, sedge meadows, lower wooded slopes	2, 4, 6, 15
<i>Muhlenbergia schreberi</i>	Gramineae	Nuttall's sedge	0	Occasional	Ruderal, disturbed woodlands	throughout
<i>Muhlenbergia sylvatica</i>	Gramineae	Woodland sedge grass	10	Infrrequent	Moist woodland	15 (Long plastic boardwalk)
<i>Myrica phyllon sphaeratum</i>	Haloragidaceae	European water milfoil	-	Occasional	Aquatic	15 (Brandenburg Lake)
<i>Nepeta catarina</i>	Labiatae	Catnip	-	Common	Ruderal, old field	throughout
<i>Nimphaea variegatum</i>	Nymphaeaceae	Bullhead lily	8	Infrrequent	Aquatic - Brandenburg Lake	4

<i>Nymphaea tuberosa</i>	Nymphaeaceae	White water lily	7	Infrequent	Aquatic - Voio pond center, Brandenburg Lake	4, 15
<i>Oenothera biennis</i>	Onagraceae	Common evening primrose	0	Common	Ruderal, old field	throughout
<i>Oenothera sensibilis</i>	Polykoidaceae	Sensitive fern	8	Common	Marshes, sedge meadows, all Bog Zones	2, 4, 6, 15
<i>Osmorhiza clethroides</i>	Umbelliferae	Hairy sweet cicely	3	Occasional	Dry woodlands, woods edges	1, 4, 9, 20
<i>Osmorhiza longistylis</i>	Umbelliferae	Smooth sweet cicely	3	Infrequent	Dry woodlands, woods edges - S of Bat Barn	1
<i>Osmunda cinnamomea</i>	Cinnamomaceae	Cinnamon fern	7	Infrequent	Tall Shrub and Tamarack Zones - Voio Bog	2, 15
<i>Osmunda regalis</i> var. <i>spectabilis</i>	Osmundaceae	Royal fern	8	Infrequent	Tall Shrub and Tamarack Zones - Voio Bog and P Bog	2, 15
<i>Oxalis europaea</i>	Oxalidaceae	Tall wood sorrel	0	Occasional	Disturbed mesic woodlands, ruderal areas	throughout
<i>Oxalis stricta</i>	Oxalidaceae	Common wood sorrel	0	Infrequent	Ruderal	15
<i>Oxyptis trifidior</i>	Umbelliferae	Common	7	Common	Marshes, sedge meadows, all Bog Zones	2, 4, 6, 15
<i>Panicum capillare</i>	Gramineae	Old witch grass	1	Common	Ruderal, old field	throughout
<i>Panicum dichroanthiflorum</i>	Gramineae	Knee grass	0	Common	Ruderal	throughout
<i>Panicum virgatum</i>	Gramineae	Old-field panic grass	2	Occasional	Ruderal, moist old field, native mesic prairie	throughout
<i>Panicum virgatum</i>	Gramineae	Switch grass	5	Common	Ruderal, old field	throughout
<i>Parthenocissus inserta</i>	Vitaceae	Thicker creeper	1	Occasional	Ruderal, old field	throughout
<i>Parthenocissus quinquefolia</i>	Vitaceae	Virginia creeper	2	Common	Woodlands, wood edges	2 (N of Bat Barn)
<i>Pastinaca sativa</i>	Umbelliferae	Wild parsnip	-	Common	Ruderal, old field	throughout
<i>Pedicularis lanceolata</i>	Scrophulariaceae	Fen betony	9	Infrequent	Marsh	2, 4
<i>Penthorum sedoides</i>	Saxifragaceae	Ditch stoncrop	5	Occasional	Marshes	2, 4, 15
<i>Phalaris arundinacea</i>	Gramineae	Reed canary grass	-	Abundant	All wetlands, including bogs, and all moist open areas	throughout
<i>Phleum pratense</i>	Gramineae	Timothy	-	Occasional	Ruderal, old field	throughout
<i>Phlox pilosa</i> var. <i>fulgida</i>	Polemoniaceae	Prairie phlox	7	Infrequent	Native mesic prairie	throughout
<i>Phragmites australis</i>	Gramineae	Common reed	1	Infrequent	Low Shrub and Floating Mat Zones - Voio Bog	6 (North Wilson tract)
<i>Phytolacca leptostachya</i>	Phytolaccaceae	Looseleaf	4	Occasional	Disturbed woodlands	15
<i>Physalis albidiflora</i>	Solanaceae	Tall ground cherry	0	Occasional	Ruderal, old field	throughout
<i>Pilea mariana</i>	Phlaeaceae	Black spruce	-	Infrequent	Low Shrub and Tamarack Zones - Voio Bog	15
<i>Pilea fontana</i>	Urticaceae	Bog cleareweed	7	Occasional	Marshes surrounding bogs	2, 4, 6, 15
<i>Pilea pumila</i>	Urticaceae	Cleareweed	5	Infrequent	Mesic woodlands	throughout
<i>Plantago lanceolata</i>	Plantaginaceae	English plantain	-	Occasional	Ruderal	throughout
<i>Plantago major</i>	Plantaginaceae	Common plantain	-	Occasional	Ruderal	throughout
<i>Plantago rugelii</i>	Plantaginaceae	Red-stalked plantain	0	Occasional	Ruderal, disturbed moist areas, disturbed woodlands	throughout
<i>Poa annua</i>	Gramineae	Annual bluegrass	-	Occasional	Ruderal	throughout
<i>Poa compressa</i>	Gramineae	Canada bluegrass	-	Common	Ruderal	throughout
<i>Poa pratensis</i>	Gramineae	Kentucky bluegrass	-	Common	Ruderal	throughout
<i>Podophyllum peltatum</i>	Berberidaceae	May apple	4	Occasional	Mesic woodlands	4, 9, 20
<i>Pogonia ophioglossoides</i>	Orchidaceae	Snake-mouth orchid	10	Infrequent	Low Shrub and Floating Mat Zones - Voio Bog	15
<i>Polygonatum carolinianum</i> var. <i>stipula</i>	Polygonaceae	Smooth Solomon's seal	3	Infrequent	Woodlands, wood edges	9, 20
<i>Polygonatum amphibium</i> var. <i>stipula</i>	Polygonaceae	Water knotweed	4	Common	Marshes	2, 4, 15
<i>Polygonum arvenstrum</i>	Polygonaceae	Sidewalk knotweed	-	Occasional	Ruderal	throughout
<i>Polygonum coccineum</i>	Polygonaceae	Water heartsease	4	Infrequent	Marshes	2, 4, 15
<i>Polygonum hydrophilum</i>	Polygonaceae	Water pepper	2	Infrequent	Floating mat - Voio Bog	13
<i>Polygonum hydrophilum</i>	Polygonaceae	Mild water pepper	7	Common	Marshes, disturbed wetlands	2, 4, 15
<i>Polygonum lapathifolium</i>	Polygonaceae	Heartsease	0	Occasional	Marshes, disturbed wetlands	2, 4, 15
<i>Polygonum persicaria</i>	Polygonaceae	Lady's thumb	-	Common	Disturbed wetlands	2, 4, 15
<i>Polygonum sagittatum</i>	Polygonaceae	Arrow-leaved tearthumb	8	Occasional	Marshes, sedge meadows	2
<i>Polygonum scandens</i>	Polygonaceae	Climbing false daisy/wheat	1	Occasional	Marsh edges	2, 4, 15
<i>Polygonum virginianum</i>	Polygonaceae	Woodland knotweed	2	Occasional	Dry woodlands, wood edges	2, 4, 15
<i>Populus deltoides</i>	Salicaceae	Eastern cottonwood	2	Occasional	Marsh edges, lower wooded slopes	2, 4, 15
<i>Populus tremuloides</i>	Salicaceae	Quaking aspen	4	Occasional	Marsh edges, shrub-carr	2, 4, 15
<i>Polamogonion crispus</i>	Zosteraceae	Beglier's pondweed	-	Occasional	Aquatic - Voio moat, Voio pond center, Brandenburg lake	4, 15
<i>Polamogonion pectinatus</i>	Zosteraceae	Comb pondweed, sago pondwk	5	Common	Aquatic - Voio moat, Voio pond center, Brandenburg lake	4, 15
<i>Potentilla norvegica</i>	Rosaceae	Rough cinquefoil	0	Infrequent	Moist meadows	6 (North Wilson tract)
<i>Potentilla palustris</i>	Rosaceae	Marsh cinquefoil	10	Infrequent	Floating mat and Low Shrub Zones - Voio pond center	15
<i>Potentilla recta</i>	Rosaceae	Sulfur cinquefoil	-	Infrequent	Ruderal, old field	1
<i>Potentilla simplex</i>	Rosaceae	Common cinquefoil	4	Occasional	Disturbed woodlands	9, 20
<i>Prunella vulgaris</i> var. <i>lancoolata</i>	Labiateae	Self-heal	0	Occasional	Ruderal, disturbed woodlands	throughout
<i>Prunus americana</i>	Rosaceae	Wild plum	5	Occasional	Marsh edges	2, 4, 15
<i>Prunus angustifolia</i>	Rosaceae	Chickasaw plum	-	Infrequent	Ruderal, old field	12

<i>Prunus serotina</i>	Rosaceae	Wild black cherry	1	Common	Woodlands, wood edges	throughout
<i>Prunus virginiana</i>	Rosaceae	Choke cherry	3	Infrequent	Woods edges	1
<i>Prata trifoliata</i>	Rutaceae	Water ash, hop tree	7	Infrequent	Old field edges	8, 10
<i>Pycnanthemum virginianum</i>	Gramineae	Alkali grass	-	Infrequent	Ruderal (roadsides)	8, 9, 10, 13, 15
<i>Quercus alba</i>	Fagaceae	Common mountain mint	5	Occasional	Sedge meadows, native mesic prairie	2, 4, 6, 15
<i>Quercus x bebbiana</i>	Fagaceae	White oak	5	Common	Dry and mesic woodlands	1, 4, 9, 20
<i>Quercus coccinea</i>	Fagaceae	Hybrid white x bur oak	5	Occasional	Dry and mesic woodlands	1, 6
<i>Quercus macrocarpa</i>	Fagaceae	Scarlet oak (Hill's Oak)	4	Occasional	Dry woods	1, 9
<i>Quercus rubra</i>	Fagaceae	Bur oak	5	Common	Mesic woodlands, marsh edges	throughout
<i>Ranunculus abortivus</i>	Ranunculaceae	Red oak	7	Occasional	Mesic woods	20
<i>Ranunculus fascicularis</i>	Ranunculaceae	Small-flowered buttercup	0	Occasional	Mesic woods	4, 10
<i>Ranunculus pennsylvanicus</i>	Ranunculaceae	Early buttercup	6	Infrequent	Dry woods	1
<i>Ranunculus recurvatus</i>	Ranunculaceae	Bristly buttercup	6	Infrequent	Marshes	2, 4
<i>Ranunculus sceleratus</i>	Ranunculaceae	Hooked buttercup	5	Occasional	Mesic woods	4, 9, 20
<i>Raphanus raphanistrum</i>	Cruciferae	Cursed buttercup	6	Common	Marshes, Tall Shrub Zone - all three bogs	2, 4, 15
<i>Rhamnus californica</i>	Rhamnaceae	Wild radish	-	Infrequent	Old sq fields	7
<i>Rhamnus frangula</i>	Rhamnaceae	Common buckthorn	-	Abundant	Disturbed woodlands, occ. In bogs (all zones)	throughout
<i>Rhus glabra</i>	Anacardiaceae	Glossy buckthorn	-	Abundant	Disturbed wetlands, frequent in bogs (all zones)	throughout
<i>Rhus radicans</i>	Anacardiaceae	Smooth sumac	1	Common	Ruderal, old field	throughout
<i>Rhus typhina</i>	Anacardiaceae	Poison ivy	2	Common	Disturbed woodlands, woods edges	1, 4, 9, 14, 20
<i>Ribes americanum</i>	Saxifragaceae	Staghorn sumac	1	Common	Ruderal, old field	throughout
<i>Ribes vernix</i>	Saxifragaceae	Poison sumac	2	Occasional	Tall Shrub and Tamarack Zones - all three bogs, shrub-carr	2, 4, 15
<i>Ribes missouriense</i>	Saxifragaceae	Wild black currant	7	Occasional	Tall Shrub Zone - all three bogs; lower slope mesic woods by marshes	2, 4, 15
<i>Robinia pseudoacacia</i>	Leguminosae	Wild gooseberry	5	Infrequent	Disturbed dry woods	1, 4, 10
<i>Rorippa palustris</i> var. <i>femaldiana</i>	Cruciferae	Black locust	-	Occasional	Disturbed dry woods, woods edges, ruderal	throughout
<i>Rosa arifansana</i> var. <i>suffulta</i>	Rosaceae	Marsh cress	4	Infrequent	Marsh Zone - Voio Bog; sedge meadow S of P Bog	6, 15
<i>Rosa carolina</i>	Rosaceae	Pasture rose	5	Infrequent	Ruderal, old field, also in N area Tall Shrub Zone - B Bog	3, 4, 21
<i>Rosa multiflora</i>	Rosaceae	Multiflora rose	-	Abundant	Native mesic prairie	6 (North Wilson tract)
<i>Rubus allegheniensis</i>	Rosaceae	Common blackberry	3	Occasional	Disturbed woodland, lower wooded slopes, ruderal	throughout
<i>Rubus flagellans</i>	Rosaceae	Common dewberry	3	Infrequent	Ruderal, woods edges	throughout
<i>Rubus idaeus</i> var. <i>strigosus</i>	Rosaceae	Red raspberry	3	Common	Disturbed woods	1
<i>Rubus occidentalis</i>	Rosaceae	Black raspberry	2	Common	Marsh edges, Tall Shrub and Tamarack Zones - P and B Bogs	2, 4, 6, 15
<i>Rubus pensylvanicus</i>	Rosaceae	Yankee blackberry	3	Occasional	Ruderal, woods edges	throughout
<i>Rudbeckia hirta</i>	Compositae	Black-eyed Susan	1	Common	Ruderal, old field, native mesic prairie	throughout
<i>Rumex acetosella</i>	Polygonaceae	Field sorrel	-	Occasional	Ruderal	throughout
<i>Rumex crispus</i>	Polygonaceae	Curly dock	8	Common	Ruderal	throughout
<i>Rumex obtusifolius</i>	Polygonaceae	Great water dock	4	Occasional	Marshes, shrub-carr, outer edge of Tall Shrub Zone - all three bogs	2, 4, 6, 15
<i>Sagittaria latifolia</i>	Alismaceae	Common arrowhead	4	Common	Marshes, all bog zones in all three bogs	2, 4, 6, 15
<i>Salix x alba</i>	Salicaceae	Weeping Willow	-	Infrequent	Ruderal areas, near water	4
<i>Salix amygdaloides</i>	Salicaceae	Peach-leaved willow	5	Occasional	Marsh edges	2, 4, 15
<i>Salix bebbiana</i>	Salicaceae	Beaked willow	8	Common	Marsh edges, shrub-carr, Tall Shrub Zone - all three bogs	2, 4, 6, 15
<i>Salix caroliniana</i>	Salicaceae	Hoary willow	10	Infrequent	Tamarack Zone - Voio and P Bog	2, 15
<i>Salix discolor</i>	Salicaceae	Pussy willow	2	Abundant	All bog zones, shrub-carr, marsh edges	2, 4, 6, 15
<i>Salix eriocephala</i>	Salicaceae	Heart-leaved willow	5	Occasional	Marsh edges, shrub-carr	2, 4, 15
<i>Salix interior</i>	Salicaceae	Sandbar willow	1	Abundant	Marsh borders, shrub-carr, disturbed wetlands	2, 4, 6, 15
<i>Salix lucida</i>	Salicaceae	Shining willow	10	Rare	Marsh S of Brandenburg Bog	4
<i>Salix nigra</i>	Salicaceae	Black willow	4	Infrequent	Marsh edges	2, 4, 15
<i>Salix pedicellaris</i> var. <i>hypoglauca</i>	Salicaceae	Little bog willow	10	Infrequent	Tamarack Zone - Voio Bog	15
<i>Salix petiolaris</i>	Salicaceae	Meadow willow	7	Occasional	Marsh edges, Tamarack Zone - Voio Bog, shrub-carr	2, 4, 15
<i>Salix purpurea</i>	Salicaceae	Purple willow	-	Occasional	"1st sedge meadow" edge NW of Pistakee Bog	2
<i>Salix x rubens</i>	Salicaceae	Hybrid crack willow	-	Occasional	Disturbed wetland edges	2, 4, 15
<i>Sambucus canadensis</i>	Caprifoliaceae	Elderberry	1	Common	Lower slope mesic woods, shrub-carr, Tall Shrub Zones	2, 4, 16
<i>Santivola carolinensis</i>	Umbelliferae	Canada black snakeroot	7	Occasional	Mesic woodlands	1, 4
<i>Saponaria officinalis</i>	Caryophyllaceae	Bouncing Bet, Soapwort	-	Infrequent	Ruderal	15
<i>Sarracenia purpurea</i>	Sarracenaceae	Pitcher plant	10	Rare	Tamarack Zone - Voio Bog	15
<i>Saxifraga pennsylvanica</i>	Saxifragaceae	Swamp saxifrage	10	Occasional	Marshes, shrub-carr, outer edge of Tall Shrub Zone - all three bogs	2, 4, 15
<i>Scirpus acutus</i>	Cyperaceae	Hard-stemmed bulrush	6	Occasional	Floating Mat and Low Shrub Zones - Voio Bog	15
<i>Scirpus atrovirens</i>	Cyperaceae	Dark green rush	4	Occasional	Marshes, low woods	2, 4, 15

<i>Scirpus cyperinus</i>	Cyperaceae	Wood grass	6	Common	Marshes, sedge meadows, shrub-car, all Bog Zones - all three bogs	2, 4, 6, 15
<i>Scirpus fluvialis</i>	Cyperaceae	River bulrush	4	Occasional	Volo Bog marsh moist, marsh at N end of Wilson tract	6 (N Wilson tract), 15
<i>Scirpus smithii</i>	Cyperaceae	Smith's tufted bulrush	10	Infrrequent	Floating mat - Volo pond center	15
<i>Scirpus validus var. creber</i>	Cyperaceae	Great bulrush	5	Occasional	Marshes, sedge meadows, pond edges	2, 4, 13, 15
<i>Scutellaria epilobifolia</i>	Labiatae	Marsh skullcap	5	Occasional	Marshes, sedge meadows, shrub-car	2, 4, 6, 15
<i>Scutellaria lateriflora</i>	Labiatae	Mad-dog skullcap	5	Occasional	Marshes, sedge meadows, all bog zones, shrub-car	2, 4, 6, 15
<i>Setaginella apoda</i>	Setaginellaceae	Marsh clubmoss	10	Infrrequent	Marshes (long plastic boardwalk), floating mat - Brandenburg Bog	4, 15
<i>Senecio aureus</i>	Compositae	Golden ragwort	7	Infrrequent	Sedge meadow (SE of Volo Bog)	15
<i>Senecio platensis</i>	Compositae	Prairie ragwort	6	Infrrequent	Old field near <i>Pyrus angustifolia</i> - Tamarack View trail	12
<i>Setaria glauca</i>	Gramineae	Yellow foxtail	-	Occasional	Ruderal	throughout
<i>Setaria viridis</i>	Gramineae	Green foxtail	-	Occasional	Ruderal	throughout
<i>Silphium integrifolium var. deamii</i>	Compositae	Deam's rosinweed	5	Infrrequent	Native mesic prairie	6 (North Wilson tract)
<i>Silybum albidum</i>	Indicaceae	Common blue-eyed grass	7	Infrrequent	Marshes, Tall Shrub Zone - all three bogs	6 (North Wilson tract)
<i>Silum slave</i>	Umbelliferae	Tall water parsnip	7	Occasional	Dry and mesic woodlands, wood edges	2, 4, 15
<i>Smilacina racemosa</i>	Liliaceae	Feathery false Solomon's seal	3	Occasional	Dry and mesic woodlands, wood edges	1, 4, 9, 20
<i>Smilacina stellata</i>	Liliaceae	Starry false Solomon's seal	3	Infrrequent	Marsh edges, Tall Shrub end Tamarack Zones - P and B Bogs, native mesic prairie	2, 4, 6 (North Wilson tract)
<i>Smilax echinatra</i>	Liliaceae	Upright cactus flower	5	Occasional	Mesic woodlands	1, 4, 9, 20
<i>Smilax lasionetra</i>	Liliaceae	Common cactus flower	5	Occasional	Woodlands, wood edges	1, 4, 9, 20
<i>Smilax tamedeas var. hispida</i>	Liliaceae	Bristly green brier	5	Occasional	Mesic woodlands	1, 4, 9, 20
<i>Solanum americanum</i>	Solanaceae	Black nightshade	0	Infrrequent	Ruderal	1
<i>Solanum carolinense</i>	Solanaceae	Horse nettle	-	Infrrequent	ruderal, old field	1
<i>Solanum dulcamara</i>	Solanaceae	Bittersweet nightshade	-	Common	Ruderal, all Bog zones, marsh edges	throughout
<i>Solidago canadensis</i>	Compositae	Canada goldenrod	1	Common	Ruderal, old field	throughout
<i>Solidago gigantea</i>	Compositae	Late goldenrod	4	Common	Marshes, sedge meadows, disturbed wetlands, low woods	throughout
<i>Solidago graminifolia var. nuttallii</i>	Compositae	Hairy grass-leaved goldenrod	3	Common	Disturbed moist areas, marsh edges, sedge meadows	throughout
<i>Solidago rigida</i>	Compositae	Ruddell's goldenrod	7	Infrrequent	Sedge meadow - long plastic boardwalk E of Volo Bog	15
<i>Sorbus uliginosus</i>	Compositae	Common soy thistle	-	Common	Ruderal, old field	throughout
<i>Sorbus aucuparia</i>	Rosaceae	Rosagone	-	Infrrequent	Tall Shrub Zone - all three bogs	2, 4, 15
<i>Sorghastrum nutans</i>	Gramineae	Indian grass	5	Infrrequent	Native mesic prairie	6 (North Wilson tract)
<i>Spergularium eurycarpum</i>	Spergulariaceae	Common bur reed	6	Infrrequent	Marsh S of B Bog, floating mat - Volo Bog	4, 15
<i>Spergula pectinata</i>	Gramineae	Prairie cord grass	4	Occasional	Sedge meadow and wet prairie	6 (N Wilson tract), 15 (long plast)
<i>Sphenopholis intermedia</i>	Gramineae	Slender wedge grass	4	Occasional	Sedge meadows, native mesic prairie, Tall Shrub Zone - all three bogs	2, 4, 6 (N Wilson tract), 15
<i>Spiraea alba</i>	Rosaceae	Meadowsweet	7	Occasional	Marsh Zone - Volo Bog	15
<i>Sporobolus polytrichus</i>	Gramineae	Great duckweed	7	Infrrequent	Aquatic - Volo Bog pond	15
<i>Stachys palustris var. homotricha</i>	Labiatae	Sheathed rush grass	0	Infrrequent	Ruderal	15
<i>Stachys tenuifolia var. hispida</i>	Labiatae	Marsh hedge nettle	5	Infrrequent	Marshes, sedge meadows	4
<i>Stellaria media</i>	Caryophyllaceae	Common chickweed	5	Infrrequent	Low woods edges	4
<i>Styrax virginicus</i>	Oleaceae	Lilac	-	Rare	Ruderal	15
<i>Taraxacum officinale</i>	Compositae	Common dandelion	-	Common	All habitats	throughout
<i>Thalictrum dasycarpum</i>	Ranunculaceae	Purple meadow rue	5	Infrrequent	Marshes	4
<i>Thalictrum dasycarpum var. hypoleucum</i>	Ranunculaceae	Smooth meadow rue	5	Occasional	Marshes, shrub-car	2, 4, 15
<i>Thalictrum dioicum</i>	Ranunculaceae	Early meadow rue	7	Occasional	Low moist woods, marsh edges	4, 6 (N Wilson tract)
<i>Thlaspi arvense</i>	Cruciferae	Penny cress	-	Occasional	Ruderal, old field	throughout
<i>Tilia americana</i>	Tiliaceae	American basswood	5	Infrrequent	Mesic woods	20
<i>Tidestromia ohlsonis</i>	Compositae	Common spiderwort	2	Infrrequent	Old field edge (not planted)	1
<i>Tragopogon dubius</i>	Compositae	Sand goat's beard	-	Infrrequent	Dry old field	21, 22
<i>Tragopogon pratensis</i>	Compositae	Common goat's beard	-	Common	Ruderal, old field	throughout
<i>Trientalis borealis</i>	Primulaceae	Starflower	10	Infrrequent	Tamarack Zone - Volo Bog	15
<i>Trifolium hybridum</i>	Leguminosae	Alsike clover	-	Occasional	Ruderal, old field	throughout
<i>Trifolium pratense</i>	Leguminosae	Red clover	-	Occasional	Ruderal, old field	throughout
<i>Trifolium repens</i>	Leguminosae	White clover	-	Occasional	Ruderal, old field	throughout
<i>Trillium recurvatum</i>	Liliaceae	Red trillium	5	Infrrequent	Woods S of Brandenburg Lake	4 (NE)
<i>Troscium aurantiacum</i>	Caprifoliaceae	Early horse gentian	5	Rare	Woods S of Bar Barn	1
<i>Typa angustifolia</i>	Typhaceae	Narrow-leaved cattail	1	Occasional	Floating Mat - Volo Bog and NW Brandenburg Lake (close to lake)	4, 15
<i>Typa x glauca</i>	Typhaceae	Hybrid cattail	1	Occasional	Disturbed marshes (mostly near roads); B Lake mat (away from lake)	4, 22
<i>Typa latifolia</i>	Typhaceae	Broad-leaved cattail	1	Abundant	Marshes	2, 4, 15
<i>Ulmus pumila</i>	Ulmaceae	Siberian elm	-	Occasional	Ruderal, old field	10

<i>Linum rubra</i>	Umbelliferae	Slippery elm	4	Common	Mesic woods; low woods; disturbed woods edges; Tall Shrub and Tamarack zones - D throughout	2, 4, 15	
<i>Urtica procera</i>	Urticaceae	Stinging nettle, Tall nettle	2	Common	Low woods edges; marsh edges; shrub-carr	2, 4, 15	
<i>Urticaria intermedia</i>	Urticaceae	Flat-leaved bladderwort	10	Infrequent	Floating Mat - NW Brandenburg Lake	4	
<i>Urticaria vulgaris</i>	Urticaceae	Great bladderwort	9	Infrequent	Marsh - Volo Bog; SW Brandenburg Lake	4, 15	
<i>Urticaria glandiflora</i>	Liliaceae	Belwort	7	Infrequent	Shading woods S of Brandenburg Lake	4	
<i>Vaccinium corymbosum</i>	Ericaceae	Highbush blueberry	8	Infrequent	Tall Shrub and Tamarack zones - all three bogs	2, 4, 15	
<i>Vaccinium oxycoccos</i>	Ericaceae	Small cranberry	10	Infrequent	Tamarack Zone - Volo Bog (N of platform)	15	
<i>Verbascum thapsus</i>	Scrophulariaceae	Common mullein	-	Occasional	Ruderal, old field	throughout	
<i>Verberna baicalia</i>	Verbenaceae	Creeping vervain	0	Infrequent	Ruderal (foesides)	8, 9, 10, 13, 15	
<i>Verberna hastata</i>	Verbenaceae	Blue vervain	4	Occasional	Marshes; sedge meadows	2, 4, 15	
<i>Verberna stricta</i>	Verbenaceae	Hoggy vervain	4	Occasional	Ruderal, old field	throughout	
<i>Verberna utrifolia</i>	Verbenaceae	Hairy white vervain	5	Occasional	Dry woods; woods edges	throughout	
<i>Veronica arvensis</i>	Scrophulariaceae	Common speedwell	-	Occasional	Ruderal	throughout	
<i>Veronica peregrina</i>	Scrophulariaceae	Purshane speedwell	0	Occasional	Moist fields	6 (North Wilson tract)	
<i>Veronica serpyllifolia</i>	Scrophulariaceae	Thyme-leaved speedwell	-	Occasional	Moist fields	6 (North Wilson tract)	
<i>Veronicastrum virginicum</i>	Scrophulariaceae	Culver's root	7	Infrequent	Ruderal	throughout	
<i>Viburnum lentago</i>	Caprifoliaceae	Nannyberry	5	Occasional	Native mesic prairie	6 (North Wilson tract)	
<i>Viburnum opulus</i>	Caprifoliaceae	European highbush cranberry	-	Common	Low woods; shrub-carr; marsh edges; Tall Shrub Zone - P and B Bogs	2, 4, 15	
<i>Viburnum racognitum</i>	Caprifoliaceae	Smooth arrowwood	-	Occasional	Disturbed woods; Tall Shrub and Tamarack Zones - bogs	throughout	
<i>Viburnum trilobum</i>	Caprifoliaceae	Highbush cranberry	10	Rare	Disturbed woods; Tall Shrub and Tamarack Zones - all bogs	throughout	
<i>Viola americana</i>	Leguminosae	American vetch	7	Infrequent	Tall Shrub Zone - B Bog	4	
<i>Viola villosa</i>	Leguminosae	Hairy vetch	-	Infrequent	Low woods	14, 15	
<i>Viola affinis</i>	Violaceae	LeCort's violet	4	Infrequent	Ruderal, old field	15	
<i>Viola nephrophylla</i>	Violaceae	Northern bog violet	9	Infrequent	Sedge meadows	2, 4, 6 (North Wilson tract)	
<i>Viola pallens</i>	Violaceae	Smooth white violet	10	Occasional	Sedge meadows	2, 6 (North Wilson tract)	
<i>Viola pedatifida</i>	Violaceae	Prairie violet	9	Infrequent	Tall Shrub and Tamarack Zones - all three bogs	2, 4, 15	
<i>Viola pubescens</i>	Violaceae	Yellow violet	5	Occasional	Native mesic prairie	6 (North Wilson tract)	
<i>Viola sororia</i>	Violaceae	Common blue violet	3	Common	Mesic and dry woods	1, 12, 15, 16, 20	
<i>Vitis flexilis</i>	Vitaceae	Riverbank grape	2	Common	Moist open area; ruderal	throughout	
<i>Wolфия columbiana</i>	Lemnaceae	American water meal	7	Common	Disturbed woods and woods edges	throughout	
<i>Zizia aurea</i>	Umbelliferae	Golden Alexander	7	Infrequent	Marshes; ponds	2, 4, 13, 15	
					Moist field; native mesic prairie	6 (North Wilson tract), 15	
<b>PRAIRIE RESTORATIONS</b>							
<i>Ammophia canescens</i>	Leguminosae	Lead plant	9	Infrequent	Prairie restorations	8, 16	
<i>Andropogon gerardii</i>	Gramineae	Big bluestem grass	5	Common	Prairie restorations	6 (south), 8, 16	
<i>Andropogon scoparius</i>	Gramineae	Little bluestem grass	5	Occasional	Prairie restorations	8, 16	
<i>Aster laevis</i>	Compositae	Smooth blue aster	9	Infrequent	Prairie restorations	8, 16	
<i>Bouteloua curtipendula</i>	Gramineae	Side-oats grama	8	Infrequent	Prairie restorations	26	
<i>Coreopsis palmata</i>	Compositae	Prairie coreopsis	6	Infrequent	Prairie restorations	8, 16	
<i>Coreopsis tripteris</i>	Compositae	Tall coreopsis	5	Occasional	Prairie restorations	8, 16	
<i>Desmodium canadense</i>	Leguminosae	Showy tick trefoil	4	Infrequent	Prairie restorations	8, 16	
<i>Eryngium yuccifolium</i>	Umbelliferae	Rattlesnake master	9	Occasional	Prairie restorations	8, 16	
<i>Helopsis helianthoides</i>	Compositae	False sunflower	5	Common	Prairie restorations	8, 16	
<i>Lespedeza capitata</i>	Leguminosae	Round-headed bush clover	4	Infrequent	Prairie restorations	8, 16	
<i>Peritanthum integrifolium</i>	Compositae	Wind quinine	8	Occasional	Prairie restorations	8, 16	
<i>Physostegia virginiana</i>	Labiatae	False dragonhead, obedient pl.	6	Infrequent	Prairie restorations	8, 16	
<i>Ratibida pinnata</i>	Compositae	Yellow coneflower	4	Occasional	Prairie restorations	8, 16	
<i>Silphium integrifolium</i> var. <i>dearml</i>	Compositae	Deam's roseweed	5	Occasional	Prairie restorations	8, 16	
<i>Silphium laciniatum</i>	Compositae	Compass plant	5	Occasional	Prairie restorations	8, 16	
<i>Silphium terribinthaceum</i>	Compositae	Prairie dock	5	Occasional	Prairie restorations	8, 16	
<i>Solidago rigida</i>	Compositae	Stiff goldenrod	4	Occasional	Prairie restorations	8, 16	
<i>Scrophularium nutans</i>	Gramineae	Indian grass	5	Occasional	Prairie restorations	8, 16	
<i>Veronicastrum virginicum</i>	Scrophulariaceae	Culver's root	7	Infrequent	Prairie restorations	8, 16	
<b>INTRODUCED/ESTABLISHED:</b>							
<i>Aquilegia canadensis</i>	Ranunculaceae	Wild columbine	6	Infrequent	TV trail near VC (not there in 1994)	15	
<i>Pinus nigra</i>	Pinaceae	Austrian pine	-	Occasional	Reproducing from old pine plantations	(3, 15, 27)	
<i>Pinus sylvestris</i>	Pinaceae	Scotch Pine	-	Occasional	Reproducing from old pine plantations	(3, 15, 27)	

NOTE: Nomenclature used is same as that contained in the 1994 Edition of Plants of the Chicago Region by Dr. Gerold Wilhelm and Floyd Swink, except for the following listed species exceptions, where the name *Chamaedaphne calyculata*  
*Cyrtopodium panoflorum* var. *makasin*  
*Menyanthes trifoliata*

TABLE KEY

Natives are shown in Regular type on the table.  
Non-natives are shown in *Italics* on the table.

C Value = Coefficient of Conservatism (Swink/Wilhelm 1994)

Population Estimate:

Rare (fewer than 12 plants sighted)

Infrequent (occasional in limited habitats)

Occasional (moderate populations in limited habitats, or scattered throughout the entire site)

Frequent (large populations in several habitats, or frequently found throughout the entire site)

Abundant (common over large portions of the site)



## VOLO BOG

### Plants on the 1994 list and not on the 2004 list

### Plants on the 2004 but not 1994 list

Abutilon theophrasti	Agrostis alba palustris
Ailanthus altissima	Alisma triviale
Althea rosea	Anemonella thalictroides
Amelanchier interior	Arisaema triphyllum
Antennaria neglecta	Athyrium filix-femina var. michauxii
Apios americana	Betula alleghaniensis
Apocynum cannabinum	Calla palustris
Arctium lappa	Cardamine pensylvanica
Arenaria lateriflora	Carduus nutans
Atriplex patula	Carex sparganioides
Avena sativa	Carex sterilis
Bidens aristosa	Ceratophyllum demersum
Brassica nigra	Cuscuta gronovii
Calamagrostis inexpansa brevior	Cyperus ferruginescens
Carex buxbaumii	Cyperus strigosus
Carex molesta	Daucus carota
Carex utriculata	Duchesnea indica
Cuscuta campestris	Eleocharis intermedia
Cynoglossum officinale	Equisetum x ferrissii
Cyperus erythrorhizos	Erysimum cheiranthoides
Diplotaxis muralis	Euphorbia esula
Echinochloa crusgallii	Geum canadense
Eleocharis compressa	Glechoma hederacea
Eleocharis obtusa	Gnaphalium obtusifolium
Epipactis helleborine	Hedeoma pulegioides
Eragrostis cilliaensis	Hordeum jubatum
Erigeron canadensis	Hypericum majus
Euphorbia maculata	Hypericum perforatum
Festuca obtusa	Juncus torreyi
Galium lanceolatum	Lactuca canadensis
Galium mollugo	Lactuca serriola
Helianthus strumosus	Lamium amplexicaule
Hierochloa odorata	Lepidium campestre
Impatiens pallida	Ligustrum vulgare
Ludwigia palustris americana	Lilium michiganense
Lysimachia ciliata	Lonicera maackii
Mianthemum canadense interius	Lotus corniculatus
Malus ioensis	Lysimachia terrestris
Muhlenbergia frondosa	Malus baccata
Najas flexiles	Malva neglecta
Osmunda claytoniana	Mirabilis nyctaginea



Parnassia glauca  
Poa palustris  
Polygonum punctatum  
Polygonum pensylvanicum  
Pontederia cordata  
Potentilla norvegica  
Quercus bicolor  
Quercus velutina  
Ranunculus cymbalaria  
Ranunculus flabellaris  
Ranunculus septentrionalis  
Rosa blanda  
Salix fragilis  
Salix glaucophylloides  
Sanicula gregaria  
Scirpus hattorianus  
Scrophularia marilandica  
Scutellaria parvula leonardii  
Solidago altissima  
Solidago ohioensis  
Solidago uliginosa  
Teucrium canadense  
Tilia americana  
Ulmus americana  
Ulmus pumila  
Utricularia gibba (?2004?)  
Vaccinium macrocarpon  
Verbebe bracteata  
Xanthoxylem americanum

Myriophyllum spicatum  
Osmorhiza claytonii  
Polygonum hydropiper  
Potamogeton crispus  
Potamogeton pectinatus  
Prunus angustifolia  
Ptelea trifoliata  
Puccinella distans  
Quercus x bebbiana  
Ranunculus fascicularis  
Rhus typhina  
Robinia pseudoacacia  
Rosa arkansana var. suffulta  
Rosa carolina  
Rubus flagellaris  
Rumex acetosella  
Salix purpurea  
Salix x alba  
Saponaria officinalis  
Scirpus smithii  
Senecio aureus  
Senecio plattensis  
Silphium integrifolium var. deamii  
Smilax ecirrhata  
Smilax tamnoides var. hispida  
Solanum carolinense  
Solidago Canadensis  
Syringa vulgaris  
Thalictrum dasycarpum var. hypoglaucum  
Tradescantia ohioensis  
Trillium recurvatum  
Typha x glauca  
Triosteum aurantiacum  
Uvularia grandiflora  
Vaccinium oxycoccos

**Compiled by Margo Milde for WPF Grant 04-L34W**