2015



Appendix I – Current Conditions Biological Inventory









Soils

The following is a detailed description of the soil types found within the project site as delineated by the NRCS. Figure 4 in the main report shows a map of soil series locations within the project site:

Drummer – This soil series consists of very deep, poorly drained soils formed in loess or other silty material. Drummer soils are found on nearly level or depressional areas of outwash plains, stream terraces, and till plains with slope gradients ranging from 0 to 2 percent. The potential for surface runoff ranges from low to negligible. Native vegetation includes hydrophytic grasses, reeds, and sedges.

Faxon – This soil series consists of moderately deep, poorly and very poorly drained soils that formed in a mantle of glacial drift over bedrock. Faxon soils are found on tock-cored terraces and structural benches with slope gradients ranging from 0 to 2 percent. The potential for surface runoff ranges from low to negligible. Native vegetation includes wet to mesic tall grass prairie.

Fox – This soil series consists of very deep, well drained soils which formed in thin loess and in loamy alluvium or in loamy alluvium overlying stratified calcareous sandy outwash. Fox soils are found on outwash plains, stream terraces, valley trains, kames, and glacial moraines with slope gradients ranging from 0 to 35 percent. The potential for surface runoff ranges from high to negligible. Native vegetation includes hardwood forests of northern red oak, white oak, sugar maple, black cherry, and white ash.

Harpster – This soil series consists of very deep, poorly drained soils formed in calcareous loess or glacial drift. Harpster soils are found on nearly level or depressional parts of outwash plains, till plains, glacial lake plains, or stream terraces with slope gradients ranging from 0 to 2 percent. The potential for surface runoff is negligible. Native vegetation includes hydrophytic herbaceous vegetation.

Hoopeston – This soil series consists of very deep, somewhat poorly drained soils formed in loamy and sand sediments. Hoopeston soils are found on outwash plains, valley trains, and stream terraces with slope gradients ranging from 0 to 5 percent. The potential for surface runoff is low. Native vegetation includes prairie grasses.

Kane – This soil series consists of very deep, somewhat poorly drained soils formed in silty material and in the underlying loamy outwash over stratified calcareous gravel and sand. Kane soils are found on outwash plains and stream terraces with slope gradients ranging from 0 to 3 percent. The potential for surface runoff ranges from medium to low. Native vegetation includes tall grass prairie. A

Kankakee – This soil series consists of well drained soils that formed in loamy outwash and limestone cobbles. Kankakee soils are found on outwash plains and stream terraces with slope gradients ranging from 0 to 12 percent. Potential for surface runoff ranges from medium to negligible. Native vegetation includes prairie grasses.

Milford – This soil series consists of very deep, poorly drained and very poorly drained soils that formed in lacustrine sediments. Milford soils are found on low broad summits or in depression on glacial lake plains with slope gradients ranging from 0 to 2 percent. The potential for surface runoff is low to negligible. Native vegetation included marsh grasses and sedges.

Morley – This soil series consists of very deep, moderately well drained soils that formed in loess and in the underlying clay loam or silty clay loam till. Morley soils are found on till plains and moraines with

slope gradients ranging from 1 to 18 percent. The potential for surface runoff ranges from low to very high. Native vegetation is mixed deciduous hardwood forest.

Muskego – This soil series consists of very deep, very poorly drained soils formed in herbaceous organic material. Muskego soils are associated with glacial lake plains and flood plains, but other geographical features are not excluded. Slope gradients range from 0 to 2 percent while the potential for surface runoff ranges from low to negligible. Native vegetation includes grasses, reeds, and sedges with scatter hardwoods.

Oakville – This soil series consists of very deep, excessively drained soils formed in sandy eolian deposits. Oakville soils are found on dunes and beach ridges on outwash plains, lake plains, and moraines with slope gradients ranging from 0 to 60 percent. The potential for surface runoff ranges from low to negligible. Native vegetation includes mixed hardwoods of oak and white pine.

Orthents – (7.6%) Orthents are exceedingly shallow soils that are often referred to as skeletal soils. Any former soil has been either completely remover or so truncated that the diagnostic horizons typical of all orders other than entisols are absent. These soils are found in highly erodible areas whereas a permanent covering of deep soil cannot establish itself.

Sawmill – This soil series consists of very deep, poorly drained soils formed in alluvium. Sawmill soils are associated with floodplains, on nearly level valley floors, and in some drainageways that extend into the uplands. Slope gradients range from 0 to 3 percent. Native vegetation includes grasses and trees.

Will – This soil series consists of poorly drained soils that formed in loamy outwash overlying calcareous gravel and sand. Will soils are found on nearly level or depressional parts of outwash plains, stream terraces, lake plains, valley trains, and moraines. Slope gradients range from 0 to 3 percent with the potential for surface runoff being negligible. Native vegetation includes hydrophytic grasses, reeds, and sedges.

Thorp – This soil series consists of very deep, poorly drained soils formed in loess or other silty material and in the underlying loamy stratified outwash or sandy loam till. Thorp soils are found on broad low summits or in depression on outwash plains, stream terraces, or till plains with slope gradients ranging from 0 to 2 percent. The potential for surface runoff is negligible. Native vegetation includes marsh grasses and sedges.

Zurich – This soil series consists of very deep, moderately well drained soils which formed in loess or silty material underlying calcareous, loamy outwash. Zurich soils are found on outwash plains with slope gradients ranging from 0 to 35 percent. The potential for surface runoff ranges from high to medium. Native vegetation includes hardwood forests of oak, hickory, and maple.

Macroinvertebrates

Butterflies

List of butterflies and skippers compiled for the proposed McMahon Woods and Fen Nature Preserve for the period of 1996 – 2008 by the Butterfly Monitoring Network (Doug Taron, personal communication). The number of years each species was present and the average number of total individuals recorded each year are provided.

Species	Scientific Name	Frequency	Average
Least Skipper	Ancyloxypha numitor	13/13	29.46
Delaware Skipper	Atrytone logan	12/13	3.92
Silver Spotted Skipper	Epargyreus clarus	13/13	17.92
Baptesia Duskywing	Erynnis baptesiae	02/13	0.31
Horace's Duskywing	Erynnis horatius	03/13	0.23
Juvenal's Duskywing	Erynnis juvenalis	02/13	0.15
Black Dash	Atrytone conspicua	13/13	30.00
Dion Skipper	Atrytone dion	12/13	7.46
Dun Skipper	Atrytone ruricola	08/13	1.92
Fiery Skipper	Hylephila phyleus	06/13	3.08
Hobomok Skipper	Poanes hobomok	12/13	7.08
Peck's Skipper	Polites peckius	13/13	15.69
Crossline Skipper	Polites manataaqua	03/13	0.85
Tawny Edge	Polites Themistocles	11/13	6.38
Little Glassywing	Polites verna	04/13	0.46
European Skipper	Adopaea lineola	10/13	4.46
Broken Dash	Wallengrenia otho	06/13	1.23
Black Swallowtail	Papilio polyxenes	06/13	1.46
Tiger Swallowtail	Papilio glaucus	13/13	38.31
Giant Swallowtail	Papilio cresphontes	06/13	0.92
Pipevine Swallowtail	Papilio philenor	02/13	0.46
Cabbage White	Pieris rapae	13/13	709.15
Common/Orange Sulphur	Colias eurytheme	13/13	20.69
Acadian Hairstreak	Strymon acadica	06/13	11.92
Banded Hairstreak	Strymon falacer	02/13	0.23
Striped Hairstreak	Strymon liparops	01/13	0.08
Gray Hairstreak	Strymon melinus	01/13	0.08
Bronze Copper	Lycaena thoe	11/13	11.00
Great Gray Copper	Lycaena dione	01/13	0.08
Spring Azure	Celastrina ladon	12/13	17.08
Eastern Tailed Blue	Everes comvntas	13/13	6.62
Snout Butterfly	Libytheana bachmannii	02/13	0.02
Hackberry Butterfly	Asterocampa celtis	01/13	0.25
Viceroy	Limenitis archippus	13/13	21.31
Red-Spotted Purple	Limenitis arthemis astyanax	12/13	9.38
Red Admiral	Vanessa atalanta	13/13	32.62
American Painted Lady	Vanessa virginiensis	06/13	1.08
Painted Lady	Vanessa cardui	03/13	2.62
-	Precis lavinia		
Buckeye Mourning Cloak		08/13 06/13	1.92 1.38
)	Nymphalis antiopa Polygonia interpogationis		
Question Mark	Polygonia interrogationis	13/13	6.92
Cray Commo	Polygonia comma	11/13	15.54
Gray Comma	Polygonia progne	02/13	0.15
Silvery Checkerspot	Melitaea nycteis	13/13	19.92
Pearl Crescent	Phyciodes tharos	13/13	36.38

Great Spangled Fritillary*	Speyeria Cybele	13/13	33.85
Variegated Fritillary	Euptoieta Claudia	01/13	0.08
Monarch	Danaus plexippus	13/13	38.00
Common Wood Nymph	Cercyonis pegala	13/13	27.77
Pearly Eye	Lethe portlandia	13/13	15.31
Little Wood Satyr	Euptychia cymela	07/13	7.62
Eyed Brown	Lethe Eurydice	13/13	112.31

Italic: Large population

Insects

Survey of Terrestrial Insects: Sanganashkee Slough Section 506 Restoration Project US Army Corps of Engineers Surveyors: Matthew A. McCary & José-Cristian Martinez Date of survey: August 3rd 2012

I. Materials and Methods:

Surveyed sites

Two sites were surveyed at Sanganashkee Slough, the eastern wetland fringe of the lake (41°41'31.42"N, 87°52'31.19"W) and the wet open woodland northwest of the lake (41°41'49.61"N, 87°53'59.04"W). The wetland fringe primarily consisted of a *Typha* (cattail) dominated site, with mature cattails reaching over 3 m in height. The wet open woodland comprised of a scarce woody vegetative mix, comprised of *Rhamnus* (buckthorn), *Lonicera* (honeysuckle), *Acer* (maple), and *Quercus* (oak) species. Both sites were surveyed between 09:30 and 16:00 hours on August 3rd 2012. *Insect Sampling*

For each of the two surveyed sites, a transect approximately 45 m in length was established. Each transect consisted of 3 survey points, each point being about 15 m apart. Both transects originated near the lake's edge and descended away from it in a straight line. At the center of each surveyed point, one sweep-net sampling was carried out consisting of 1 x 20 sweeps with a heavy duty sweep net (38 cm diameter, 90 cm wood handle). In addition to sweep-netting, the visual search method was applied to survey flying, vegetation-dwelling, and litter-dwelling insects. Visual searching involved actively searching for insects and other arthropods flying, sitting on, or under the surrounding vegetation. The visual search method was performed consecutively for approximately 45 min. *Insect Identification*

All insect captures were identified in the field to at least family level (when possible), or to the highest taxonomic resolution possible. All insects captured were released after identification. Due to the course nature of a live field survey, only order was the highest taxonomic level possible to identify for some arthropod groups. These groups consisted of Opiliones, Dermaptera, Lepidoptera, Odonata, Orthroptera, and Thysanoptera. Conversely, other arthropod groups such as Isopoda and Cicadidae were able to identify down to the species level. For this survey, only presence/absence was documented; species abundance was not recorded.

II. Results:

Table 1: Table of species/taxonomic groups identified at the wetland fringe of Saganashkee Slough. There were a total of 48 taxonomic units identified, varying between Order, Family, Genus, and Species. The '*' represent Subfamily name of a particular family.

^{*}Generalist with some preference for woodlands. Notably large population at McMahon.

Taxonomic Group/Species

Arachnida-Class

Araneae: Spider Families

Anyphaenidae Corinnidae Gnaphosidae Linyphiidae

Lycosidae Pisauridae Salticidae Tetragnathidae Theridiidae

Thomisidae

Opiliones-Order

Insecta-Class

Coleoptera: Beetle Families

Carabidae

Chrysomelidae Curculionidae Histeridae

Leiodidae Scarabaeidae Hydrophylidae Staphylinidae *Steninae

*Scydmaenidae

Dermaptera-Order

Diptera: Fly Families

Micropezidae Tabanidae

Hemiptera: Families

Aphidoidea Reduviidae Cicadellidae Coreidae Pentatomidae

Hymenoptera: Families

Apidae Braconidae Halictidae Vespidae

Formicidae-Ant genera

Camponotus Formica Lasius

Temnothorax
Lepidoptera-Order
Odonata-Order
Orthroptera-Order
Thysanoptera-Order

Malacostracans-Class

Isopoda: Species

Armadillidium nasatum Trachelipus rathkii Trichoniscus pygmaeus

Miriopoda -Class

Diplopoda: Millipede Families

Paradoxosomatidae

Entognatha-Class
Collembola: Families

Entomobryidae Sminthuridae Tomoceridae

^{****} Note that names <u>underlined</u> and in **bold** letters represent Class for a given arthropod group; names in **bold** represent title of an arthropod group; letters in *italics* represent genus or species name

Table 2: Table of taxonomic groups/species identified at the wet open woodland of Sanganashkee Slough. There were a total of 61 taxonomic units identified, varying between Order, Family, Genus, and Species. The '*' represent Subfamily name of a particular family.

Taxonomic Group /	Species
-------------------	---------

raxonomic Group / Species		
Arachnida-Class	Dermaptera-Order	Malacostracans-Class
Araneae: Spider Families	Diptera: Fly Families	Isopoda: Species
Agelenidae	Culicidae	Armadillidium nasatum
Araneidae	Dolichopodidae	Trachelipus rathkii
Corinnidae	Tabanidae	Trichoniscus pygmaeus
Linyphiidae	Tipulidae	Miriopoda-Class
Lycosidae	Hemiptera: Families	Chilopoda: Centipede Families
Miturgidae	Aphidoidea	Geophilidae
Mysmenidae	Reduviidae	Lithobiidae
Pisauridae	Cicadidae	Scolopendridae
Salticidae	Tibicen linnei	Diplopoda: Millipede Families
Tetragnathidae	Cicadellidae	Julidae
Theridiidae	Largidae	Paradoxosomatidae
Thomisidae	Coreidae	Entognatha-Class
Opiliones-Order	Pentatomidae	Collembola: Families
Insecta-Class	Hymenoptera: Families	Entomobryidae
Coleoptera: Beetle Families	Apidae	Tomoceridae
Carabidae	Halictidae	
Cerambycidae	Vespidae	
Chrysomelidae	Formidae-Ant genera	
Coccinellidae	Camponotus	
Curculionidae	Formica	
Elateridae	Lasius	
Histeridae	Temnothorax	
Leiodidae	Lepidoptera-Order	
Mordellidae	Mantodea-Order	
Nitidulidae	Neuroptera: Families	
Scarabaeidae	Chrysopidae	
Lampyridae	Odonata-Order	
Staphylinidae	Orthroptera-Order	
*Staphylininae	Thysanoptera-Order	

^{****} Note that names <u>underlined</u> and in **bold** letters represent Class for a given arthropod group; names in **bold** represent title of an arthropod group; letters in *italics* represent genus or species name

Discussion:

There appear to be more taxonomic groups present within the wet open woodland when compared to the wetland fringe of Saganashkee Slough. This is not surprising giving the environmental characteristics of the wetland fringe, which was mostly a monoculture of cattail (*Typha*). Because of the tall dense stand of cattail present at the wetland fringe, there were fewer insect groups identified as being ground-dwelling or flying insects when compared to the wet open woodland. Most the insects in the

wetland fringe were identified as being vegetative-dwelling insects. The wet open woodland had a mix of vegetative types, which allows for more arthropod groups to establish due to the possible increase in species' niches. Overall, between the two sites, there were no surprises in arthropod groups identified (i.e. there was not any unique arthropods found for this field survey).

Birds

Forest Preserve District of Cook County
Department of Resource Management
Fisheries
Bird Species List
for
Saganashkee Slough and McMahon Woods Restoration Site

The following is a list of all bird species seen within the proposed Saganashkee Slough and Fen Restoration Site by James J. Phillips, Fisheries Biologist for the Forest Preserve District of Cook County. This list is a compilation of species observed over the past 30 years. Species are listed in accordance with the 7th edition of the American Ornithologist Union's A.O.U. Check-list, published in June 1998, and its subsequent supplement.

Common Name	Scientific Name	Historical (1968- 1998)	2008	Resident	Migrator	Migrator Breeder	Status
American Coot	Fulica americana	Х	Х	Х			
American Crow	Corvus brachyrhychos	Х		Х			
American Goldfinch	Carduelis tristis	Х		Х			
American White Pelican	Pelecanus erythrorhynchos	Х			х		
American Wigeon	Anas americana	Х	Х		Х		
Bald Eagle	Haliaeetus Ieucocephalus	Х			Х		
Baltimore Oriole	Icterus galbula	Х				Х	
Barn Swallow	Hirundo rustica	Х				Х	
Belted Kingfisher	Ceryle alcyon	Х		Х			
Black-and-White Warbler	Mniotilta varia	х			Х	?	
Black-Capped Chickadee	Parus atricapillus	х		Х			
Black-Crowned Night- Heron	Nycticorax nycticorax	Х				Х	E-IL
Black-Throated Green Warbler	Dendroica virens	X			Х		
Blue-Gray Gnatcatcher	Polioptila caerulea	Х				Х	
Blue-Jay	Cyanocitta cristata	Х		Х			
Blue-Winged Teal	Anas discors	Х				Х	
Bonaparte's Gull	Larus philadelphia	Х					
Broad-Winged Hawk	Buteo platypterus	Х					
Brown-Headed Cowbird	Molothrus ater	Х				Х	

Common Name	Scientific Name	Historical (1968- 1998)	2008	Resident	Migrator	Migrator Breeder	Status
Bufflehead	Bucephala albeola	Х	Х		Х		
Canada Goose	Branta canadensis	Х	Х	Х			
Canvasback	Aythya valisineria	Х	Х				
Caspian Tern	Sterna caspia	Х			Х		
Cedar Waxwing	Bombycilla cedrorum	Х		Х			
Cerulean Warbler	Dendroica cerulea	Х					*
Chimney Swift	Chaetura pelagica	Х				Х	
Chipping Sparrow	Spizella passerina	Х				Х	
Cliff Swallow	Petrochelidon pyrrhonota	Х				Х	
Common Goldeneye	Bucephala clangula	Х	Х		X		
Common Grackle	Quiscalus quiscula	Х		X			
Common Loon	Gavia immer	Х	Х				
Common Merganser	Mergus merganser	Х	Х		Х		
Common Yellowthroat	Geothlyphis trichas	Х				Х	
Cooper's Hawk	Accipiter cooperii	Х		Х			
Dark-Eyed Junco	Junco hyemalis	Х		Х			
Double-Crested Cormorant	Phalacrocorax auritus	Х	х		X		
Downy Woodpecker	Picoides pubescens	Х		X			
Eared Grebe	Podiceps nigricollis	Х					
Eastern Bluebird	Sialia sialis	Х				Х	
Eastern Kingbird	Tyrannus tyrannus	Х				Х	
Eastern Phoebe	Sayornis phoebe	Х			Х	?	
Eastern Screech-Owl	Otus asio	Х					
Eastern Towhee	Pipilo erythophthalmus	Х				Х	
Forster's Tern	Sterna forsteri	Х				Х	E-IL
Franklin's Gull	Leucophaeus pipixcan	Х					
Gadwall	Anas strepera	Х					
Gray Catbird	Dumetella carolinensis	Х				Х	
Great Black-Backed Gull	Larus marinus	Х					
Great Blue Heron	Ardea herodias	Х				Х	
Great Egret	Ardea alba	Х				Х	
Greater Scaup	Aythya marila	Х	Х				
Green Heron	Butorides virescens	Х				Х	
Green-Winged Teal	Anas crecca	Х				Х	

Common Name	Scientific Name	Historical (1968- 1998)	2008	Resident	Migrator	Migrator Breeder	Status
Hairy Woodpecker	Picoides villosus	Х		Х			
Herring Gull	Larus argentatus	Х	Х	Х			
Hooded Merganser	Lophodytes cucullatus	Х	Х	Х			
Horned Grebe	Podiceps auritus	Х	Х			Х	
House Finch	Carpodacus mexicanus	Х		Х			
House Sparrow	Passer domesticus	Х		Х			
Indigo Bunting	Passerina cyanea	Х				Х	
Killdeer	Charadrius vociferus	Х				Х	
Lesser Scaup	Aythya affinis	Х	Х				
Lesser Yellowlegs	Tringa flavipes	Х					
Mallard	Anas platyrhynchos	Х	Х	Х		Х	
Mourning Dove	Zenaida macroura	Х			Х		
Northern Cardinal	Cardinalis cardinalis	Х		Х			
Northern Flicker	Colaptes auraus	Х		Х		Х	
Northern Pintail	Anas acuta	Х			Х		**
Northern Shoveler	Anas clypeata	Х	Х				
Orchard Oriole	Icterus spurius	Х				Х	
Osprey	Pandion haliaetus	Х					
Palm Warbler	Dendroica palmarum	Х			Х		
Pied-Billed Grebe	Podilymbus podiceps	Х	Х			Х	
Purple Martin	Progne subis	Х				Х	
Red-Bellied Woodpecker	Melanerpes carolinus	х		Х			
Red-Breasted Merganser	Mergus serrator	х	Х				
Red-Eyed Vireo	Vireo olivaceus	X				Х	
Redhead	Aythya americana	X	Х		Х		
Red-Necked Grebe	Podiceps grisegena	X			X		
Red-Tailed Hawk	Buteo jamaicensis	X		Х			
Red-Winged Blackbird	Agelaius phoeniceus	X			Х	Х	
Ring-Billed Gull	Larus delawarensis	X	Х	Х			
Ring-Necked Duck	Aythya collaris	X	Х	X			
Ruddy Duck	Oxyura jamaicensis	X	Х	-			
Sandhill Crane	Grus canadensis	Х			Х		
Sharp-Shinned Hawk	Accipiter striatus	X			-	х	
Snow Goose	Anser caerulescens	Х			Х		

Common Name	Scientific Name	Historical (1968- 1998)	2008	Resident	Migrator	Migrator Breeder	Status
Song Sparrow	Melospiza melodia	Х		Х			
Spotted Sandpiper	Actitis macularius	Х				Х	
Thayer's Gull	Larus thayeri	Х			Х		*
Tree Swallow	Tachycineta bicolor	Х			Х		
Trumpeter Swan	Cygnus buccinator	Х	Х		Х		*
Tufted Titmouse	Baeolophus bicolor	Х			Х		
Turkey Vulture	Cathartes aura	Х				Х	
Warbling Vireo	Vireo gilvus	Х				Х	
Western Grebe	Aechmophorus occidentalis	х			х		
White-Breasted Nuthatch	Sitta carolinensis	X		Х			
White-Throated Sparrow	Zonotrichia albicollis	Х			Х		
White-Winged Scoter	Melanitta fusca	Х	Х				
Wood Duck	Aix sponsa	Х				Х	
Yellow Warbler	Dendroica petechia	Х		-		Х	
Yellow-Billed Cuckoo Yellow-Rumped	Coccyzus americanus	Х			Х		
Warbler	Dendroica coronata	X			Х		
Yellow-Throated Vireo	Vireo flavifrons	X				Х	

Plants

Inventory from summer 2012 by the USACE representing baseline conditions:

^{*} National Audubon Society Species of Concern ** National Audubon Society Common Declining Bird E-IL- Illinois State Listed Endangered Species

Baseline (Current Conditions) Marsh

Marsn				Midwest				
Species Name			C	WET	WET			
NWPL/Mohlenbrock	Species(Synonym)	Common Name	Value	indicator	indicator	Habit	Duration	Nativity
Apocynum cannabinum	Apocynum sibiricum	Indian-Hemp	2	FAC	0	Forb	Perennial	Native
саппадінит	Asclepias	Swamp		TAC	U	FOID	reicilliai	Native
Asclepias incarnata	incarnata	Milkweed	4	OBL	-2	Forb	Perennial	Native
	COMMELINA	Asiatic						
Commelina communis	COMMUNIS	Dayflower	0	FACU	1	Forb	Annual	Adventive
	DAUCUS	Queen Anne's						
Daucus carota	CAROTA	Lace	0	UPL	2	Forb	Biennial	Adventive
	DIPSACUS							
Dipsacus laciniatus	LACINIATUS	Cut-Leaf Teasel	0	UPL	2	Forb	Biennial	Adventive
	Eupatorium	Late-Flowering						
Eupatorium serotinum	serotinum	Thoroughwort	0	FAC	0	Forb	Perennial	Native
	Polygonum	Climbing Black-						
Fallopia scandens	scandens	Bindweed	1	FAC	0	Vine	Perennial	Native
Geum laciniatum	Geum laciniatum	Rough Avens	2	FACW	-1	Forb	Perennial	Native
Halanium autumnala	Helenium	Fall Sneezeweed	5	FACW	1	Eorle	Doronnial	Native
Helenium autumnale	autumnale		3	FACW	-1	Forb	Perennial	Native
Helianthus annuus	HELIANTHUS ANNUUS	Common Sunflower	0	FACU	1	Forb	Annual	Adventive
Hettaninus annuus	HIBISCUS	Flower-of-an-	U	TACU	1	FOID	Ailliuai	Adventive
Hibiscus trionum	TRIONUM	Hour	0	UPL	2	Forb	Annual	Adventive
	Lycopus	Cut-Leaf Water-						
Lycopus americanus	americanus	Horehound	5	OBL	-2	Forb	Perennial	Native
-	LYTHRUM	Purple						
Lythrum salicaria	SALICARIA	Loosestrife	0	OBL	-2	Forb	Perennial	Adventive
	MELILOTUS	Yellow Sweet-						
Melilotus officinalis	ALBA	Clover	0	FACU	1	Forb	Biennial	Adventive
Oenothera biennis	Oenothera biennis	King's-Cureall	0	FACU	1	Forb	Biennial	Native
	PHALARIS	Reed Canary						
Phalaris arundinacea	ARUNDINACEA	Grass	0	FACW	-1	Grass	Perennial	Adventive
Phragmites australis	Phragmites		_			_		
ssp. australis	australis	Common Reed	0	FACW	-1	Grass	Perennial	Adventive
		Eastern		T. C				N
Populus deltoides	Populus deltoides ROSA	Cottonwood	2	FAC	0	Tree	Perennial	Native
Rosa multiflora	MULTIFLORA	Rambler Rose	0	FACU	1	Shrub	Perennial	Adventive
Rosa mangiora	MCEIH EORI	Peach-Leaf	0	17100	1	Siliuo	1 Cicilliai	Tuvcitive
Salix amygdaloides	Salix amygdaloides	Willow	5	FACW	-1	Tree	Perennial	Native
Schoenoplectus		River Club-						
fluviatilis	Scirpus fluviatilis	Rush	4	OBL	-2	Sedge	Perennial	Native
	Erechtites	American						
Senecio hieraciifolius	hieracifolia	Burnweed	2	FAC	0	Forb	Annual	Native
Solidago altissima	Solidago altissima	Tall Goldenrod	1	FACU	1	Forb	Perennial	Native
Stachys palustris	Stachys palustris	Woundwort	0	OBL	-2	Forb	Perennial	Adventive
	TARAXACUM	Common						
Taraxacum officinale	OFFICINALE	Dandelion	0	FACU	1	Forb	Perennial	Adventive
		Broad-Leaf Cat-						
Typha latifolia	Typha latifolia	Tail	1	OBL	-2	Forb	Perennial	Native
Ulmus americana	Ulmus americana	American Elm	3	FACW	-1	Tree	Perennial	Native

1.4

Oak Savanna

Species Name NWPL/Mohlenbrock	Species(Synonym)	Common Name	C Value	Midwest WET indicator	WET indicator	Habit	Duration	Nativity
Acer negundo	Acer negundo var. violaceum	Ash-Leaf Maple	0	FAC	0	Tree	Perennial	Native

Acer saccharinum	Acer saccharinum	Silver Maple	0	FACW	-1	Tree	Perennial	Native
	Arisaema	Jack-In-The-						
Arisaema triphyllum	triphyllum	Pulpit Common	4	FACW	-1	Forb	Perennial	Native
Asclepias syriaca	Asclepias syriaca	Milkweed	0	FACU	1	Forb	Perennial	Native
		Hairy Pagoda-						
Blephilia hirsuta	Blephilia hirsuta	Plant	8	FACU	1	Forb	Perennial	Native
	Boehmeria cylindrica	Small-Spike						
Boehmeria cylindrica	drummondiana	False Nettle	2	OBL	-2	Forb	Perennial	Native
Bouteloua	Bouteloua	Side-Oats						
curtipendula	curtipendula	Grama	8	UPL	2	Grass	Perennial	Native
	Convolvulus	Hedge False				l		
Calystegia sepium	sepium	Bindweed Eastern	1	FAC	0	Forb	Perennial	Native
		Woodland						
Carex blanda	Carex blanda	Sedge	1	FAC	0	Sedge	Perennial	Native
	Clematis	Devil's-Darning-						
Clematis virginiana	virginiana	Needles	4	FAC	0	Vine	Perennial	Native
Coreopsis tripteris	Coreopsis tripteris	Tall Tickseed Downy	5	FAC	0	Forb	Perennial	Native
Crataegus mollis	Crataegus mollis	Hawthorn	2	FAC	0	Tree	Perennial	Native
Desmodium	Desmodium	Showy Tick-						
canadense	canadense	Trefoil	4	FACU	1	Forb	Perennial	Native
	Echinacea	Purple	2	Y VDY	•	L .		37.2
Echinacea purpurea Elymus villosus	purpurea Elymus villosus	Coneflower	<u>3</u> 5	UPL FACU	1	Forb Grass	Perennial Perennial	Native Native
Equisetum arvense	Equisetum arvense	Hairy Wild Rye Field Horsetail	0	FAC	0	Fern	Perennial	Native
Eutrochium	Eupatorium Eupatorium	Sweet-Scented	0	TAC	U	FCIII	1 Cicilliai	Ivative
ригригеит	ригригеит	Joe-Pye-Weed	7	FAC	0	Forb	Perennial	Native
•	Fraxinus	j						
Fraxinus	pennsylvanica							
pennsylvanica	subintegerrima	Green Ash	1	FACW	-1	Tree	Perennial	Native
G : 1 .	Geranium	Spotted Crane's-	4	FACIL	1	г.	D	NI.C
Geranium maculatum Geum canadense	maculatum Geum canadense	Bill White Avens	<u>4</u> 1	FACU FAC	0	Forb Forb	Perennial Perennial	Native Native
Geum canadense	GLECHOMA	WIIIC AVEIS	1	TAC	U	FOID	retellillal	Native
Glechoma hederacea	HEDERACEA	Groundivy	0	FACU	1	Forb	Perennial	Adventive
	Helenium							
Helenium autumnale	autumnale	Fall Sneezeweed	5	FACW	-1	Forb	Perennial	Native
	, ,	Spotted Touch-	2	FACW	,	г.		NI.C
Impatiens capensis	Impatiens capensis	Me-Not	3	FACW	-1	Forb	Annual	Native
Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	2	Shrub	Perennial	Adventive
Lonicera maaekii	LYTHRUM	Purple	-	OLE		Siruo	1 Cremmar	Haventive
Lythrum salicaria	SALICARIA	Loosestrife	0	OBL	-2	Forb	Perennial	Adventive
Monarda fistulosa	Monarda fistulosa	Oswego-Tea	4	FACU	1	Forb	Perennial	Native
	Osmorhiza	Hairy Sweet-	2	EACH	,	F 1	D : 1	NT 41
Osmorhiza claytonii	claytonii	Cicely Wand Panic	3	FACU	1	Forb	Perennial	Native
Panicum virgatum	Panicum virgatum	Grass	5	FAC	0	Grass	Perennial	Native
Parthenocissus	Parthenocissus							
inserta	inserta	Thicket-Creeper	1	FACU	1	Vine	Perennial	Native
Parthenocissus	Parthenocissus	Virginia-	_	n. ~				
quinquefolia	quinquefolia	Creeper	2	FACU	1	Vine	Perennial	Native
Persicaria virginiana	Polygonum virginianum	Jumpseed	2	FAC	0	Forb	Perennial	Native
2 or	, or guicement	Eastern		1710	V	1 510	1 Ciciniai	1141170
Populus deltoides	Populus deltoides	Cottonwood	2	FAC	0	Tree	Perennial	Native
Prunella vulgaris ssp.	PRUNELLA	Common						
vulgaris	VULGARIS	Selfheal	0	FAC	0	Forb	Perennial	Adventive
ni i	RHAMNUS	European	^	EAG	^	G	D	A 1
Rhamnus cathartica	CATHARTICA	Buckthorn	0	FAC	0	Shrub	Perennial	Adventive

		Missouri						
Ribes missouriense	Ribes missouriense	Gooseberry	5	UPL	2	Shrub	Perennial	Native
	ROSA							
Rosa multiflora	MULTIFLORA	Rambler Rose	0	FACU	1	Shrub	Perennial	Adventive
Salix discolor	Salix discolor	Pussy Willow	2	FACW	-1	Shrub	Perennial	Native
	SOLANUM	Climbing						
Solanum dulcamara	DULCAMARA	Nightshade	0	FAC	0	Vine	Perennial	Adventive
Stachys palustris	0	Woundwort	0	OBL	-2	Forb	Perennial	Adventive
Symphyotrichum		White Oldfield						
pilosum	Aster pilosus	American-Aster	0	FACU	1	Forb	Perennial	Native
Toxicodendron		Eastern Poison-						
radicans	Rhus radicans	Ivy	2	FAC	0	Vine	Perennial	Native
Viburnum opulus var.	VIBURNUM	Highbush-						
opulus	OPULUS	Cranberry	0	FAC	0	Shrub	Perennial	Adventive
		Hooded Blue						
Viola sororia	Viola sororia	Violet	3	FAC	0	Forb	Perennial	Native
		River-Bank						
Vitis riparia	Vitis riparia	Grape	2	FACW	-1	Vine	Perennial	Native

2.3

Wet Mesic Woodland

Species Name NWPL/Mohlenbrock	Species(Synonym)	Common Name	C Value	Midwest WET indicator	WET indicator	Habit	Duration	Nativity
TVVI L/WIOIHEIDIOCK	Acer negundo var.	Common Name	value	muicator	muicatoi	Habit	Duration	Nativity
Acer negundo	violaceum	Ash-Leaf Maple	0	FAC	0	Tree	Perennial	Native
Agrimonia gryposepala	Agrimonia gryposepala	Tall Hairy Grooveburr	2	FACU	1	Forb	Perennial	Native
Alliaria petiolata	ALLIARIA PETIOLATA	Garlic-Mustard	0	FAC	0	Forb	Biennial	Adventive
Boehmeria cylindrica	Boehmeria cylindrica drummondiana	Small-Spike False Nettle	2	OBL	-2	Forb	Perennial	Native
Crataegus mollis	Crataegus mollis	Downy Hawthorn	2	FAC	0	Tree	Perennial	Native
Fraxinus pennsylvanica	Fraxinus pennsylvanica subintegerrima	Green Ash	1	FACW	-1	Tree	Perennial	Native
Geranium maculatum	Geranium maculatum	Spotted Crane's- Bill	4	FACU	1	Forb	Perennial	Native
Geum canadense	Geum canadense	White Avens	1	FAC	0	Forb	Perennial	Native
Glechoma hederacea	GLECHOMA HEDERACEA	Groundivy	0	FACU	1	Forb	Perennial	Adventive
Juglans nigra	Juglans nigra	Black Walnut	5	FACU	1	Tree	Perennial	Native
Lonicera maackii	LONICERA MAACKII	Amur Honeysuckle	0	UPL	2	Shrub	Perennial	Adventive
Menispermum canadense	Menispermum canadense	Canadian Moonseed	6	FAC	0	Vine	Perennial	Native
Parthenocissus inserta	Parthenocissus inserta	Thicket-Creeper	1	FACU	1	Vine	Perennial	Native
Phalaris arundinacea	PHALARIS ARUNDINACEA	Reed Canary Grass	0	FACW	-1	Grass	Perennial	Adventive
Platanus occidentalis	Platanus occidentalis	American Sycamore	9	FACW	-1	Tree	Perennial	Native
Populus deltoides	Populus deltoides	Eastern Cottonwood	2	FAC	0	Tree	Perennial	Native
Quercus palustris	Quercus palustris	Pin Oak	8	FACW	-1	Tree	Perennial	Native
Rhamnus cathartica	RHAMNUS CATHARTICA	European Buckthorn	0	FAC	0	Shrub	Perennial	Adventive
Ribes missouriense	Ribes missouriense	Missouri Gooseberry	5	UPL	2	Shrub	Perennial	Native

Robinia pseudoacacia	ROBINIA PSEUDOACACIA	Black Locust	0	FACU	1	Tree	Perennial	Adventive
Rosa multiflora	ROSA MULTIFLORA	Rambler Rose	0	FACU	1	Shrub	Perennial	Adventive
Rudbeckia laciniata	Rudbeckia laciniata	Green-Head Coneflower	5	FACW	-1	Forb	Perennial	Native
Smilax hispida	Smilax tamnoides hispida	Chinaroot	5	FAC	0	Vine	Perennial	Native
Symphyotrichum pilosum	Aster pilosus	White Oldfield American-Aster	0	FACU	1	Forb	Perennial	Native
Toxicodendron radicans	Rhus radicans	Eastern Poison- Ivy	2	FAC	0	Vine	Perennial	Native
Ulmus americana	Ulmus americana	American Elm	3	FACW	-1	Tree	Perennial	Native
Verbesina alternifolia	Actinomeris alternifolia	Wingstem	5	FACW	-1	Forb	Perennial	Native
Vitis riparia	Vitis riparia	River-Bank Grape	2	FACW	-1	Vine	Perennial	Native