



Houdek Dunes Natural Area Floristic Quality Assessment Results

A Floristic Quality Assessment of Houdek Dunes Natural Area was conducted by Liana May during the fall of 2013.

Floristic quality assessments (FQAs) are a useful tool to measure a plant community's conservation value. To perform an FQA, all vascular plant species in a community are quantified and an index representing the rarity of these species is summed to give a ranking that can be compared across different ecosystem types. This information can then be used to identify high-quality species and groupings of species in order to prioritize conservation and management efforts. At Houdek Dunes Natural Area the total number of species and native species are:

Native Species	Total Species
224	299

The coefficient of conservation (C) is a value between 0 and 10 assigned to each species, representing the species likelihood to occur in an unaltered, pre-European settlement landscape in the state of Michigan (Herman et al 2001). A C-value of 0 is assigned to species with low fidelity to their natural habitat and the ability to persist in numerous habitat conditions. A C-value of 10 is assigned to invasive species, also called adventives. At Houdek Dunes Natural Area the mean C-values are:

Native Mean C	Mean C w/ Adventives
4.5	3.4

The coefficient of wetness (W) is assigned to each species depending on their probability to occur in wetlands, where species with a W-value of -5 are obligatory wetland species, and those with a W-value of +5 are upland species. At Houdek Dunes Natural Area the mean coefficients of wetness are:

Native Mean W	Mean W w/ Adventives
-0.1	0.7

FQIs less than 20 have minimal significance, while FQIs greater than 35 represent areas of conservation importance and are floristically significant on a statewide level. Areas with FQIs greater than 50 are extremely rare and represent areas of significant native biodiversity (Herman et al 2001). At Houdek Dunes Natural Area the FQI's are:

Native FQI	FQI w/ Adventives
68.1	58.9

May, L. 2013. Floristic Quality Assessment and Habitat Mapping of Houdek Dunes Natural Area.

Herman, K. D., L. A. Masters, M. R. Penskar, A. A. Reznicek, G. S. Wilhelm, W. W. Brodovich, and K. P. Gardiner. 2001. Floristic Quality Assessment with Wetland Categories and Examples of Computer Applications for the State of Michigan – Revised, 2nd Edition. Michigan Department of Natural Resources, Wildlife, Natural Heritage Program. Lansing, MI. 19 pp. + Appendices.

Site: Houdek Dunes Natural Area
 Locale: Leelanau Co. MI
 By: Liana N May
 Notes: Not included in FQA catalog:
 Rosa spp. (cultivated Rosa near old house)
 Malus spp. (crab apple)
 Hedera helix (English ivy located near the old house)
 Picea pungens (old house site)
 Forsythia intermedia (old house site)
 Hybrids and variations:
 Cypripedium acaule var. alba
 Sorbus has densely pubescent buds and glabrous leaves suggesting hybrid with S. americana
 Symphyotrichum lanceolatum subspecies hesperium (A. Gray)

FLORISTIC QUALITY DATA

224	NATIVE SPECIES	Native	224	74.90%	Adventive	75	25.10%
299	Total Species	Tree	30	10.00%	Tree	4	1.30%
4.5	NATIVE MEAN C	Shrub	27	9.00%	Shrub	8	2.70%
3.4	W/Adventives	W-Vine	3	1.00%	W-Vine	2	0.70%
68.1	NATIVE FQI	H-Vine	1	0.30%	H-Vine	0	0.00%
58.9	W/Adventives	P-Forb	84	28.10%	P-Forb	35	11.70%
-0.1	NATIVE MEAN W	B-Forb	2	0.70%	B-Forb	11	3.70%
0.7	W/Adventives	A-Forb	10	3.30%	A-Forb	5	1.70%
AVG:	Faculative	P-Grass	18	6.00%	P-Grass	9	3.00%
		A-Grass	0	0.00%	A-Grass	1	0.30%
		P-Sedge	30	10.00%	P-Sedge	0	0.00%
		A-Sedge	0	0.00%	A-Sedge	0	0.00%
		Fern	19	6.40%			

ACRONYM	C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
ABIBAL	3	Abies balsamea	-3	FACW	Nt Tree	BALSAM FIR
ACEPEN	5	Acer pensylvanicum	3	FACU	Nt Tree	STRIPED MAPLE
ACERUB	1	Acer rubrum	0	FAC	Nt Tree	RED MAPLE
ACESAU	5	Acer saccharum	3	FACU	Nt Tree	SUGAR MAPLE
ACESPI	5	Acer spicatum	3	FACU	Nt Tree	MOUNTAIN MAPLE
ACHMIL	1	Achillea millefolium	3	FACU	Nt P-Forb	YARROW
ACTPAC	7	Actaea pachypoda	5	UPL	Nt P-Forb	DOLL'S EYES
AGRGRY	2	Agrimonia gryposepala	2	FACU+	Nt P-Forb	TALL AGRIMONY
AGRREP	0	AGROPYRON REPENS	3	FACU	Ad P-Grass	QUACK GRASS
AGRIGG	0	AGROSTIS GIGANTEA	0	FAC	Ad P-Grass	REDTOP
AGRPER	5	Agrostis perennans	1	FAC-	Nt P-Grass	AUTUMN BENT GRASS
ALLPET	0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
AMBART	0	Ambrosia artemisiifolia	3	FACU	Nt A-Forb	COMMON RAGWEED
AMEARB	4	Amelanchier arborea	3	FACU	Nt Tree	JUNEBERRY
AMMBRE	10	Ammophila breviligulata	5	UPL	Nt P-Grass	MARRAM GRASS
ANAMAR	3	Anaphalis margaritacea	5	UPL	Nt P-Forb	PEARLY EVERLASTING
ANDSCO	5	Andropogon scoparius	3	FACU	Nt P-Grass	LITTLE BLUESTEM GRASS
ANECAN	4	Anemone canadensis	-3	FACW	Nt P-Forb	CANADA ANEMONE
ANEMUL	10	Anemone multifida	5	UPL	Nt P-Forb	RED ANEMONE
ANTHOW	2	Antennaria howellii	5	UPL	Nt P-Forb	SMALL PUSSYTOES
ANTPAL	2	Antennaria parlinii	5	UPL	Nt P-Forb	SMOOTH PUSSYTOES

APESPI	0	APER A SPICA-VENTI	5	UPL	Ad A-Grass	APER A
APOCAN	3	Apocynum cannabinum	0	FAC	Nt P-Forb	INDIAN HEMP
ARANUD	5	Aralia nudicaulis	3	FACU	Nt P-Forb	WILD SARSAPARILLA
ARARAC	8	Aralia racemosa	5	UPL	Nt P-Forb	SPIKENARD
ARCMIN	0	ARCTIUM MINUS	5	UPL	Ad B-Forb	COMMON BURDOCK
ARCUVA	8	Arctostaphylos uva-ursi	5	UPL	Nt Shrub	BEARBERRY
ARESER	0	ARENARIA SERPYLLIFOLIA	0	FAC	Ad A-Forb	THYME LEAVED SANDWORT
ARITRI	5	Arisaema triphyllum	-2	FACW-	Nt P-Forb	JACK IN THE PULPIT
ARTVUL	0	ARTEMISIA VULGARIS	5	UPL	Ad P-Forb	MUGWORT
ASCSYR	1	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
ASPOFF	0	ASPARAGUS OFFICINALIS	3	FACU	Ad P-Forb	ASPARAGUS
ASTFIR	4	Aster firmus	-5	OBL	Nt P-Forb	SMOOTH SWAMP ASTER
ASTLAN	2	Aster lanceolatus	-3	FACW	Nt P-Forb	EASTERN LINED ASTER
ASTLAT	2	Aster lateriflorus	-2	FACW-	Nt P-Forb	SIDE FLOWERING ASTER
ASTMAC	4	Aster macrophyllus	5	UPL	Nt P-Forb	BIG LEAVED ASTER
ASTPUN	5	Aster puniceus	-5	OBL	Nt P-Forb	SWAMP ASTER
ATHFIL	4	Athyrium filix-femina	0	FAC	Nt Fern	LADY FERN
BARVUL	0	BARBAREA VULGARIS	0	FAC	Ad B-Forb	YELLOW ROCKET
BERTHU	0	BERBERIS THUNBERGII	4	FACU-	Ad Shrub	JAPANESE BARBERRY
BERINC	0	BERTEROA INCANA	5	UPL	Ad A-Forb	HOARY ALYSSUM
BETALL	7	Betula alleghaniensis	0	FAC	Nt Tree	YELLOW BIRCH
BETPAP	2	Betula papyrifera	2	FACU+	Nt Tree	PAPER BIRCH
BIDCER	3	Bidens cernuus	-5	OBL	Nt A-Forb	NODDING BUR MARIGOLD
BIDCOM	5	Bidens comosus	-3	FACW	Nt A-Forb	SWAMP TICKSEED
BOTMUL	5	Botrychium multifidum	3	FACU	Nt Fern	LEATHER GRAPE FERN
BROINE	0	BROMUS INERMIS	5	UPL	Ad P-Grass	SMOOTH BROME
CALLON	10	Calamovilfa longifolia	5	UPL	Nt P-Grass	SAND REED GRASS
CALTPA	6	Caltha palustris	-5	OBL	Nt P-Forb	MARSH MARIGOLD
CAMRAD	0	CAMPSIS RADICANS	0	FAC	Ad W-Vine	TRUMPET VINE
CXARTT	3	Carex arctata	5	UPL	Nt P-Sedge	SEDGE
CXCOMM	2	Carex communis	5	UPL	Nt P-Sedge	SEDGE
CXCOMO	5	Carex comosa	-5	OBL	Nt P-Sedge	SEDGE
CXCRYP	10	Carex cryptolepis	-5	OBL	Nt P-Sedge	SEDGE
CXDISP	10	Carex disperma	-5	OBL	Nt P-Sedge	SEDGE
CXE BUR	7	Carex eburnea	4	FACU-	Nt P-Sedge	SEDGE
CXFLAV	4	Carex flava	-5	OBL	Nt P-Sedge	SEDGE
CXGRAN	2	Carex granularis	-4	FACW+	Nt P-Sedge	SEDGE
CXHITC	5	Carex hitchcockiana	5	UPL	Nt P-Sedge	SEDGE
CXINTE	3	Carex interior	-5	OBL	Nt P-Sedge	SEDGE
CXINTU	3	Carex intumescens	-4	FACW+	Nt P-Sedge	SEDGE
CXLEPA	5	Carex leptalea	-5	OBL	Nt P-Sedge	SEDGE
CXLEPO	3	Carex leptoneuria	0	FAC	Nt P-Sedge	SEDGE
CXLUPA	4	Carex lupulina	-5	OBL	Nt P-Sedge	SEDGE
CXLURI	3	Carex lurida	-5	OBL	Nt P-Sedge	SEDGE
CXPENS	4	Carex pensylvanica	5	UPL	Nt P-Sedge	SEDGE
CXROSE	2	Carex rosea	5	UPL	Nt P-Sedge	CURLY STYLED WOOD SEDGE
CXSCAB	4	Carex scabrata	-5	OBL	Nt P-Sedge	SEDGE
CXSTIP	1	Carex stipata	-5	OBL	Nt P-Sedge	SEDGE
CXSTRI	4	Carex stricta	-5	OBL	Nt P-Sedge	SEDGE
CXUTRI	5	Carex utriculata	-5	OBL	Nt P-Sedge	SEDGE

CXVULP	1	Carex vulpinoidea	-5	OBL	Nt P-Sedge	SEDGE
CELORB	0	CELASTRUS ORBICULATA	5	UPL	Ad W-Vine	ORIENTAL BITTERSWEET
CENMAU	0	CENTAUREA MACULOSA	5	UPL	Ad B-Forb	SPOTTED BLUET
CERFON	0	CERASTIUM FONTANUM	3	FACU	Ad P-Forb	MOUSE EAR CHICKWEED
CHIUMB	8	Chimaphila umbellata	5	UPL	Nt Shrub	PIPSISSEWA
CHRLEU	0	CHRYSANTHEMUM LEUCANTHEMUM	5	UPL	Ad P-Forb	OX EYE DAISY
CICINT	0	CICHORIUM INTYBUS	5	UPL	Ad P-Forb	CHICORY
CIRLUT	2	Circaea lutetiana	3	FACU	Nt P-Forb	ENCHANTER'S NIGHTSHADE
CIRARV	0	CIRSIUM ARVENSE	3	FACU	Ad P-Forb	CANADIAN THISTLE
CIRPAL	0	CIRSIUM PALUSTRE	-4	FACW+	Ad B-Forb	MARSH THISTLE
CIRVUL	0	CIRSIUM VULGARE	4	FACU-	Ad B-Forb	BULL THISTLE
CLEVIR	4	Clematis virginiana	0	FAC	Nt W-Vine	VIRGIN'S BOWER
CLIVUL	3	Clinopodium vulgare	5	UPL	Nt P-Forb	WILD BASIL
CLIBOR	5	Clintonia borealis	-1	FAC+	Nt P-Forb	BLUEBEAD LILY; CORN LILY
CONAME	10	Conopholis americana	5	UPL	Nt P-Forb	SQUAWROOT
CONMAJ	0	CONVALLARIA MAJALIS	5	UPL	Ad P-Forb	LILY OF THE VALLEY
CONCAN	0	Conyza canadensis	1	FAC-	Nt A-Forb	HORSEWEED
COPTRI	5	Coptis trifolia	-3	FACW	Nt P-Forb	GOLDTHREAD
CORODO	8	Corallorhiza odontorhiza	5	UPL	Nt P-Forb	FALL CORAL ROOT
CORFLO	8	Cornus florida	4	FACU-	Nt Tree	FLOWERING DOGWOOD
CORSTO	2	Cornus stolonifera	-3	FACW	Nt Shrub	RED OSIER DOGWOOD
CYPACA	5	Cypripedium acaule	-3	FACW	Nt P-Forb	PINK LADY'S SLIPPER; MOCCASIN FLOWER
CYCAPU	5	Cypripedium calceolus var. pubescens	-1	FAC+	Nt P-Forb	LARGE YELLOW LADY'S SLIPPER
CYPREG	9	Cypripedium reginae	-4	FACW+	Nt P-Forb	SHOWY or QUEEN'S LADY SLIPPER
CYSBUL	5	Cystopteris bulbifera	-2	FACW-	Nt Fern	BULBLET FERN
DACGLO	0	DACTYLIS GLOMERATA	3	FACU	Ad P-Grass	ORCHARD GRASS
DANSPI	4	Danthonia spicata	5	UPL	Nt P-Grass	POVERTY GRASS; OATGRASS
DAUCAR	0	DAUCUS CAROTA	5	UPL	Ad B-Forb	QUEEN ANNE'S LACE
DECVER	7	Decodon verticillatus	-5	OBL	Nt Shrub	WHORLED or SWAMP LOOSESTRIFE
DIELON	4	Diervilla lonicera	5	UPL	Nt Shrub	BUSH HONEYSUCKLE
DIPTRI	7	Diphasiastrum tristrachyum	5	UPL	Nt Fern Ally	GROUND CEDAR
DROROT	6	Drosera rotundifolia	-5	OBL	Nt P-Forb	ROUND LEAVED SUNDEW
DRYCAR	5	Dryopteris carthusiana	-2	FACW-	Nt Fern	SPINULOSE WOODFERN
DRYCRI	6	Dryopteris cristata	-5	OBL	Nt Fern	CRESTED SHIELD FERN
ELAUMB	0	ELAEAGNUS UMBELLATA	3	FACU	Ad Shrub	AUTUMN OLIVE
ELEELL	6	Eleocharis elliptica	-3	FACW	Nt P-Sedge	GOLDEN SEEDED SPIKE RUSH
ELEERY	4	Eleocharis erythropoda	-5	OBL	Nt P-Sedge	SPIKE RUSH
ELEROS	10	Eleocharis rostellata	-5	OBL	Nt P-Sedge	SPIKE RUSH
EPIVIR	10	Epifagus virginiana	5	UPL	Nt P-Forb	BEECH DROPS
EPIPAR	0	EPILOBIUM PARVIFLORUM	3	FACU	Ad P-Forb	WILLOW HERB
EPIHEL	0	EPIPACTIS HELLEBORINE	5	UPL	Ad P-Forb	HELLEBORINE
EQUARV	0	Equisetum arvense	0	FAC	Nt Fern Ally	COMMON HORSETAIL
EQUFLU	7	Equisetum fluviatile	-5	OBL	Nt Fern Ally	WATER HORSETAIL
EQUSCI	7	Equisetum scirpoides	-1	FAC+	Nt Fern Ally	DWARF SCOURING RUSH
ERiang	10	Eriophorum angustifolium	-5	OBL	Nt P-Sedge	NARROW LEAVED COTTON GRASS
ERUGAL	0	ERUCASTRUM GALLICUM	5	UPL	Ad A-Forb	DOG MUSTARD
EUPMAM	4	Eupatorium maculatum	-5	OBL	Nt P-Forb	JOE PYE WEED
EUPPER	4	Eupatorium perfoliatum	-4	FACW+	Nt P-Forb	COMMON BONESET
EUPESU	0	EUPHORBIA ESULA	5	UPL	Ad P-Forb	LEAFY SPURGE
EUTGRA	3	Euthamia graminifolia	-2	FACW-	Nt P-Forb	GRASS LEAVED GOLDENROD

FAGGRA	6	Fagus grandifolia	3	FACU	Nt Tree	AMERICAN BEECH
FESSAX	6	Festuca saximontana	5	UPL	Nt P-Grass	FESCUE
FESSUB	5	Festuca subverticillata	2	FACU+	Nt P-Grass	NODDING FESCUE
FRAVIR	2	Fragaria virginiana	1	FAC-	Nt P-Forb	WILD STRAWBERRY
FRAAME	5	Fraxinus americana	3	FACU	Nt Tree	WHITE ASH
FRANIG	6	Fraxinus nigra	-4	FACW+	Nt Tree	BLACK ASH
GALODO	0	GALIUM ODORATUM	5	UPL	Ad P-Forb	SWEET WOODRUFF
GALTRR	4	Galium triflorum	2	FACU+	Nt P-Forb	FRAGRANT BEDSTRAW
GAUPRO	5	Gaultheria procumbens	3	FACU	Nt Shrub	WINTERGREEN
GERROB	3	Geranium robertianum	5	UPL	Nt A-Forb	HERB ROBERT
GEURIV	7	Geum rivale	-5	OBL	Nt P-Forb	PURPLE AVENS
GLYSTR	4	Glyceria striata	-5	OBL	Nt P-Grass	FOWL MANNA GRASS
GYMDRY	5	Gymnocarpium dryopteris	0	FAC	Nt Fern	OAK FERN
HACVIR	1	Hackelia virginiana	1	FAC-	Nt P-Forb	BEGGAR'S LICE
HEMFUL	0	HEMEROCALLIS FULVA	5	UPL	Ad P-Forb	ORANGE DAY LILY
HESMAT	0	HESPERIS MATRONALIS	5	UPL	Ad P-Forb	DAME'S ROCKET
HIEAUR	0	HIERACIUM AURANTIACUM	5	UPL	Ad P-Forb	ORANGE HAWKWEED
HIEPAN	10	Hieracium paniculatum	5	UPL	Nt P-Forb	PANICLED HAWKWEED
HIEPIS	0	HIERACIUM PILOSELLOIDES	5	UPL	Ad P-Forb	GLAUCOUS KING DEVIL
HOLLAN	0	HOLCUS LANATUS	4	FACU-	Ad P-Grass	VELVET GRASS
HUDTOM	10	Hudsonia tomentosa	5	UPL	Nt Shrub	BEACH HEATH
HUMLUP	3	Humulus lupulus	3	FACU	Nt H-Vine	COMMON HOP
HYPPER	0	HYPERICUM PERFORATUM	5	UPL	Ad P-Forb	COMMON ST. JOHN'S WORT
ILEVER	5	Ilex verticillata	-4	FACW+	Nt Shrub	MICHIGAN HOLLY
IMPCAP	2	Impatiens capensis	-3	FACW	Nt A-Forb	SPOTTED TOUCH ME NOT
JUNBAL	4	Juncus balticus	-5	OBL	Nt P-Forb	RUSH
JUNBRP	7	Juncus brachycephalus	-5	OBL	Nt P-Forb	RUSH
JUNBRE	8	Juncus brevicaudatus	-5	OBL	Nt P-Forb	RUSH
JUNDUD	1	Juncus dudleyi	0	FAC	Nt P-Forb	DUDLEY'S RUSH
JUNEFF	3	Juncus effusus	-5	OBL	Nt P-Forb	SOFT STEMMED RUSH
JUNNOD	5	Juncus nodosus	-5	OBL	Nt P-Forb	JOINT RUSH
JUNCOI	4	Juniperus communis	3	FACU	Nt Shrub	COMMON or GROUND JUNIPER
JUNHOR	10	Juniperus horizontalis	1	FAC-	Nt Shrub	CREEPING JUNIPER
LACCAN	2	Lactuca canadensis	2	FACU+	Nt B-Forb	TALL LETTUCE
LARLAR	5	Larix laricina	-3	FACW	Nt Tree	TAMARACK
LEEORY	3	Leersia oryzoides	-5	OBL	Nt P-Grass	CUT GRASS
LEMMIN	5	Lemna minor	-5	OBL	Nt A-Forb	SMALL DUCKWEED
LEOCAR	0	LEONURUS CARDIACA	5	UPL	Ad P-Forb	MOTHERWORT
LEPCAM	0	LEPIDIUM CAMPESTRE	5	UPL	Ad B-Forb	FIELD CRESS
LILLAN	0	LILIUM LANCIFOLIUM	5	UPL	Ad P-Forb	TIGER LILY
LINBOR	6	Linnaea borealis	0	FAC	Nt P-Forb	TWINFLOWER
LIPLOE	5	Liparis loeselii	-4	FACW+	Nt P-Forb	LOESEL'S TWAYBLADE
LONCAN	5	Lonicera canadensis	3	FACU	Nt Shrub	AMERICAN FLY HONEYSUCKLE
LONMOR	0	LONICERA MORROWII	5	UPL	Ad Shrub	MORROW HONEYSUCKLE
LONBEL	0	LONICERA XBELLA	3	FACU	Ad Shrub	HYBRID HONEYSUCKLE
LYCANN	5	Lycopodium annotinum	0	FAC	Nt Fern Ally	STIFF CLUBMOSS
LYCCLA	4	Lycopodium clavatum	0	FAC	Nt Fern Ally	RUNNING GROUND PINE
LYCOBS	5	Lycopodium obscurum	3	FACU	Nt Fern Ally	GROUND PINE
LYCAME	2	Lycopus americanus	-5	OBL	Nt P-Forb	COMMON WATER HOREHOUND
LYCUNI	2	Lycopus uniflorus	-5	OBL	Nt P-Forb	NORTHERN BUGLE WEED

MAICAC	4	Maianthemum canadense	0	FAC	Nt P-Forb	CANADA MAYFLOWER
MALPUM	0	MALUS PUMILA	5	UPL	Ad Tree	APPLE
MEDVIR	10	Medeola virginiana	5	UPL	Nt P-Forb	INDIAN CUCUMBER ROOT
MELLIN	6	Melampyrum lineare	1	FAC-	Nt A-Forb	COW WHEAT
MELALB	0	MELILOTUS ALBA	3	FACU	Ad B-Forb	WHITE SWEET CLOVER
MENARV	3	Mentha arvensis	-3	FACW	Nt P-Forb	WILD MINT
MENPIP	0	MENTHA PIPERITA	-5	OBL	Ad P-Forb	PEPPERMINT
MITREP	5	Mitchella repens	2	FACU+	Nt P-Forb	PARTRIDGE BERRY
MITNUD	8	Mitella nuda	-3	FACW	Nt P-Forb	NAKED MITERWORT
MONHYP	6	Monotropa hypopithys	5	UPL	Nt P-Forb	PINESAP
MONOUN	5	Monotropa uniflora	3	FACU	Nt P-Forb	INDIAN PIPE
MUHSYL	8	Muhlenbergia sylvatica	-3	FACW	Nt P-Grass	WOODLAND SATIN GRASS
MYOLAX	6	Myosotis laxa	-5	OBL	Nt P-Forb	SMALL FORGET ME NOT
MYOSYL	0	MYOSOTIS SYLVATICA	5	UPL	Ad P-Forb	WOODLAND FORGET ME NOT
NASOFF	0	NASTURTIIUM OFFICINALE	-5	OBL	Ad P-Grass	WATERCRESS
OENBIE	2	Oenothera biennis	3	FACU	Nt B-Forb	COMMON EVENING PRIMROSE
ONOSEN	2	Onoclea sensibilis	-3	FACW	Nt Fern	SENSITIVE FERN
OSMLON	3	Osmorhiza longistylis	4	FACU-	Nt P-Forb	SMOOTH SWEET CICELY
OSMCIN	5	Osmunda cinnamomea	-3	FACW	Nt Fern	CINNAMON FERN
OSMREG	5	Osmunda regalis	-5	OBL	Nt Fern	ROYAL FERN
OSTVIR	5	Ostrya virginiana	4	FACU-	Nt Tree	IRONWOOD; HOP HORNBEAM
PANDEP	4	Panicum depauperatum	5	UPL	Nt P-Grass	PANIC GRASS
PANIMP	3	Panicum implicatum	0	FAC	Nt P-Grass	PANIC GRASS
PANMER	7	Panicum meridionale	5	UPL	Nt P-Grass	MAT PANIC GRASS
PANVIR	4	Panicum virgatum	-1	FAC+	Nt P-Grass	SWITCH GRASS
PETPAL	10	Petasites palmatus	-3	FACW	Nt P-Forb	SWEET COLTSFOOT
PHAARU	0	Phalaris arundinacea	-4	FACW+	Nt P-Grass	REED CANARY GRASS
PHLPRA	0	PHLEUM PRATENSE	3	FACU	Ad P-Grass	TIMOTHY
PHLPAN	0	PHLOX PANICULATA	3	FACU	Ad P-Forb	GARDEN PHLOX
PHYHET	3	Physalis heterophylla	5	UPL	Nt P-Forb	CLAMMY GROUND CHERRY
PHYVIA	8	Physostegia virginiana	-3	FACW	Nt P-Forb	FALSE DRAGONHEAD
PICGLA	3	Picea glauca	3	FACU	Nt Tree	WHITE SPRUCE
PINBAN	5	Pinus banksiana	3	FACU	Nt Tree	JACK PINE
PINRES	6	Pinus resinosa	3	FACU	Nt Tree	RED PINE
PINSTR	3	Pinus strobus	3	FACU	Nt Tree	WHITE PINE
PLALAN	0	PLANTAGO LANCEOLATA	0	FAC	Ad P-Forb	ENGLISH PLANTAIN
PLAMAJ	0	PLANTAGO MAJOR	-1	FAC+	Ad P-Forb	COMMON PLANTAIN
PLARUG	0	Plantago rugelii	0	FAC	Nt A-Forb	RED STALKED PLANTAIN
PLAHYP	5	Platanthera hyperborea	-4	FACW+	Nt P-Forb	TALL NORTHERN BOG ORCHID
POACOM	0	POA COMPRESSA	2	FACU+	Ad P-Grass	CANADA BLUEGRASS
POAPRA	0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUEGRASS
POASYL	8	Poa sylvestris	0	FAC	Nt P-Grass	WOODLAND BLUEGRASS
POLPUB	5	Polygonatum pubescens	5	UPL	Nt P-Forb	DOWNY SOLOMON SEAL
POLHYS	5	Polygonum hydropiperoides	-5	OBL	Nt P-Forb	WATER PEPPER
POPBAL	2	Populus balsamifera	-3	FACW	Nt Tree	BALSAM POPLAR
POPGRA	4	Populus grandidentata	3	FACU	Nt Tree	BIG TOOTHED ASPEN
POPTRE	1	Populus tremuloides	0	FAC	Nt Tree	QUAKING ASPEN
POTARE	0	POTENTILLA ARGENTEA	3	FACU	Ad P-Forb	SILVERY CINQUEFOIL
PRUVUL	0	PRUNELLA VULGARIS	0	FAC	Nt P-Forb	LAWN PRUNELLA
PRUPEN	3	Prunus pensylvanica	4	FACU-	Nt Tree	PIN CHERRY

PRUSER	2	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
PRUVIR	2	Prunus virginiana	1	FAC-	Nt Shrub	CHOKE CHERRY
PTEAQU	0	Pteridium aquilinum	3	FACU	Nt Fern	BRACKEN FERN
PYRASA	8	Pyrola asarifolia	-3	FACW	Nt P-Forb	PINK PYROLA
QUERUB	5	Quercus rubra	3	FACU	Nt Tree	RED OAK
RANACR	0	RANUNCULUS ACRIS	-2	FACW-	Ad P-Forb	TALL or COMMON BUTTERCUP
RANREC	5	Ranunculus recurvatus	-3	FACW	Nt A-Forb	HOOKED CROWFOOT
RHAALN	8	Rhamnus alnifolia	-5	OBL	Nt Shrub	ALDER LEAVED BUCKTHORN
RHACAT	0	RHAMNUS CATHARTICA	3	FACU	Ad Tree	COMMON BUCKTHORN
RHUTYP	2	Rhus typhina	5	UPL	Nt Tree	STAGHORN SUMAC
RIBCYN	4	Ribes cynosbati	5	UPL	Nt Shrub	PRICKLY or WILD GOOSEBERRY
RIBLAC	6	Ribes lacustre	-3	FACW	Nt Shrub	SWAMP BLACK CURRANT
ROBPSE	0	ROBINIA PSEUDOACACIA	4	FACU-	Ad Tree	BLACK LOCUST
ROSBLA	3	Rosa blanda	3	FACU	Nt Shrub	WILD ROSE
ROSCIN	0	ROSA CINNAMOMEA	5	UPL	Ad Shrub	CINNAMON ROSE
ROSMUL	0	ROSA MULTIFLORA	3	FACU	Ad Shrub	MULTIFLORA ROSE
ROSPAL	5	Rosa palustris	-5	OBL	Nt Shrub	SWAMP ROSE
RUBALL	1	Rubus allegheniensis	2	FACU+	Nt Shrub	COMMON BLACKBERRY
RUBOCC	1	Rubus occidentalis	5	UPL	Nt Shrub	BLACK RASPBERRY
RUBPAR	6	Rubus parviflorus	2	FACU+	Nt Shrub	THIMBLEBERRY
RUBPUB	4	Rubus pubescens	-4	FACW+	Nt P-Forb	DWARF RASPBERRY
RUBSTR	2	Rubus strigosus	-2	FACW-	Nt Shrub	WILD RED RASPBERRY
RUMACL	0	RUMEX ACETOSELLA	0	FAC	Ad P-Forb	SHEEP SORREL
RUMOBT	0	RUMEX OBTUSIFOLIUS	-3	FACW	Ad P-Forb	BITTER DOCK
SALDIS	1	Salix discolor	-3	FACW	Nt Shrub	PUSSY WILLOW
SALEXI	1	Salix exigua	-5	OBL	Nt Shrub	SANDBAR WILLOW
SALNIG	5	Salix nigra	-5	OBL	Nt Tree	BLACK WILLOW
SALSEC	6	Salix sericea	-5	OBL	Nt Shrub	SILKY WILLOW
SCHPUP	5	Schizachne purpurascens	2	FACU+	Nt P-Grass	FALSE MELIC
SCHAME	10	Schoenoplectus americanus	-5	OBL	Nt P-Sedge	OLNEY'S BULRUSH
SCHTAB	4	Schoenoplectus tabernaemontani	-5	OBL	Nt P-Sedge	SOFTSTEM BULRUSH
SCIATR	3	Scirpus atrovirens	-5	OBL	Nt P-Sedge	BULRUSH
SCIPEN	3	Scirpus pendulus	-5	OBL	Nt P-Sedge	BULRUSH
SCUGAL	5	Scutellaria galericulata	-5	OBL	Nt P-Forb	COMMON SKULLCAP
SEDACR	0	SEDUM ACRE	5	UPL	Ad P-Forb	MOSSY STONECROP
SEDALB	0	SEDUM ALBUM	5	UPL	Ad P-Forb	STONECROP
SHECAN	7	Shepherdia canadensis	5	UPL	Nt Shrub	SOAPBERRY
SILVUL	0	SILENE VULGARIS	5	UPL	Ad P-Forb	BLADDER CAMPION
SMIRAC	5	Smilacina racemosa	3	FACU	Nt P-Forb	FALSE SPIKENARD
SMISTE	5	Smilacina stellata	1	FAC-	Nt P-Forb	STARRY FALSE SOLOMON SEAL
SOLDUL	0	SOLANUM DULCAMARA	0	FAC	Ad P-Forb	BITTERSWEET NIGHTSHADE
SOLALT	1	Solidago altissima	3	FACU	Nt P-Forb	TALL GOLDENROD
SOLCAE	7	Solidago caesia	3	FACU	Nt P-Forb	BLUE STEMMED GOLDENROD
SOLFLE	6	Solidago flexicaulis	3	FACU	Nt P-Forb	BROAD LEAVED GOLDENROD
SOLJUN	3	Solidago juncea	5	UPL	Nt P-Forb	EARLY GOLDENROD
SOLNEM	2	Solidago nemoralis	5	UPL	Nt P-Forb	OLD FIELD GOLDENROD
SOLRUG	3	Solidago rugosa	-1	FAC+	Nt P-Forb	ROUGH GOLDENROD
SORAU	0	SORBUS AUCUPARIA	5	UPL	Ad Tree	EUROPEAN MOUNTAIN ASH
SPOCRY	3	Sporobolus cryptandrus	4	FACU-	Nt P-Grass	SAND DROPSEED
SYRVUL	0	SYRINGA VULGARIS	5	UPL	Ad Shrub	COMMON LILAC

TAROFF	0	TARAXACUM OFFICINALE	3	FACU	Ad P-Forb	COMMON DANDELION
TAXCAN	5	Taxus canadensis	3	FACU	Nt Shrub	CANADIAN YEW
THEPAL	2	Thelypteris palustris	-4	FACW+	Nt Fern	MARSH FERN
THEPHE	5	Thelypteris phegopteris	5	UPL	Nt Fern	NORTHERN BEECH FERN
THUOCC	4	Thuja occidentalis	-3	FACW	Nt Tree	ARBOR VITAE
THYPUL	0	THYMUS PULEGIOIDES	5	UPL	Ad P-Forb	THYME
TIACOR	9	Tiarella cordifolia	1	FAC-	Nt P-Forb	FOAMFLOWER
TILAME	5	Tilia americana	3	FACU	Nt Tree	BASSWOOD
TOXRYD	3	Toxicodendron rydbergii	0	FAC	Nt W-Vine	POISON IVY
TRADUB	0	TRAGOPOGON DUBIUS	5	UPL	Ad B-Forb	GOAT'S BEARD
TRIBOR	5	Trientalis borealis	-1	FAC+	Nt P-Forb	STARFLOWER
TRICAM	0	TRIFOLIUM CAMPESTRE	5	UPL	Ad A-Forb	LOW HOP CLOVER
TRIPRA	0	TRIFOLIUM PRATENSE	2	FACU+	Ad P-Forb	RED CLOVER
TRIGRA	5	Trillium grandiflorum	5	UPL	Nt P-Forb	COMMON TRILLIUM
TSUCAN	5	Tsuga canadensis	3	FACU	Nt Tree	HEMLOCK
ULMAME	1	Ulmus americana	-2	FACW-	Nt Tree	AMERICAN ELM
VERTHA	0	VERBASCUM THAPSUS	5	UPL	Ad B-Forb	COMMON MULLEIN
VERHAS	4	Verbena hastata	-4	FACW+	Nt P-Forb	BLUE VERVAIN
VERBEA	10	Veronica beccabunga var. americana	-5	OBL	Nt P-Forb	AMERICAN BROOKLIME
VEROFF	0	VERONICA OFFICINALIS	5	UPL	Ad P-Forb	COMMON SPEEDWELL
VERSER	0	Veronica serpyllifolia	-3	FACW	Nt P-Forb	THYME LEAVED SPEEDWELL
VIBACE	6	Viburnum acerifolium	5	UPL	Nt Shrub	MAPLE LEAVED ARROW WOOD
VICVIL	0	VICIA VILLOSA	5	UPL	Ad A-Forb	HAIRY VETCH
VINMIN	0	VINCA MINOR	5	UPL	Ad Shrub	PERIWINKLE
VIOCUC	5	Viola cucullata	-5	OBL	Nt P-Forb	MARSH VIOLET
VIOPUB	4	Viola pubescens	4	FACU-	Nt P-Forb	YELLOW VIOLET
VIOSOR	1	Viola sororia	1	FAC-	Nt P-Forb	COMMON BLUE VIOLET
VITRIP	3	Vitis riparia	-2	FACW-	Nt W-Vine	RIVERBANK GRAPE