An Assessment of the Biological Resources Associated with the US Route 30 Project Corridor, Whiteside County Illinois

Illinois Natural History Survey Division of Ecology & Conservation Sciences Technical Report 2008

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CHAPTER 1: Environmental Setting

William Handel

Location

The sections below describe the location, geography, and vegetation history of the Illinois Department of Transportation US Route 30 project corridor in Whiteside County, Illinois. This corridor extends from the intersection of US Route 30/Prophetstown Road in Rock Falls (Coloma Township) westward to Illinois 84, east of Fulton, Whiteside County. The study area is approximately 21,985.7 acres in size. **Figure 1-1** is a map of the study corridor. Field assessments of the biological resources were conducted from April to October 2007.

Physical Geography

The US Route 30 project corridor landscape is comprised of three major landforms: sand deposits, uplands, and floodplains. These landforms are the products of past continental glaciations and more recent stream erosion**.** The sand deposits occur on the western side of the study corridor **(Figure 1-2)**. They include a large dune complex on the southern edge of the study corridor near the Chicago Northwestern Railroad line and a portion of the bluff east of Cattail Creek. This bluff rises approximately 120 feet above Cattail Creek; the highest point is approximately 720 feet above sea level. Areas with sand prairie vegetation in the corridor are mapped as Plainfield sand (Sabata 1995). This same soil series is the dominant soil series at Thomson-Fulton Sand Prairie Nature Preserve. This nature preserve occurs a few miles north of the project corridor in Whiteside County. The uplands portion of the study corridor begins where wind blown loess becomes the prominent soil parent material along the bluff line east of Cattail Creek (**Figure 1-2**). The uplands from the bluff line to the town of Morrison are rolling hills of loess and glacial till deposits. These hills decrease and the land becomes level and less rolling toward the eastern end of the corridor near Elkhorn Creek. The largest area of floodplain occurs in the western end of the corridor along the Mississippi River including Cattail Creek. Smaller areas of floodplain exist along Rock Creek near Morrison, and at the eastern end of the corridor along Elkhorn Creek and the Rock River (**Figure 1-2**).

The US Route 30 project corridor crosses three Natural Divisions of Illinois, approximately 90% of the corridor lies within Rock River Hill Country Natural Division. (The Illinois Comprehensive Wildlife Conservation Plan & Strategy 2007). The far western and eastern portions, near the towns of Fulton and Rock Falls, are in the Upper Mississippi/Illinois River Bottomlands Division. Two small areas of the Illinois/Mississippi Sand Area Division exist in the corridor. These include the large dune complex on the southern edge of the study corridor near the Chicago Northwestern Railroad and a large portion of the bluff east of Cattail Creek.

Vegetation History

The pre-settlement vegetation in Illinois (early 1800's) was a patchwork of prairie and forest. Approximately 55% of the state consisted of prairie (Szafoni et al. 2002). Prairie once covered roughly 75% of the area within the IL Route 30 study corridor, forest covered 10%, and the remaining 15% consisted of "bottomland", "cultural", "swamp", and "water" land-cover types (**Figure 1-3)**. Presently, Cropland makes up 302,961 acres (67.8%) of the county, Forest/Woodland comprises 91,946 acres (20.6%), Wetlands comprise 9,023 acres (2.0%), and Urban/Built-up Land comprises 9,489 acres (2.1%) of Whiteside County (Whiteside County Illinois Land Cover, July 1996).

At finer landscape scales, vegetation in Illinois consisted of more than just prairie and forest. Pre-settlement habitat types that occurred within the IL Route 30 project corridor included prairie in the uplands, bottomland forest, marsh and sedge meadow communities, and a complex of savanna, woodland, forest, and loess hill prairies associated with the bluffs. Prairie was the dominant cover type in the uplands of the Rock River Hill Country Natural Division, with forest occupying the adjacent stream and river drainages such as the Deer and Rock creeks. The bluff west of Cattail Creek also had some forested areas. Small areas of bottomland forest occurred near the far western edge of the corridor near the Mississippi River, and on the far eastern edge of the corridor, along the Rock River. A portion of a large peat deposit occurs within the corridor along Cattail Creek. The former Cattail Slough, the single largest peat deposit in Illinois, is a one-mile wide valley extending about 12 miles long, with peat measured to a depth of 30 feet (Soper and Osbon 1922). The peat presently is mined just outside the project limits south of Garden Plain Road (pers. observation, Handel 2007). This area has all been ditched and drained and the only portion of Cattail Slough that remains a shallow marsh occurs just outside the study corridor north of IL 136 near Fulton (Figure 1-4). Figure 1-4 illustrates where the current peat soils are located within the study corridor.

Fire was a major ecological component that helped maintain the tall grass prairie, savanna, and open woodland vegetation in the Midwest (Anderson 1970, 1983; Axelrod 1985; Taft 1997). A major decline in fire frequency in contemporary times has resulted in dramatic changes to these vegetation types and this study corridor was no exception. Furthermore, Illinois forests, wetlands, and especially prairies and savannas have declined dramatically in extent and quality with settlement, particularly because of fragmentation, exotic species infestations, and fire absence. Results from the statewide Illinois Natural Areas Inventory (INAI), an ongoing survey of significant natural communities and biotic resources (discussed in more detail later in this chapter), revealed that only 0.07% of the state remained in a condition of high ecological integrity (White 1978).

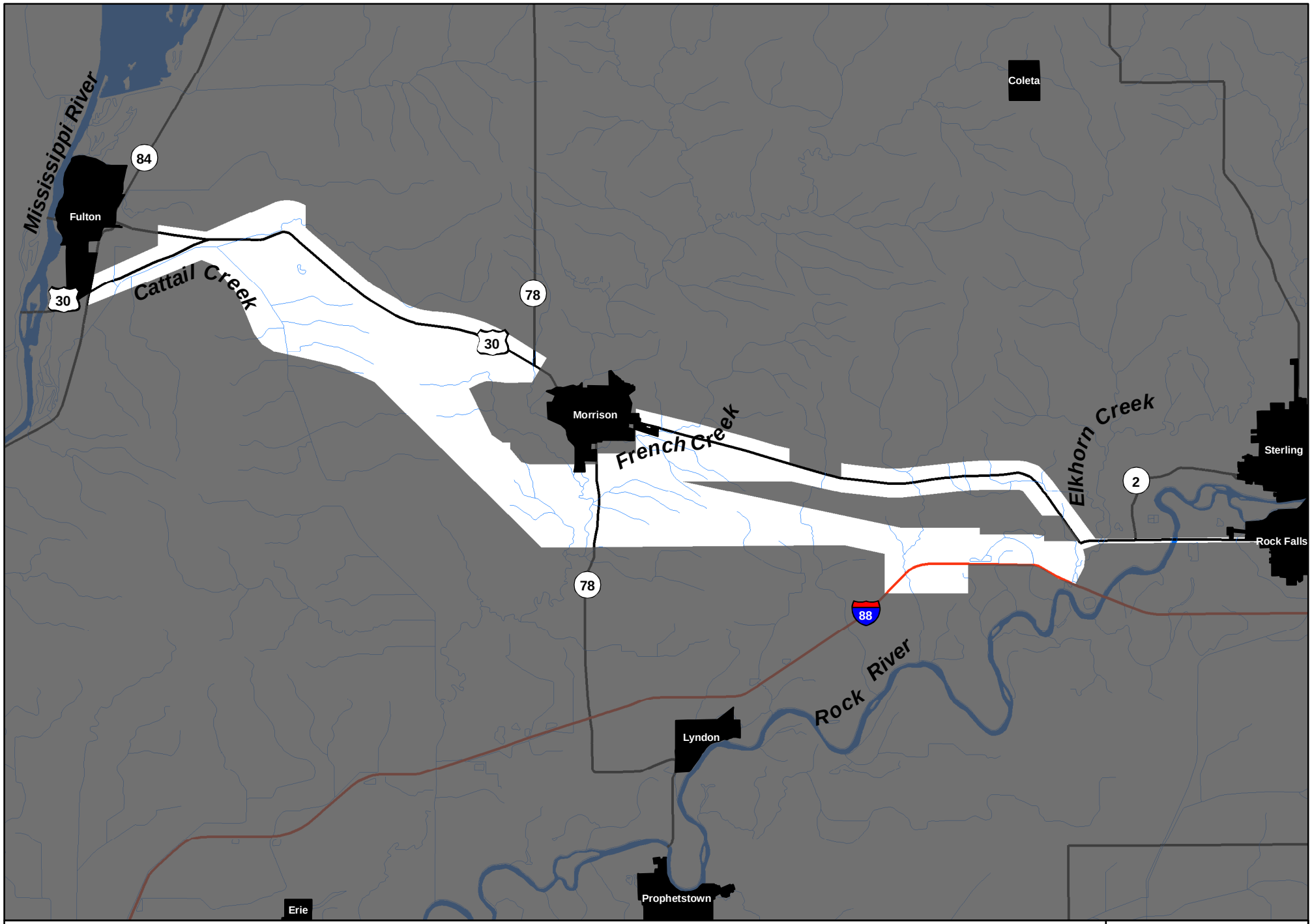

Figure 1-1 Map of Route 30 Corridor

INHS

0 1 2 3
Miles

N

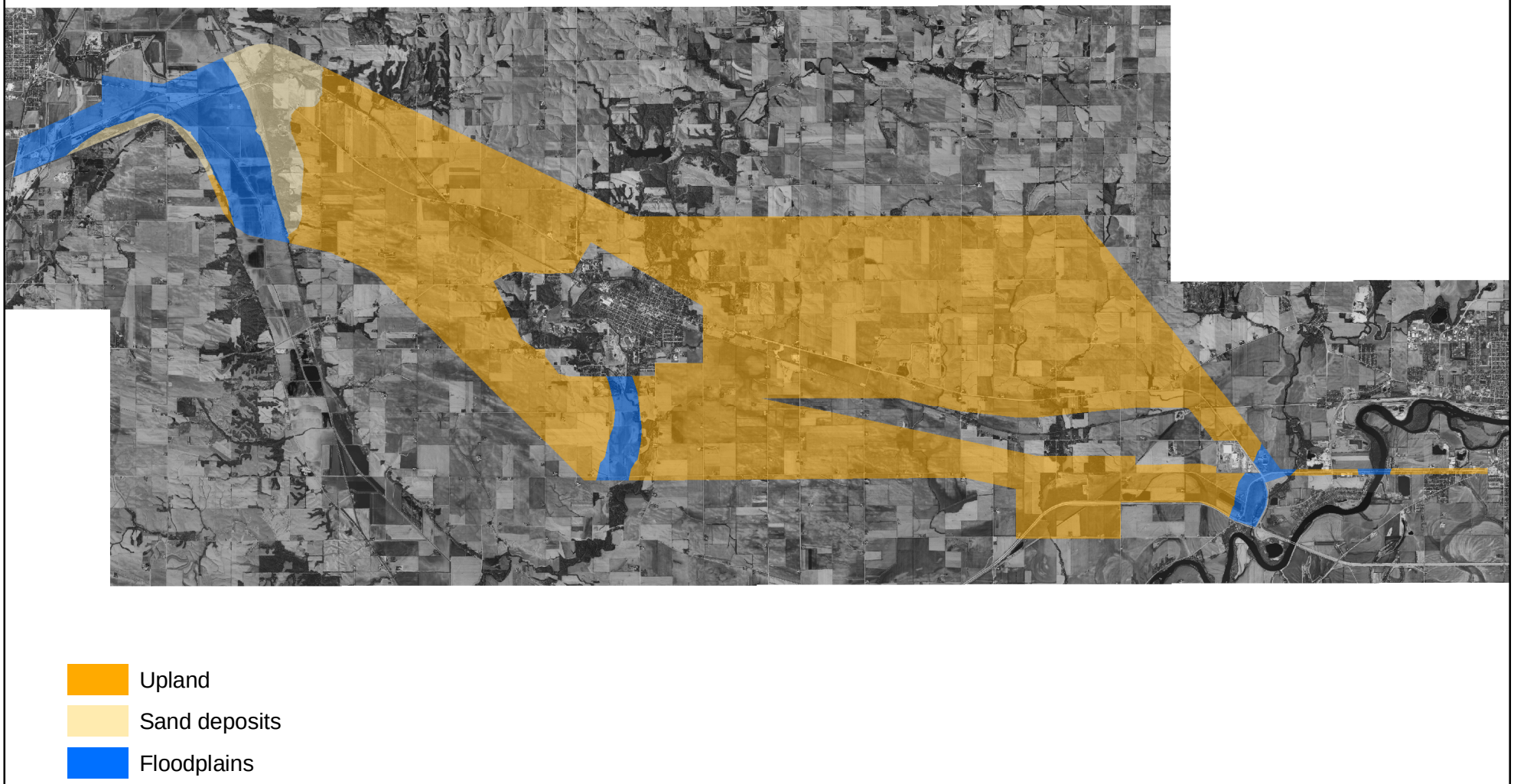

Figure 1-2 Major Landforms in the US 30 corridor.

INHS

0 1 5 2

Miles

N

Hutto

Land Cover of Whiteside County, Illinois in the Early 1800's

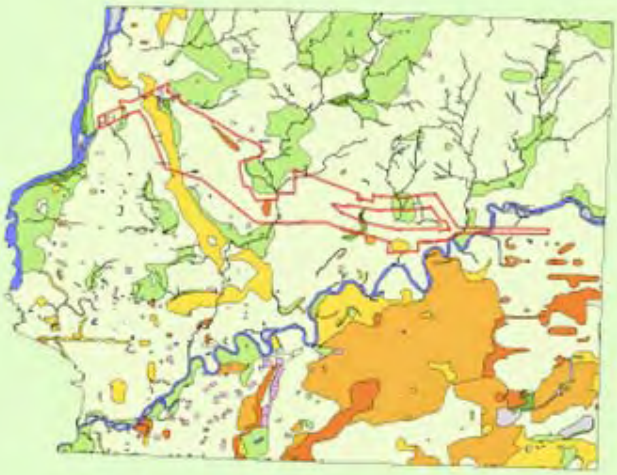

Figure 1-3 US Route 30 Project Area 1800's Landcover

Legend

- barrens
- bottomland
- cultural
- forest
- marsh
- other wetland
- prairie
- slough
- topo/geo
- water
- wet prairie
- swamp

MAP	ACRES	HECTARES	PERCENT
barrens	0	0	0
bottomland	2418	978	0.5
cultural	2721	1101	0.6
forest	56101	22703	12.6
marsh	11853	4797	2.7
other wetland	34	14	0
prairie	288068	116577	64.5
slough	436	176	0.1
swamp	23903	9673	5.4
topo/ geo	3691	1494	0.8
water	11912	4821	2.7
wet prairie	45613	18459	10.2
TOTAL	446750	180794	100

Figure 1-3. US Route 30 Project Area 1800's landcover
(Szafoni, D. L, D. Greer and L. Cordle. 2002. Land Cover of Illinois in the Early 1800s. Illinois Natural History Survey. Digital vector data.)

Figure 1-4 Existing and former Cattail Slough including peat producing soils

Legend

- Project Boundary
- Existing Cattail Slough
- Peat producing soils (former Cattail Slough)

0 3,500 7,000 Feet

Chapter 2: Vegetation: Botanical Surveys

William Handel, John Taft, Jacquelyn Potter

Vegetation: Cover Types and Plant Communities

Twenty-one cover types were found in the corridor (in alphabetical order): Cropland, Conservation Reserve Program (CRP grassland), CRP Tree Planting, Forbland, Forest, Forest Wetland, Lacustrine (Lake), Marsh, Mining, Non-native Grassland, Pasture and Hayland, Pond, Prairie, Riverine (River), Savanna, Sedge Meadow, Shrubland, Scrub-shrub wetland, Savanna, Tree Farm, Upland Forest, Urban and Built-up land, and Wet Meadow. Only the major cover types will be discussed in detail, with emphasis on natural forest and prairie. Cropland was the dominant upland cover type (81.9%), followed by Urban and Built-up land (9.3%), Pasture and Hayland (2.5%), Forest (2.4%), and Tree Farm (0.55%).

The cover type map for the US Route 30 project corridor was digitized as a GIS layer. Total land cover and percent cover for each cover type in the US Route 30 project corridor is presented in (**Table 2-1).**

Table 2-1. Land area of cover types present in the US Route 30 project corridor (Whiteside County, Illinois).

Cover Type	Acres	% Cover
Cropland	18,004.35	81.89%
Urban and Built-up land	2,040.24	9.28%
Pasture and Hayland	549.42	2.50%
Upland Forest	522.14	2.37%
Tree Farm	121.87	0.55%
Marsh	108.75	0.49%
CRP Tree Planting	105.36	0.48%
Wet Meadow	89.69	0.41%
Savanna	84.69	0.39%
Prairie	65.36	0.30%
Riverine (River)	62.76	0.29%
Non-native Grassland	61.53	0.28%
CRP grassland	56.92	0.26%
Forest Wetland	38.44	0.17%
Shrubland	28.16	0.13%
Lacustrine (Lake)	26.30	0.12%
Forbland	6.60	0.03%
Mining	6.42	0.03%
Sedge Meadow	4.02	0.02%
Shrub-scrub Wetland	2.13	0.01%
Pond	0.57	0.00%
Total	**21,985.72**	**100.00%**

The major plant communities in the US Route 30 project are discussed below. The communities with the greatest native plant diversity (i.e., forest, savanna, and prairie communities) will be discussed in greatest detail.

Vegetation: Plant Community (Forest)

The US Route 30 Forest cover type was subdivided into Forest and Forested Wetland **(Forested Wetlands described in Chapter 5).** Forest communities found in the US Route 30 forest cover type were predominately dry-mesic upland forest and dry-mesic sand forest with some localized forested wetland community types. These totaled 602.9 acres, 2.74% of the project corridor, ranking fourth among cover types **(Table 2-1).** This amount is slightly lower that the 4.3% of present forest cover for the county (Whiteside County, Illinois Land Cover, July 1996).

The sand forests are confined to the bluff east of Cattail Creek, and to a far lesser extent, the sand dunes adjacent to the Chicago Northwestern Railroad near Fulton. Based on stand composition and structure, these forests appear to formerly have been black oak sand savanna. Two sandy hill prairies still exist on the bluff. Small areas of sand prairie vegetation can still be found in some of the forest clearings. These forests currently are dominated by native and non-native shade-tolerant species. Detailed qualitative and quantitative descriptions of the forests are presented in **Appendix 2-2 and Appendix 2-3, respectively.** The dry-mesic upland forests occur adjacent to small drainages on the more level topography at the western and eastern end of the corridor. Due to past history of disturbance including grazing by domestic livestock, and fire absence, no high-quality examples of upland forests were found within the US Route 30 project corridor during the 2007 surveys. Furthermore, no endangered or threatened species were found within this cover type.

Twenty-three tree species were encountered in the six forest units that were sampled with quantitative methods. Dominate species, those with 5% or greater of the importance value, were black oak (*Quercus velutina*), hackberry (*Celtis occidentalis*), white mulberry (*Morus alba*), black walnut (*Juglans nigra*), bitternut hickory (*Carya cordiformis*), and wild black (*Prunus serotina*). In general, oaks are dominant with a sum total of 26.6% of the IV, followed by hickories with 10% of the IV, and elms with 8.9% of the IV (Appendix 2-3).

Dry-Mesic Upland Forest - The dry-mesic upland forests can be classified as oak–hickory forests because of the dominance of these species. Most examples of this forest type appear to have been grazed in the past by domestic livestock and are currently browsed by abundant deer herds. Some forest stands also were selectively logged in the recent past.

Dominant canopy trees within this forest type were bitternut hickory, shagbark hickory (*Carya ovata*), hackberry (*Celtis occidentalis*), black walnut, bur oak (*Quercus macrocarpa*), red oak (*Quercus rubra*), black oak, and slippery elm (*Ulmus rubra*). Common subcanopy trees included bitternut hickory, hackberry and black cherry. Typical shrubs included gray dogwood (*Cornus racemosa*), hazelnut (*Corylus americana*), Missouri gooseberry (*Ribes missouriense*), and the non-native shrub honeysuckles (*Lonicera* spp.). Common woody vines included Virginia creeper (*Parthenocissus quinquefolia*), bristly greenbrier (*Smilax hispida*), poison ivy (*Toxicodendron radicans*), and river grape (*Vitis riparia*). Herbaceous ground-cover species included; doll's-eyes (*Actaea pachypoda*), ramps (*Allium burdickii*), Jack-in-the-pulpit (*Arisaema triphyllum*), ladyfern (*Athyrium angustum*), American bellflower (*Campanula americana*), sedges (e.g. *Carex blanda* and *Carex pensylvanica*), toothwort (*Dentaria laciniata*),white snakeroot (*Eupatorium rugosum*), joe-pye weed (*Eupatorium purpureum*), white avens (*Geum canadense*), stickseed (*Hackelia virginiana*), Virginia waterleaf (*Hydrophyllum virginianum*), Canada wood nettle (*Laportea canadensis*), Virginia bluebells (*Mertensia virginica*), lopseed (*Phryma leptostachya*), Virginia knotweed (*Polygonum virginianum*), Common snakeroot (*Sanicula gergaria*), false Solomon seal (*Smilacina racemosa*), common blue violet (*Viola pratincola*), and smooth yellow violet (*Viola pubescens v. eriocarpa*).

Dry-mesic Upland Sand Forest - This community is restricted in the study corridor to the bluff east of Cattail Creek and small areas adjacent to the large sand dune along the southern edge of US Route 30 near Fulton. The native vegetation that occurred on Sparta soils is described as prairie grasses with widely spaced oak and hickory trees (Soil Survey Staff 2004). Large black oaks are found in this forest type. The forests appear to have been grazed in the distant past and nearby areas are still fenced and pastured. Several introduced woody species are common, with white mulberry found extensively throughout the bluff. Black walnut was an important component in some areas of this forest type, but in other areas, it appeared that this species was planted. The shrub layer is dominated in some areas by native and non-native thorn-bearing species. There are a few small openings with sand prairie and savanna vegetation. The herbaceous layer has some native flora but the exotic garlic mustard (*Alliaria petiolata*) dominated the forest floor in many areas.

Dominant canopy trees within this forest type were bitternut hickory, black cherry, and black oak. The subcanopy included bitternut hickory, hackberry, white mulberry, and black cherry. Typical shrubs included gray dogwood, hazelnut, Missouri gooseberry, blackberry (*Rubus allegheniensis*), black raspberry (*Rubus occidentalis*), and the non-native multiflora rose. Common woody vines included Virginia creeper, bristly greenbrier, poison ivy, and river grape. Herbaceous ground-cover species included garlic mustard, ramps, Jack-in-the-pulpit, lady fern, American bellflower, sedges (e.g. *Carex blanda* and *Carex pensylvanica*), beggar's lice (*Desmodium glutinosum*), white snakeroot, white avens, stickseed, lopseed, Virginia knotweed, and starry false solomon seal (*Smilacina stellata*).

Individual Stand Descriptions

Forest Stand 1

This 40-acre stand is located in the eastern portion of the project corridor **(Figure 2-1)** and is a dry-mesic upland forest. Sixteen sample plots were completed at this site. It is isolated and surrounded by agricultural land. The stand occurs on Fayette silt loam, 5 to 10 percent slopes, eroded; Downs silt loam, 2 to 5 percent slopes; and Seaton-Timula silt loams, 13 to 25 percent slopes, eroded. The stand is a former savanna grove with a very open canopy. Fourteen species of trees were sampled within the stand that contained 148 trees per acre and a basal area of 130 ft^2 per acre. The stand was dominated by hackberry, American basswood, bitternut hickory, and slippery elm. Hackberry was distributed throughout the stand and contained over half (54%) the individuals and approximately one-third of the basal area within the stand **(Appendix 2-3).** Only one introduced tree species, black locust, occurred within this stand. The sapling and shrub layers were sparse. The stand was estimated to be old-second growth age. The ground cover was moderately degraded and evidence of heavy deer browsing was present. However, of the six stands sampled quantitatively, it had the most diversity in the herbaceous layer.

Forest Stand 2

This 10-acre forest is located in the project corridor along the bluff line east of Cattail Creek **(Figure 2-1)** and is probably a former black oak sand savanna. This forest was classified as a dry-mesic sand forest. Portions of an established tree farm occurred in this forest and sampling in this area was limited because the mix of planted species was unrepresentative of the forest vegetation in the project area. Four sample plots were completed at this site. The stand occurs on Plainfield Sand 3 to 25 percent slope and Sparta loamy sand 12 to 20 percent slope. This stand was very disturbed with several introduced tree species common in the overstory. Eleven species of trees were sampled within this stand that contained 155 trees per acre and had a basal area of 128 ft^2 per acre. White mulberry, hackberry, American elm, and honey locust dominated the stand. White mulberry contained 32% of the individuals and approximately one-

third of the basal area. The stand was estimated to be mature second growth. The ground layer was highly degraded and was dominated by the non-native garlic mustard.

Forest Stand 3

This 20-acre forest is located at the northern edge of the project corridor along the bluff east of Cattail Creek **(Figure 2-1)** and is probably a former black oak sand savanna. This forest was classified as a dry-mesic sand forest. The stand occurs primarily on Plainfield Sand with 12 to 25 percent slope. A small portion occurs on Lamont loam 7 to 15 percent slope, eroded. This forest stand was highly to moderately degraded and currently was being grazed by horses. Eight sample plots were completed at this site. Thirteen species of trees were sampled within this stand that contained 158 trees per acre and had a basal area of 112 ft^2 per acre. Black oak was the dominant species in the stand and made up 55% of the basal area. White mulberry, black cherry, and bitternut hickory were also important species in the stand. This stand was estimated to be sub-mature to mature second growth.

Forest Stand 4

This 10-acre stand is located next to the sand savanna adjacent to US 30 on the southwestern edge of the corridor **(Figure 2-1)**. This stand was classified as a dry-mesic upland sand forest. The stand occurs on Dickinson sand loam 2 to 7 percent slope eroded. This forest was moderately degraded and evidence of recent logging of large trees was present. Four sample plots were completed at this site. Ten species of trees were sampled with in this stand that contained 151 trees per acre and had a basal area of 120 ft^2 per acre. Black walnut was the dominant tree and contained 32% of the individuals and made up one-third of the basal area. Other important trees in the stand were black oak, bitternut hickory, and bur oak. The stand was estimated to be mature second-growth forest.

Forest Stand 5

This 50-acre stand is located along the bluff line east of Cattail Creek **(Figure 2-1)**. This forest was classified as a dry-mesic sand forest. It was probably an open black oak sand savanna in the past. Several small openings still have sand prairie vegetation present in the herb layer. The stand occurs on Plainfield Sand 3 to 25 percent slope and Sparta loamy sand 12 to 20 percent. A small portion occurs on Lamont loam 7 to 15 percent slope eroded. Sixteen sample plots were completed at this site. Fourteen species of trees were sampled within this stand that contained 174 trees per acre and had a basal area of 122 ft^2 per acre. Large black oaks were common at this site, but black cherry and hackberry made up a greater portion of total individuals in the stand. These two species made up 40% of the total individuals. The stand was estimated to be mature, second-growth age forest. The ground layer was highly degraded and was dominated by the non-native garlic mustard.

Forest Stand 6

This 20-acre stand was located at the southern end of the bluff line east of Cattail Creek **(Figure 2-1)**. This forest was classified as a dry-mesic sand forest. The stand occurs on Plainfield Sand with 12 to 25 percent slope, and Lamont Sand with 15 to 45 percent slope. Eight sample plots were completed at this site. Fifteen species of trees were sampled within this stand that contained 192 trees per acre and had a basal area of 118 ft^2 per acre. Black oak was the dominant tree and comprised 33% of the individuals and approximately 40% of the basal area. Other important trees include black walnut, bitternut hickory, and hackberry. The stand was estimated to be a sub-mature to mature second-growth forest. The stand was highly degraded and had recreational vehicle trails throughout most of the sampling area.

Vegetation: Plant Community (Savanna)

Dry to Dry-mesic Sand Savanna - The Savanna cover type made up 84.7 acres, 0.39% of the total US Route 30 project corridor **(Table 2-1; Figure 7-1).** A total of 147 plant species were recorded in the Savanna cover type, of which 127 (about 86%) were native **(Appendix 2-4)**. This was a botanically diverse cover type that had several populations of endangered and threatened plant species **(Chapters 6 and 7).** This cover type typically has been used to describe bi-layered vegetation consisting of a ground cover of native shrubs, forbs, grasses, and sedges with an open canopy (10-80% closure) of fire-tolerant tree species. This cover type typically occurred as a mixture of *dry to dry-mesic sand savanna* and *dry sand prairie* communities but was cover-typed collectively as Savanna because boundaries between these communities are not easily distinguishable in the landscape limiting the potential for cover typing at a finer scale. This cover type occurs on a series of sand dunes reaching their greatest height adjacent to the Chicago Northwestern Railroad. The dry sand savanna and prairie communities occur on the ridge tops. On some of the sand ridges, there are stands of dense, small (10 -20 cm dbh) black oak and some of these ridges were planted in pines (*Pinus* spp.). Sand blowouts exist throughout the area of this cover type and many of the rare plant species are associated with these blow outs. On the more level terrain between the dunes and swales, dry-mesic savanna and dry-mesic sand prairie communities occur and the vegetation is less sparse. There has been some human disturbance in the past with some old livestock fences, but presently there is no livestock grazing. There is evidence of past fire and scars occur on some of the trees near the railroad. The dominant tree in this community is black oak. Typical shrubs include gray dogwood, wafer ash (*Ptelea trifoliata*), and aromatic sumac (*Rhus aromatica*). Typical herbaceous ground-cover species include western ragweed (*Ambrosia psilostachya*), three awn grass (*Aristida tuberculosa*), poppy mallow (*Callirhoe triangulata*), sedges (eg. *Carex mulhenbergii, Carex tonsa*), Schweinitz's flatsedge (*Cyperus schweinitzii*), frostweed (*Helianthemum canadense*), golden aster (*Heterotheca camporum*), June grass (*Koeleria macrantha*), bush clover (*Lespedeza capitata*), hairy puccoon (*Lithospermum caroliniense*), horsemint (*Monarda punctata*), common sorrel (*Rumex acetosella*), Indian grass (*Sorghastrum nutans*), and bird's foot violet (*Viola pedata*). State endangered and threatened species found in this plant community include Gray's sedge (*Cyperus grayioides*), beach heather (*Hudsonia tomentosa*), and large-flowered beard tongue (*Penstemon grandiflorus*).

Vegetation: Plant Community (Prairie)

Total land cover for Grassland (Prairie) was 65.36 acres, 0.30% of the total area, less than the forest cover type within the US Route 30 project corridor **(Table 2.1).** The prairie vegetation in the US Route 30 corridor can be classified into four types based on vegetation, bedrock or substrate, soil, and position in the landscape. These include sand, dry sand hill prairie, dry-mesic gravel hill prairie (limestone), and black soil prairie communities (**Figure 7-1).**
Sand prairie occurred in the large sand dune complex associated with the savanna cover type occurring south of existing US Route 30 near the Chicago Northwestern Railroad (Figure 7-1). In this area, this community occurred in association with the savanna cover type (dry to dry-mesic sand savanna). The other sand hill prairie communities occurred along the bluff east of Cattail Creek. These prairies occurred as openings within the dry-mesic sand forest communities. A dry-mesic gravel (limestone substrate) prairie occurred along the slope just west of Cattail Creek, east of Frog Song Road, on the edge of the project area. Black soil prairies were rare in the corridor and occurred along an existing railroad and an abandoned rail line on the eastern end of the corridor (Figure 7-1). Several state endangered and threatened species occurred within the sand, dry sand hill, and dry-mesic gravel (limestone) prairie communities **(see Chapters 6 and 7).** Some of the remnant prairies were degraded by fire absence, invasion of exotic species, and past grazing. Despite the disturbance, these are

floristically diverse communities with rare species for the US Route 30 project corridor and the state.

Dry Sand Hill Prairie - This community type is limited to the bluff east of Cattail Creek **(Figure 7-1)**. This community is very rare in US Route 30 corridor and in this area of Illinois (Randy Nyboer, INHS, pers. comm.). With a few exceptions, species composition is very similar to the sand prairie communities in the Savanna cover type. Woody vegetation is encroaching along the edges, but the grasslands are still open and dominated by sand prairie grasses and forbs. The dry sand hill prairie east of Cattail creek and southwest of existing US Route 30 (**Figure 7-1**) is the most diverse and has several populations of endangered and threatened species **(Chapters 6 and 7).** The other dry sand prairie is further south along the bluff and has fewer species. One population of a state threatened species occurs at this site. Common species that occur in this community type include western ragweed, (cheat grass brome) *Bromus tectorum,* Schweinitz's flatsedge, bush clover, horsebalm, common sorrel, (little bluestem) *Schizachyrium scoparium.* State endangered and threatened species found in this plant community include kitten tails (*Besseya bullii*), prairie dandelion (*Microseris cuspidata*) and broomrape (*Orobanche ludoviciana*).

Dry-mesic Gravel Hill Prairie (limestone substrate) **-** This community is very rare in US Route 30 corridor and in this area of Illinois (Randy Nyboer, INHS, pers. comm.). Limestone bedrock occurs near the surface at this location (Figure 7-1). The prairie vegetation primarily is found in a flat area above the slope. Small limestone cliffs (30 feet) occur along the edge before the relief drops into the Cattail Creek floodplain. The floristic composition includes species from the nearby sand prairies and a few restricted to the gravelly substrate of weathered limestone in this habitat including small yellow flax (*Linum medium*), rock sandwort (*Minuartia stricta*), and ladies' tresses (*Spiranthes magnicamporum*). Additional herbaceous species include rock cress (*Arabis lyrata*), sideoats grama (*Bouteloua curtipendula*), spiked lobela (*Lobelia spicata*), little bluestem, and the non-native blue grasses (*Poa compressa* and *P. pratensis*). State endangered and threatened species found in this plant community include kitten tails. Fire suppression has caused some of the area to become infested with native and non-native woody species including eastern red cedar (*Juniperus virginiana*), bush honeysuckle, and aromatic sumac.

Black-Soil Prairie (Dry-mesic to mesic prairie) - Three main areas of black-soil prairie occur within the US Route 30 corridor including two along an abandoned rail line **(Figure 7-1).** These two areas are adjacent to IL Route 88, and are owned by the Natural Land Institute and managed by the Whiteside Soil Conservation Service **(see Chapter 7).** The Lyndon-Agnew Prairie Nature Preserve occurs partially within the US Route 30 study corridor along this same rail line. In general, with the exception of these sites, cool-season grasses with a few disturbance-tolerant prairie species dominate the majority of the railroad alignments. The other black soil prairie community is near Union Grove. This site is identified in the Roadside Prairie Inventory as Site 17 in IDOT District 2 (Handel 2004) **(Figure 2-2).** The following species occur in the black-soil prairie community: big bluestem (*Andropogon* gerardii), heath aster (*Aster ericoides*), Canada wild rye (*Elymus* canadensis), sawtooth sunflower (*Helianthus grosseserratus*), bee balm (*Monarda fistulosa*), reed canary (*Phalaris arundinacea*), Virginia mountain mint (*Pycnanthemum virginianum*), Canada goldenrod (*Solidago canadensis*), prairie cord grass (*Spartina pectinata*), and the non-native smooth brome (*Bromus inermis*),

The following cover types are only minor components of the US Route 30 corridor and are not discussed in detail. Species encountered in these cover types are listed in **Appendix 2-1**.

Vegetation: Plant Community (Cropland)

The two main crops grown in the US 30 project corridor are corn and soybeans (**Appendix 2-4**). Other crops that are grown to a lesser extent include wheat, oats, and other small grains. Cropland makes up 18,004.4 acres or 81.9% of the corridor **(Table 2-1)**. This is slightly more than the ranking of cropland in Whiteside county overall with 67.8% of the land cover (Whiteside County, Illinois Land Cover, July 1996).

Vegetation: Plant Community (Urban and Build-up land)

Most of the urban and build-up land occurs around the town of Morrison and near the eastern end of the corridor near Rock Falls. A total of 2,040 acres of the study corridor, or 9.2%, is urban or build-up land **(Table 2-1),** a greater proportion than the 2.1% currently in the county (Whiteside County, Illinois Land Cover, July 1996).

Vegetation: Plant Community (Pasture and Hayland)

The Pasture and Hayland vegetation cover type is widely scattered throughout the US Route 30 project corridor (**Appendix 2-4**), making up 549.4 acres, or 2.5%, of the study corridor **(Table 2-1).** Several pastures have not had livestock grazing for an extended period, but still have existing fences. These fields were combined with the pastureland cover type. This cover type represents the pastureland and/or successional field community of White and Madany (1978) and is associated with severe disturbance to the natural character of an area.

Vegetation: Plant Community (Tree Farm)

This is a mature tree planting near US Route 30 on the bluff east of Cattail Creek (**Appendix 2-4**). It is a mixture of planted native and introduced species and young dry-mesic sand forest. It occupies 121.9 acres, or 0.55%, of the total land area.

Vegetation: Plant Community (Shrubland)

Shrubland occupies 28.2 acres, or 0.13%, of the total land area and occurs scattered throughout the US Route 30 project corridor **(Table 2-1)**. This cover type includes abandoned pastures, successional fields, hedgerows, and some railroad or roadway rights-of-way. The cover type is dominated by dense-to-open stands of shrubs and young trees, with at least 25% shrub cover.

Vegetation: Plant Community (Non-native Grassland)

Non-native grassland vegetation cover type within the US Route 30 project corridor occupied 61.5 acres, or 0.28%, of the study corridor **(Table 2-1).** Sites were characterized as non-native grasslands if they were dominated by planted or established non-native, cool season grasses; the cover type usually also includes a few additional invasive native and non-native species that are not dominant.

Vegetation: Plant Community (Forested Wetland)

Forested wetlands occupy 38.4 acres or 0.17% of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

Vegetation: Plant Community (Pond)

Ponds occupy 0.52 acres of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

Vegetation: Plant Community (Sedge Meadow)
Sedge meadows cover 4.0 acres or 0.02% of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

Vegetation: Plant Community (Scrub-Shrub Wetland)
Scrub-shrub wetlands cover 2.1 acres or 0.01% of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

Vegetation: Plant Community (Wet Meadow)
Wet meadows cover 89.7 acres or 0.41% of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

Vegetation: Plant Community (Marsh)
Marshes cover 108.8 acres or 0.49% of the US Route 30 corridor. This cover type is discussed in detail in Chapter 5.

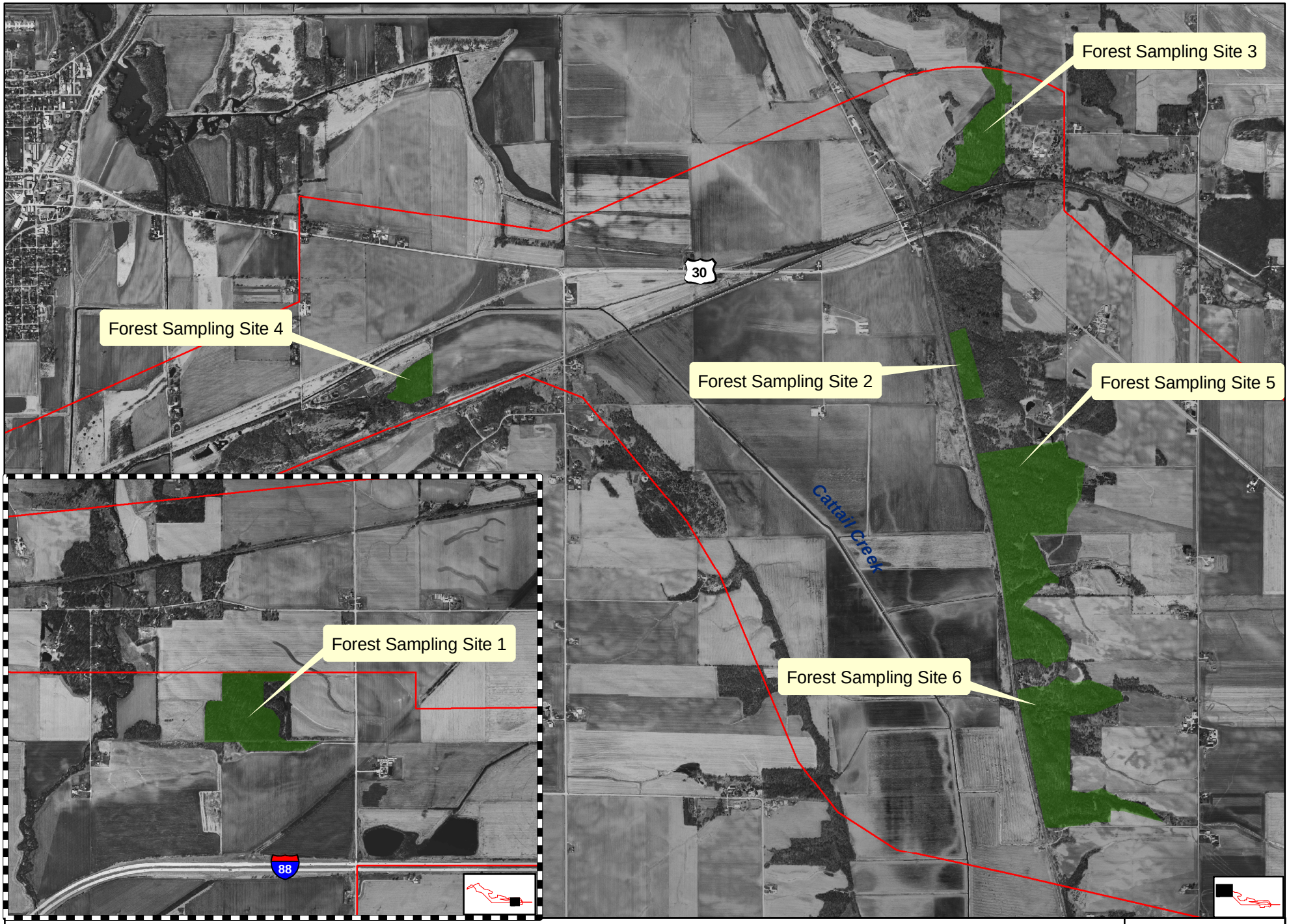

Figure 2-1. Sampled forests in the US Route 30 corridor

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Figure 2-2. Site 17 of the Roadside Prairie Inventory District 2 (Handel 2004)

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CHAPTER 3: TERRESTRIAL WILDLIFE

J.E. HOFMANN, J.E. PETZING, D.A. ENSTROM, J. M. MENGELKOCH, J.F. MERRITT, S.B. AMUNDSEN

The terrestrial wildlife investigated during this study were birds, mammals, amphibians, and reptiles. Information about wildlife in the corridor and the surrounding region was obtained from scientific collections, the scientific literature, and unpublished reports. Fieldwork was conducted to document species that occurred in the corridor. Field methods are described in **Appendix 3-8**.

WILDLIFE HABITAT

The US 30 project corridor contains wildlife habitats that coincide with the major cover types present (**Chapter 2**). Natural communities that provide habitat for wildlife are forest, grassland, shrubland, wetlands, and aquatic systems. **Appendices 3-1, 3-2, and 3-3** list the habitat associations of the birds, mammals, and amphibians and reptiles, respectively, potentially occurring in the US 30 corridor. Natural communities cover a relatively small proportion of the corridor and much of the natural habitat occurs in the western portion of the corridor, i.e. west of Morrison. Approximately 86% of the corridor consists of agricultural land. Agricultural areas such as pasture, hayfields, fencerows, orchards, tree farms, and farm ponds provide habitat for some animals, but fields of row crops (which cover 81.89% of the corridor) generally are of limited value to wildlife. Urban/built-up and barren land account for an additional 9.28% of the corridor.

Many mammals are not restricted to specific habitats and can be considered habitat generalists. Some species of small mammals are found in a variety of habitats, although individuals would have small home ranges that may lie within a single habitat type. An example would be the northern short-tailed shrew, which occurs in forest, grassland, shrubland, wetland, and urban areas. Larger mammals (e.g. coyote, white-tailed deer) and bats have larger home ranges that may include more than one type of habitat. Such mammals may use different habitat types for different purposes, e.g. one habitat for denning or roosting, another for foraging.

Many of the terrestrial amphibians and reptiles that are known to occur in Whiteside County, Illinois also are not restricted to a specific habitat type. Amphibian and reptile species may use several habitat types for activities such as foraging, reproduction, and hibernation. For example, the western chorus frog inhabits forests, grasslands and shrubland, but uses ephemeral wetlands in the spring to breed. The common gartersnake, a habitat generalist that occurs throughout Illinois, may be found in forests, grasslands, shrubland, wetlands, and agricultural areas.

Mammals restricted to forested habitats are the hoary bat, Indiana bat, eastern chipmunk, southern flying squirrel, woodland vole, and, perhaps, gray fox. The Virginia opossum, eastern red bat, eastern fox and eastern gray squirrels, white-footed mouse, bobcat, raccoon, and white-tailed deer are associated primarily with forests, but also use other habitats. Little brown bats, big brown bats, northern bats, eastern pipistrelles, and evening bats forage in or along the edges of forested areas, but roost in buildings or other artificial structures as well as in trees (Barbour and Davis 1969). Woodchucks and eastern cottontails occupy forest edges rather than forest interiors. Many mammals occur in both upland and bottomland forests, but woodchucks and chipmunks need well-

drained soil that is not subject to flooding for their hibernation burrows. Optimal forests for eastern gray squirrels and southern flying squirrels would include many mast-producing trees (e.g. oaks, hickories).

Of the amphibian and reptile species known to occur in Whiteside County, none are restricted to forest habitats. If the spring peeper (*Pseudacris crucifer*) occurs in the project corridor, it is an example of an amphibian species that is restricted to forest habitats. Other amphibian and reptile species that occur in forest habitats, but are not restricted to forest habitats include the American toad, gray treefrog, green frog, and common gartersnake.

Grassland mammals are not restricted to native prairie, but occupy non-native grassland and forbland as well. Species restricted to herbaceous habitats are the least shrew, thirteen-lined and Franklin's ground squirrels, western harvest mouse, deer mouse, prairie vole, least weasel, and American badger. The masked shrew, northern short-tailed shrew, eastern cottontail, woodchuck, meadow vole, southern bog lemming, meadow jumping mouse, and red fox are associated strongly with herbaceous habitats.

Similar to grassland mammals, grassland reptiles also occupy such non-native grassland habitats as hayfields, pastures, road right-of-way, and railroad right-of-way. Reptile species restricted to grassland habitats include the yellow mud turtle, six-lined racerunner, western foxsnake, western hog-nosed snake, gophersnake, and plains gartersnake. Other amphibian and reptile species may be found in grassland habitats but are not restricted to them. These species include the tiger salamander, western chorus frog, ornate box turtle, eastern racer, and DeKay’s brownsnake.

Several large mammals would use shrubland, including the Virginia opossum, eastern cottontail, woodchuck, coyote, red fox, raccoon, striped skunk, bobcat, and white-tailed deer. Small mammals inhabiting shrubland include the northern short-tailed shrew, eastern mole, and white-footed mouse. Small grassland mammals, such as prairie and meadow voles, also may occupy open shrubland (i.e. areas of widely spaced shrubs) with dense herbaceous cover. The eastern red bat roosts in shrubs as well as in trees. Similarly, amphibian and reptile species that occur in forest and grassland habitats may also occupy shrubland.

The American beaver, muskrat, and North American river otter are highly specialized for aquatic life and require aquatic or wetland habitat. The American mink is more terrestrial, but closely associated with water. Masked and northern short-tailed shrews, meadow voles, southern bog lemmings, and meadow jumping mice use emergent wetlands extensively. Raccoons and opossums tend to be most abundant near water (Hoffmeister 1989), and bats forage above wetlands and streams as well as terrestrial areas.

The northern cricket frog, American bullfrog, northern leopard frog, and northern watersnake inhabit the banks and riparian areas of ditches, streams, rivers, ponds, and lakes. Blanding’s turtle is found in quiet waters of marshes, prairie wetlands, wet sedge meadows, and shallow, vegetated portions of lakes (Phillips et al 1999). The snapping turtle, painted turtle, and stinkpot occur in a variety of aquatic habitats while the Ouachita map turtle and midland smooth softshell turtle are primarily found in streams and rivers.

Many mammals have adapted to landscapes that consist of both natural and human-altered habitats, enabling them to persist in agricultural regions and inhabit towns and cities. Larger mammals that live in such areas include the opossum, cottontail, fox and gray squirrels, coyote, red fox, raccoon, and white-tailed deer. Several small mammals, such as the mole, northern short-tailed shrew, thirteen-lined ground squirrel, deer mouse, and prairie and meadow voles, occupy roadsides, railroad embankments, cemeteries, golf courses, or residential yards as well as pastures, hayfields, and fencerows. Some bats, especially big brown and little brown bats, now roost mainly in buildings. The non-native house mouse and brown rat are associated closely with buildings.

Birds breeding in Illinois generally nest in one or several related habitat types. Some species have narrow nesting habitat requirements (e.g. Henslow's Sparrows require grasslands with high litter density, Herkert et al. 2002). Other species have much broader nesting requirements (e.g. American Robins nest in forest gaps, shrubland and urban habitats). Species that historically nested in prairies (e.g. sparrows and rails) are commonly found in CRP fields. Birds foraging habitat preferences are generally broader than nesting habitat preferences. Individuals of a number of species will forage in standing crops (corn, soy beans) adjacent to their nesting habitat but nesting in corn and soybeans is extremely rare. During migration many bird species, especially those that do not breed in the area, can be found in a variety of habitats. Some have narrow habitat requirements during migratory 'stop-overs' (e.g. waterfowl) while others use a wide variety of habitats (e.g. warbler species, family Parulidae, and some songbirds, order Passeriformes) and members of some species can be found any habitat during migration. Some resident species (e.g. Red-bellied Woodpeckers, Tufted Titmice, Chickadees) remain in one habitat type throughout the year.

Habitat Fragmentation

In Illinois, natural communities are fragmented by agricultural land as well as urban areas and other types of development (Illinois Department of Energy and Natural Resources 1994). Habitat fragmentation refers to the division of large tracts of natural habitat (forests, prairies, and wetlands) into smaller, isolated patches. In Illinois, natural communities have been highly fragmented by the conversion of land to agricultural use as well as the development of residential and commercial areas (Illinois Department of Energy and Natural Resources 1994, Schwartz 1997). Habitat also can be fragmented by the construction of roads, which are a significant barrier for animals in many landscapes (Noss and Csuti 1994). Fragmentation of natural habitat is detrimental to many wildlife species, although other species benefit from the creation of additional edges around the habitat patches (Saunders et al. 1991). Fragmentation has a greater negative impact on species that are restricted to specific habitat types (habitat specialists) or those having limited mobility that makes it difficult for individuals to move between habitat patches. Fragmentation also is detrimental for area-sensitive species, which require a minimum size for habitat, especially breeding habitat.

In Illinois, most natural communities have been fragmented by agricultural land as well as urban areas and other types of development (Illinois Department of Energy and Natural Resources 1994), and roads can be a significant dispersal barrier in many landscapes (Noss and Csuti 1994). Fragmentation of natural habitats is detrimental to many wildlife species, although other species benefit from the creation of additional habitat edges (Saunders et al. 1991). Fragmentation has a greater impact on species

that are restricted to specific habitat types or have limited mobility, and on area-sensitive species (i.e. species which have minimum size requirements for habitat).

Some species of forest and grassland birds in the Midwest have been shown to be 'area sensitive' and negatively impacted by fragmentation (e.g. there is a habitat size threshold below which the species cannot maintain a viable population, Robinson and Wilcove 1994, Herkert 1994). In addition, 'forest interior species' are heavily impacted by Brown-headed Cowbird brood parasitism. Large forests are not penetrated by Brown-headed Cowbirds, but smaller habitat fragments are. Many forest interior species appear not to have evolved adaptations to combat the Cowbirds (e.g. the Wood Thrush) and so these populations suffer not only from habitat loss due to fragmentation, but also from increased parasitism. Nest predation is also thought to increase with fragmentation in both forests and grasslands. None of the forest tracts in the U.S. 30 project area large enough to be classified as forest interior. Published definitions of 'forest interior' and classifications of species by habitat vary. Here we use definitions used by Robinson and Wilcove (1994) and Herkert (1994) for Illinois bird species.

Mammals likely to be adversely affected by forest fragmentation include the eastern chipmunk (Rosenblatt et al. 1999), eastern gray squirrel (Nixon et al. 1978), southern flying squirrel (Rosenblatt et al. 1999), and long-tailed weasel (Gearing and Swihart 2004). Many larger mammals are habitat generalists with high mobility and are less affected by fragmentation. They are subject to mortality on roads, however. Road-killed opossums, raccoons, and striped skunks are commonly observed and thousands of white-tailed deer are hit by vehicles each year in Illinois (IDOT Division of Traffic Safety data). Bats, being volant, may be less likely to be affected by fragmentation and are less susceptible to vehicles.

Amphibian species in the US 30 corridor use aquatic areas for reproduction and other habitat types (e.g. floodplain forest, upland forest, grassland) for foraging and hibernation. These life history traits, in conjunction with vagility and the resistance to desiccation of amphibian species, determine the severity of impact of habitat fragmentation. A species with high mobility and broad habitat tolerances may be less severely impacted by habitat fragmentation than a species with low mobility that is restricted to forest habitats. For example, the American bullfrog is a large frog with high mobility and it forages and breeds in many aquatic habitat types. In contrast, the spring peeper is a small frog with low mobility and it is restricted to forest habitats where it breeds only in ephemeral ponds (the spring peeper is not known from Whiteside County, but it is known from adjacent counties and it may potentially occur in the project corridor). American bullfrogs are therefore less impacted by habitat fragmentation than northern spring peepers. Roads can cause significant mortality of amphibians, especially during the breeding season and during the dispersal of metamorphic individuals.

Reptiles also may use different habitat types for hibernation, reproduction, and foraging. Many reptiles are killed on Illinois roads each year when they move from winter habitats to summer habitats, when they search for mates, and when they search for places to lay their eggs. Mass mortality may occur in some instances. For example, 150 brown snakes (most of them killed by vehicles) were observed during five autumn days on a little over one mile of secondary road in Monroe County, Illinois (Phillips et al. 1999). Between 20 October and 2 November, Towey and Tucker (2001) collected 554 road-killed vertebrate species along IL 100 in Jersey County; 511 were brown snakes.

Because approximately 95% of the US 30 project corridor consists of agricultural and developed land (**Table 2-1)**, natural communities are already fragmented to a great extent. Dry-mesic upland forest with pockets of sand prairie and ponds along the line of sand dunes paralleling the Burlington Northern Santa Fe (BNSF) railroad represents the largest tract of contiguous natural habitat within the corridor. There is a relatively large tract of dry-mesic sand savannah north of US 30 and south of the Union Pacific railroad tracks. Extensive wetlands associated with Cattail Creek occur along US 30 between Frog Pond Road and IL 84 (including the IDNR's Mill Road Marsh). Although US 30, Chase Road, and a driveway cross this habitat, some animals may have little difficulty moving through the area because there are underpasses and culverts.

Much of the remaining natural habitat in the US 30 corridor occurs along streams and the Rock River. The river and streams such as Cattail Creek, Spring Brook, and Elkhorn Creek may act as dispersal corridors between habitat patches for mobile species, in addition to providing habitat for resident animals. The Rock River's suitability as a dispersal corridor for amphibians and reptiles may be limited, however. Phillips (1998) stated that its riparian zone and backwaters sloughs have suffered destruction or degradation.

Some species of forest and grassland birds in the Midwest have been shown to be 'area sensitive' and negatively impacted by fragmentation (e.g. there is a habitat size threshold below which the species cannot maintain a viable population, Robinson and Wilcove 1994, Herkert 1994). In addition, 'forest interior species' are heavily impacted by Brown-headed Cowbird brood parasitism. Large forests are not penetrated by Brown-headed Cowbirds, but smaller habitat fragments are. Many forest interior species appear not to have evolved adaptations to combat the Cowbirds (e.g. the Wood Thrush) and so these populations suffer not only from habitat loss due to fragmentation, but also from increased parasitism. Nest predation is also thought to increase with fragmentation in both forests and grasslands. None of the forest tracts in the U.S. 30 project area large enough to be classified as forest interior. Published definitions of 'forest interior' and classifications of species by habitat vary. Here we use definitions used by Robinson and Wilcove (1994) and Herkert (1994) for Illinois bird species.

AMPHIBIANS AND REPTILES

The proposed US 30 project corridor crosses three Illinois Natural Divisions (Illinois Comprehensive Wildlife Conservation Plan & Stategy 2007) as described by Schwegmann, et al (1973): the Rock River Hill Country Natural Division, the Upper Mississippi River and Illinois River Bottomlands Natural Division, and the Illinois River and Mississippi River Sand Areas Natural Division. The Rock River Hill Country Natural Division is a region of rolling topography drained by the Rock River; prairie formerly occupied the level uplands with forest equally abundant along the water courses and the more dissected uplands. Pertaining to the Mississippi River, the Upper Mississippi River and Illinois River Bottomlands Natural Division encompasses the rivers and floodplains of the Mississippi River above its confluence with the Missouri River. The Illinois River and Mississippi River Sand Areas Natural Division includes the sand areas and dunes in the bottomlands of the Illinois and Mississippi rivers.

The Natural Divisions described by Schwegmann, et al (1973) are derived primarily from Vestal (1931), who developed a vegetation map for Illinois based on topography, soil type, and natural vegetation. Smith (1961) found that the distribution of amphibians and reptiles in Illinois tended to coincide with Vestal's vegetational divisions; Smith developed a map of herpetofaunal divisions in Illinois with accompanying habitat descriptions and examples of abundant and distinctive amphibian and reptile fauna found in each division. Whiteside County contains 4 of 11 Herpetofaunal Divisions described by Smith (1961): Prairie (Grand), Western Woodlands Division, Upper Mississippi Border Division, and Sand Areas. The Grand Prairie Herpetofaunal Division comprises all original prairie, with the exception of the sand areas, north of the southern limit of Wisconsin glaciation. Abundant amphibian and reptile species in the Grand Prairie Division include the American toad (*Bufo americanus*), plains gartersnake (*Thamnophis radix*), and the western foxsnake (*Elaphe vulpina*); distinctive species of the Grand Prairie Division include Kirtland's snake (*Clonophis kirtlandii*), smooth greensnake (*Opheodrys vernalis*), and lined snake (*Tropidoclonion lineatum*). The Western Woodlands Division contains small patches of woodland and gallery forest along rivers and creeks. Smith (1961) noted the impoverished amphibian and reptile fauna of this division, despite seemingly suitable habitat for many forest species. Moderately common amphibian and reptile species in the Western Woodlands Division include the northern cricket frog (*Acris crepitans*), western chorus frog (*Pseudacris triseriata*), green frog (*Rana clamitans*), northern leopard frog (*Rana pipiens*), and common gartersnake (*Thamnophis sirtalis*); Smith listed no distinctive species for this division. The Upper Mississippi Border Division includes the forested bluffs along the Mississippi River and this division contains more species of amphibians and reptiles than the woodlands of the Western Woodlands Division. Common amphibian and reptile species of this division include the green frog (*Rana clamitans*), ring-necked snake (*Diadophis punctatus),* northern watersnake (*Nerodia sipedon*), and common gartersnake; distinctive species of this division includes the pickerel frog (*Rana palustris*) among others. Small areas of sand prairie found mainly in central and northern Illinois comprise the Sand Areas Division. The most abundant reptiles in this division include the six-lined racerunner (*Cnemidophorus sexlineatus*), eastern racer (*Coluber constrictor*), eastern hog-nosed snake (*Heterodon platirhinos*), gophersnake (*Pituophis catenifer*), and ornate box turtle (*Terrapene ornata);* distinctive species in the Sand Areas Division include the yellow mud turtle (*Kinosternon flavescens*) and the western hog-nosed snake (*Heterodon nasicus*).

There have been no systematic surveys for amphibians and reptiles in Whiteside County as a whole, but there have been studies of specific species at specific sites. Bowen, et al (2004) estimated survival and recruitment of an ornate box turtle population on a portion of the Upper Mississippi River National Fish and Wildlife Refuge in Carroll and Whiteside counties; Kuo and Janzen (2004) reported on the genetic diversity of this population. Kolbe and Janzen (2002) evaluated the impact of nest site selection by the eastern snapping turtle (*Chelydra serpentina*) on nest success and nest temperature along the Mississippi River in Carroll and Whiteside counties. The ecology of a six-lined racerunner population was studied by Warner (2000) at the Thomson – Fulton Sand Prairie Nature Preserve. The population size and demographic structure of a population of western hog-nosed snakes at Thomson – Fulton Sand Prairie was investigated by Kolbe (1999). Kolbe, et al (1999) reported state record lengths for the bullsnake (gophersnake), western hog-nosed snake, and eastern gartersnake captured at Thomson – Fulton Sand Prairie Nature Preserve in Whiteside County.

Prior to surveys in 2007, there were 7 amphibian and 14 reptile species deposited into museum collections from Whiteside County. The smooth softshell turtle (*Apalone mutica*) has been documented for Whiteside County by a literature record only (Cahn, 1937). **Appendix 3-3** lists the amphibian and reptile species known from Whiteside County based on museum specimens and the current survey as well as amphibian and reptile species that could potentially occur in Whiteside County based on distribution and habitat.

RESULTS

Seven amphibian species (one toad and six frogs) and 9 reptile species (two turtles, one lizard, and six snakes) were observed during surveys in the project corridor and in the immediate vicinity of the project corridor. A map depicting the location of amphibian and reptile survey sites is found in Figure 3-4, which is attached at the end of this chapter. **Appendix 3-10** lists the sites surveyed in 2007 for amphibians and reptiles. **Appendix 3-11** lists the amphibian and reptile species observed at the survey sites. Within **Appendix 3-11** there are five tables organized by survey type. Table 1 lists species observed at terrestrial sites. Table 2 lists the amphibian and reptile species observed at aquatic sites. Table 3 lists the sites where amphibian calls surveys were conducted or where amphibian breeding choruses were documented as incidental encounters. Table 4 lists frog and turtle species captured during turtle trap surveys. Table 5 lists amphibian and reptile species observed by other Illinois Natural History Survey personnel. A large number of frogs occurred as tadpoles and were not identified to species. These are denoted as “UIF” in the above mentioned Tables.

DISCUSSION

The most abundant species within the project corridor are the frogs (green frog, American bullfrog, and northern leopard frog) and turtles (snapping and painted turtles).The majority of the amphibian and reptile species encountered in the US 30 project corridor are considered common or abundant in Illinois (Phillips at al, 1999). One species, the six-lined racerunner, is restricted to sand habitats that occur within the western end of the project corridor. Some amphibian and reptile species that were not encountered but likely to occur in the US 30 project corridor are identified in Appendix 3-3.

Important use areas for amphibians and reptiles are defined as specific areas (pond, marsh, or similar feature) having a high species diversity relative to other areas in the region. Specific areas within the proposed US 30 corridor with 5 or more amphibian and reptile species are designated as important use areas. However, it is understood that in areas (Whiteside County and Illinois as a whole) where natural habitats are fragmented by agriculture, municipalities, roads, and other man-made features, any area of natural habitat may potentially contain 5 or more species of amphibians and reptiles, especially if there is an aquatic component to the habitat. Three sites were identified as Important Use Areas.

Important Use Area 1 (Figure 3-1)
Aquatic Site 6/Terrestrial Site 6 (Appendix 3-11 Tables 1 & 2)

This use area occurs along an Unnamed Tributary of the Rock River. North of US 30 the stream is bordered by reed canarygrass; south of US 30 a small strip of trees borders the stream (Appendix 4-1 Figure 9). Three species of frogs (northern cricket frog, northern leopard frog, unidentified frog) were observed along the tributary and three species of snakes (western foxsnake, plains gartersnake, common gartersnake) were observed at this site. The snakes were roadkills and occurred immediately adjacent to the tributary on US 30.

Important Use Area 2: (Figure 3-2)
Aquatic Site 9 & 10, Terrestrial Site 8, Call Site 1, Turtle Trap Sites 2 & 3 (Appendix 3-11 Tables 1, 2, 3 & 4)

The use area occurs in an area containing a residence, two marshes with central ponds (wetland site 20), grasslands, and a dry mesic sand forest (forest stand 5) The marsh to the west of the residence was managed and a portion of the bank was mowed in 2007. The marsh south of the residence was left in a natural state during visits in 2007. During wet periods, the margins of the ponds are in close proximity to each other. Ten species of amphibians and reptiles were observed during surveys: Gray treefrog, green frog, American toad, western chorus frog, northern leopard frog, American bullfrog, common garter snake, plains gartersnake, snapping turtle, and six lined racerunner.

Important Use Area 3: (Figure 3-3)
Turtle Trapping Sites 4-9, Terrestrial Sites 12, 13-17, Aquatic Sites 14-21, Call Sites 4-10 (Appendix 3-11 Tables 1 to 4)

This use area includes the western end of the project corridor, and consists of ponds, wet meadows (wetland sites 10, 11, 36), marshes (wetland sites 6, 9), forested wetland (Site 8), streams (Cattail Creek, Unnamed Tributary of Cattail Creek along Chase Road, Cattail Slough drainage canal; Appendix 4-1 Figures 20 & 21), Conservation Reserve Program (CRP) lands, cropland, and sand savanna. Most of this area lies within the Mississippi River floodplain and adjacent sand ridges. Twelve species of amphibians and reptiles were observed within this area during the surveys and included the snapping and painted turtles, six lined racerunner, common gartersnake, DeKay's brownsnake, northern watersnake, eastern racer, western chorus frog, gray treefrog complex, American bullfrog, green frog, and northern leopard frog).

MAMMALS

Range information for Illinois mammals is based on maps in Hoffmeister (1989) and Kurta (1995). Hoffmeister (1989) and the electronic database for the University of Illinois Museum of Natural History, INHS, and Western Illinois University (WIU) mammal collections were checked for locations of museum specimens in Whiteside County, and specifically in the US 30 corridor. Databases containing results of previous mammal surveys by the INHS and bats submitted to Illinois Department of Public Health (IDPH) and Department of Agriculture (IDA) laboratories for rabies testing were checked for additional Whiteside County records (INHS databases maintained by J.E. Hofmann).

The scientific literature and unpublished reports also were searched for records in the county and the Illinois Natural Heritage Database (INHD) was consulted for recent records of threatened and endangered species. Direct or indirect observations of mammals were made during visits to the corridor during 2007. John Petzing, INHS herpetologist, and William Handel, INHS botanist, also provided observations of mammals within the corridor. Mist netting for bats and trapping for Franklin's ground squirrel were conducted during July and August 2007.

Appendix 3-2 lists 46 mammal species known to occur or potentially occurring in the US 30 project corridor. Thirty-one of the species had been documented in Whiteside County previously or were documented during this survey. Sources of documentation are included in **Appendix 3-2**. No museum specimens were found that had been collected within the corridor. The reported trapping of river otters in ditches east of the junction of US 30 and IL 84 in 1976 (Anderson 1995) was presumed to have occurred within the corridor. Twenty species were documented in the US 30 project corridor during this survey. Species that could not be documented in the corridor are included in **Appendix 3-2.** if they are known to occur in the region (northwestern Illinois) and appropriate habitats (cover types) are present in the corridor.

Silver-haired bats likely would be present in Whiteside County primarily during spring and autumn migration, while the remaining bat species would occur there during the summer. Some big brown bats would remain in the county during the winter (hibernating in buildings), but other bats would winter elsewhere. Mammals other than bats would be year-round residents of Whiteside County. The fact that several small mammals (shrews and rodents) have not been documented in Whiteside County presumably reflects a lack of collecting because there is no large university in the area.

The North American river otter, although formerly a listed species in Illinois (Illinois Endangered Species Protection Board 1994, 1999), has been present along the Mississippi River and its tributaries in northwestern Illinois since the 1950s (Anderson 1995). The largest number of otter reports up to 1993 occurred in the Apple, Galena, and Plum River systems, with the second highest number in the Rock River system (Anderson 1995). There have been numerous otter reports for locations in northwestern Whiteside County near the western terminus of the US 30 corridor, including Sunfish Slough and Cattail Slough (INHD, Anderson 1995). According to John Petzing, INHS herpetologist, staff conducting turtle trapping sighted river otters in Cattail Creek near Chase Road during 2007.

Although most of the US 30 corridor consists of agricultural land, it has the potential to support a diversity of mammalian species. Many mammal species are habitat generalists and some forest and grassland mammals have adapted to living in agricultural and urban areas. The 46 species in **Appendix 3-2** represent 76.7% of the 60 mammal species that occur regularly in Illinois. Many of the species in **Appendix 3-2** are common in Illinois and likely to be common in the corridor, including the Virginia opossum, northern short-tailed shrew, eastern fox squirrel, white-footed mouse, coyote, raccoon, striped skunk, and white-tailed deer. Much evidence of eastern mole activity was observed, especially in the western portion of the corridor.

Other mammals would be uncommon or rare in the US 30 corridor. There have been unconfirmed sightings of the bobcat, formerly a state threatened species (Illinois Endangered Species Protection Board 1994), in Whiteside County (Woolf et al. 2000, Lischka et al. 2006a). Suitable habitat for this species is limited primarily to forested bluffs (dunes) and floodplain forests near the Mississippi River and to the Rock River corridor. According to Nixon et al. (1978) the eastern gray squirrel is absent from eastern Whiteside County (except along the Rock River) and scarce in the western portion of the county. Therefore, this species probably is uncommon in the corridor. Although beaver are generally common in Illinois (Hoffmeister 1989), no sign of beaver activity was observed in the corridor.

There are no records for the federally endangered Indiana bat in Whiteside County (INHD). The state threatened Franklin's ground squirrel has been observed historically in Whiteside County (Mohr 1943), but there are no specimens or recent records for the species (INHD, Hoffmeister 1989). These two listed mammals are discussed in detail in **Chapter 6**.

Recreationally and Commercially Important Species

Mammals of recreational and commercial interest are fur-bearing and game mammals (as defined in §5.20 ILCS 5/1.2g and 5/1.2h, respectively, of the Illinois Wildlife Code). Illinois has trapping seasons for most of its furbearers (Virginia opossum, American beaver, muskrat, coyote, red fox, gray fox, raccoon, striped skunk, long-tailed weasel, least weasel, American mink, American badger), but trapping currently is practiced by relatively few people in the state (Bluett 2005, Lischka et al. 2006a). Hunting is a more widespread pursuit (Lischka et al. 2006b). Game mammals (woodchuck, eastern cottontail, swamp rabbit, eastern gray squirrel, eastern fox squirrel, white-tailed deer) are hunted for sport and/or food and some furbearers (opossum, coyote, red fox, gray fox, raccoon, striped skunk) are hunted as well. White-tailed deer also are of economic importance because of injuries and property damage resulting from deer/vehicle collisions.

Many of Illinois' game and fur-bearing mammals have been documented in the US 30 corridor and other species potentially occur there as well (**Appendix 3-2**). The mammal of the greatest economic and recreational importance is the white-tailed deer. In 2005, 280,000 resident hunting licenses were sold in Illinois (Lischka et al. 2006b). Deer hunters purchase a large percentage of licenses; during 2005-2006, 64% of license holders hunted deer with shotguns and 33% hunted deer with bows (Lischka et al. 2006b). Preliminary data for the 2006 firearm seasons indicated a harvest of 115,192 deer in Illinois, 958 of which were killed in Whiteside County (1.39 deer/mi^2) (Anonymous 2007). The county's harvest ranked 54th among the 99 Illinois counties in which deer were hunted (Anonymous 2007).

Squirrels and rabbits also are important game mammals. During 2005-2006, an estimated 396,764 fox squirrels and 457,816 gray squirrels were killed (Lischka et al. 2006b). The estimated number of squirrel hunters was the lowest for the past ten seasons, with drops of 42% and 29% for fox and gray squirrels, respectively (Lischka et al. 2006b). The rabbit harvest (cottontails and swamp rabbits [*Sylvilagus aquaticus*]) by about 60,000 hunters during the 2005-2006 season was estimated at 311,011 (Lischka et al. 2006b). The estimated number of rabbit hunters declined 53% from 1995 to 2005 and the estimated harvest dropped 63% (Lischka et al. 2006b).

In addition, about 31,000 Illinoisans hunted coyotes (a furbearer) during 2005-2006; the estimated harvest was 126,610 (Lischka et al. 2006b). Although the estimated number of hunters has been relatively stable over the past ten seasons, the estimated harvest of coyotes has increased 47% (Lischka et al. 2006b). The only other furbearer harvested in large numbers by hunters was the raccoon (estimated harvest: 228,054), although only 4% of license holders engaged in raccoon hunting (Lischka et al. 2006b). Overall, hunting license sales have been declining in Illinois since peaking in 1956 (Lischka et al. 2006b). The 2005 total was the lowest on record (i.e. since 1938) (Lischka et al. 2006b).

Trapping is much less widely practiced in Illinois than formerly. The number of Illinois trapping licenses sold for the 2005-2006 season was 2,414 (Lischka et al. 2006a). In comparison, 15,472 licenses were sold for the 1938-1939 season (Brown and Yeager 1943, 18,412 for 1981-1982 (Hubert 1982), and 3,194 for 2004-2005 (Lischka et al. 2006a). Of 356 active trappers who responded to the IDNR's 2005-2006 trapper survey, 15 resided in Whiteside County (Lischka et al. 2006a). This was the highest number among all Illinois counties.

Fur harvests vary from year to year, depending on factors such as pelt prices and weather conditions, but the long-term trend in harvests in Illinois has been a decline. The catch for 1938-1939 was calculated at 1,298,303 (Brown and Yeager 1943), while 757,195 pelts were sold during the 1981-1982 season (Hubert 1982). The total furbearer harvest (by trapping) for 2005-2006 was estimated at only 92,835 (Lischka et al. 2006a). The value of Illinois furs sold during 2004-2005 was about $1,175,360, down 28.6% from 2003-2004 because of lower average pelt prices for eight species (Bluett 2005).

Estimated numbers of trappers during 2005-2006 were highest for raccoon (1,176), muskrat (801), beaver (682), and opossum (674) (Lischka et al. 2006a). The estimated harvest was greatest for raccoon (41,125), followed by muskrat (25,766), beaver (9.132), and opossum (8,722); estimates for the harvests of other furbearers ranged from only 19 (weasels) to 3,089 (coyote; Lischka et al. 2006a).

DEER/VEHICLE COLLISIONS

In Illinois, there were 19,731 deer/vehicle collisions during 2000; 25,660 during 2003; and 25,491 during 2006 (IDOT website: www.dot.state.il.us/trafficsafety/crashreports.html). During 2006, however, only 6.2% of all vehicle crashes and 0.09% of fatal crashes in the state involved collisions with deer (IDOT website). That year 1 person was killed and 939 injured in such collisions (IDOT website). Most deer/vehicle collisions during 2006 (78.2%) happened on rural roads; 45.0% of those occurred on state roads and 46.7% on county and local roads (IDOT website).

The IDOT Division of Traffic Safety provided data on animal/vehicle collisions on US 30 and IL 78 in Whiteside County for the years 2002 through 2006 (summarized in **Appendix 3-9**). The total number of such collisions on US 30 in Whiteside County was 109, of which 98 took place within the project corridor (the corridor includes most of the length of US 30 in the county). At least one animal/vehicle collision occurred along each mile of US 30 during the five-year period. The number of collisions was relatively consistent from 2002 to 2005, with a slight increase in 2006 (**Appendix 3-9**).

Table 3-5 lists segments of US 30 within the project corridor where there were at least five animal/vehicle collisions over the five-year period 2002-2006. Seven such crashes occurred in the first 0.5 mile east of the junction with IL 84 (Mile 1.5); most of these took place near Elston Road. This stretch of the highway is bordered by marsh as well as cornfields. There were eight animal/vehicle collisions in miles 2 and 5. Marsh, forested wetland, and sand prairie are on the south side of US 30 along Mile 2 and there are mostly cornfields to the north. Habitat along Mile 5 includes crop fields and forest associated with a line of high sand dunes (bluffs). Altogether, there were 28 animal/vehicle collisions on US 30 in the 4.5 miles east of IL 84.

Five animal/vehicle crashes occurred in the 0.5 mile beginning at Sawyer Road on the east edge of Morrison (Mile 13.5). Businesses and crop fields border this stretch of US 30. Five accidents took place in adjacent Mile 14, which is bordered mostly by crop fields. There were 11 animal/vehicle collisions in Mile 19. Habitat along this segment of US 30 includes a wooded riparian corridor (Deer Creek), cornfields, residences, and woodland. Collisions in mile 24 were concentrated near the intersection with Como Road. A quarry, crop fields, and industrial property are located at this intersection.

There were relatively few deer/vehicle collisions (9) over the five-year period from Mile 6 to the western edge of Morrison (**Appendix 3-9**).

Table 3-5. Segments of US 30 in the project corridor, Whiteside County, Illinois, which had five or more animal/vehicle collisions during 2002-2006 (IDOT Division of Traffic Safety data). Miles are numbered from west to east.

Mile	No. of crashes	Location
1.5 - 2*	7	IL 84 - Elston Road
2 - 3	8	Elston Road - Long's Garden (nursery)
4 - 5	5	Frog Pond Road - 0.5 mi W of BNSF Railroad
5 - 6	8	0.5 mi W of BNSF Railroad – 0.5 mi W of Millard Road
13.5 - 14*	5	Sawyer Road – Bishop Road
14 - 15	5	Bishop Road – Lyndon Road
19 - 20	11	Blue Goose Road – Matznick Road
24 - 25	7	Como Road – east side of Rock River

* only 0.5 mile was within the corridor

There were 67 animal/vehicle collisions on IL 78 in Whiteside County during the five-year period 2002-2006. Sixteen of these (23.9%) occurred in the US 30 project corridor, which includes less than 3 miles of IL 78. One crash occurred on IL 78 after it diverges from US 30 on the west side of Morrison. Along this stretch of the highway there are crop fields, farmsteads, and the narrow riparian corridor of Rock Creek. Fifteen animal/vehicle collisions occurred south of Morrison in the 1.6 miles between Bunker Hill Road and Meadowbrook Road. This stretch of the highway is bordered by crop fields, pasture, and residences. There also are two forest tracts associated with Rock Creek on the west side of IL 78 and the road crosses a tributary of Rock Creek that has a narrow, but wooded riparian corridor.

DEER CONCENTRATION AREAS

During the winter, white-tailed deer in northern and central Illinois may concentrate at high densities in forested areas that provide food and cover ("yards") (Nixon and Hansen 1986). Nixon and Hansen (1986) identified five such concentration areas in Whiteside County. Three of the areas are south of the US 30 corridor in Newton and Portland townships, the fourth is north of the corridor in Ustick Township, and the fifth is north of the corridor at Morrison-Rockwood State Park.

BIRDS

Standard sources were searched to establish which bird species were likely to be found in and around the US 30 project area (Whiteside County). These sources included the Clinton, Iowa annual *National Audubon Christmas Counts* (2004-2006), the White Pines State Forest (IL) annual *National Audubon Christmas Counts* (2004-2006), the Geneseo annual *Breeding Bird Survey* (Route 34008), the annual *Illinois Spring Bird Count* (Whiteside County, 2003-2006) and the *Illinois Natural Heritage Database* (IDNR). Two hundred and twenty–four bird species have been recorded in and around the US 30 project area (**Appendix 3-1** Table 1). Eleven Illinois Endangered Species and four

Illinois Threatened Species have been recorded within this area. Three species on the *American Bird Conservancy* watch and 25 *Partner's in Flight* species of concern have also occurred in the area. Finally, 48 birds designated as Illinois conservation priority species in the *Comprehensive Illinois Wildlife Action Plan* have occurred in the area. Habitat descriptions are based on field observations or from Kleen et al (2004).

Results

Point counts and a driving census were conducted during spring migration, the breeding season, and fall migration. The methodologies used in conducting these censuses are described in **Appendix 3-8**. The map locations of the point census sites and driving survey are contained in **Appendix 3-4**. Habitat descriptions of the point census sites are in **Appendix 3-8** Table 2.

One hundred and twenty-four bird species were recorded during censuses of the US 30 project area (**Appendix 3-1** Table 2). Three Illinois Endangered Species and two Illinois Threatened Species were recorded during the avian studies and are discussed in Chapter 6. Two species on the *American Bird Conservancy* 'watch-list', 13 *Partners in Flight* species of concern, and 21 birds designated as Illinois conservation priority species in the *Comprehensive Illinois Wildlife Action Plan* were recorded (**Appendix 3-1** Table 2) in the project area.

The most commonly observed species recorded within the project corridor during all census periods (spring, breeding, fall) were the common grackle, red-winged blackbird, European starling, Canada goose, American robin, eastern meadowlark, and the mourning dove.

SPRING MIGRATION

Spring censuses were conducted between 7 and 9 April 2007. During the spring census period 98 species of 39 families were recorded in the study area (**Appendix 3-5** Tables 1 and 2). Ninety-three species were detected during timed point counts (**Appendix 3-5** Table 1). Twenty-nine species were encountered during the driving census (**Appendix 3-4** Figure 8, **Appendix 3-5** Table 2).

A total of 1985 individuals were observed during the spring migration in and around the project corridor (**Appendix 3-5** Table 1). Point census sites 11 (Mississippi River shore) and 12 (Fulton Marsh) accounted for 707 individuals or 36 percent of the total spring migration observations. Both of these sites (**Appendix 3-4** Figure 5) occur within the Mississippi River floodplain and lie outside the project corridor. Within the project corridor point census sites 5 (26 species, 151 individuals) and 1 (34 species, 130 individuals) contained the most species and individuals. Point census site 5 occurs on the south edge of Morrison along Rock Creek (**Appendix 3-4** Figure 3). The area is a shrubland containing areas of wet meadows and forested wetland. The area was populated by European starlings, red-winged blackbirds, chipping sparrows, barn swallows, blue jays, and mourning doves. Point census site 1 occurs along the Rock River (**Appendix 3-4** Figure 1). The area is a forested wetland. A number of avian species use the Rock River as stop-over habitat during migration. These included the Canada goose, mallard, wood duck, and double-crested cormorant. The forested area was also used by the great blue heron, American crow, American robin, and common grackle.

BREEDING SEASON

Breeding season censuses were conducted between 5 and7 June and 19 and 21 June 2007. Eighty-six species of 39 families were encountered during this period (**Appendix 3-6** Tables 1 and 2). Three of the species (American white pelican, ring-billed gull, herring gull) detected are not likely to breed in the corridor.

Eighty-five species were detected during timed point counts (**Appendix 3-6** Table 1) and thirty-six species were encountered during the driving census (**Appendix 3-6** Table 2). A total of 1472 individuals were observed during the breeding bird point census. Point census sites 11 and 12 accounted for 602 individuals or 41 percent of the breeding bird observations. As previously described these two areas occur within the Mississippi River floodplain and lie outside the project corridor (**Appendix 3-4** Figure 5). Within the project corridor, point census sites 5 (19 species, 106 individuals), 1 (34 species, 98 individuals), and 6 (23 species, 98 individuals) contained the most species and individuals. Point census site 5 occurs on the south edge of Morrison along Rock Creek (**Appendix 3-4** Figure 3). The area is a shrubland containing areas of wet meadows and forested wetland. The common species within this area were chimney swift, European starling, house sparrow, barn swallow, and field sparrow. Point census site 1 occurs along the Rock River (**Appendix 3-4** Figure 1). The area is a forested wetland and contained red-winged blackbird, common grackle, European starling, American robin, barn swallow, brown-headed cowbird, house wren, and northern cardinal. Point census site 6 occurs just west of Morrison (**Appendix 3-4** Figure 3). Within this forested area occurs an unnamed tributary of Rock Creek. Areas along this tributary have been delineated as wet meadow. Common species at this site include the common grackle, rock pigeon, European starling, cedar waxwing, brown-headed cowbird and house sparrow.

FALL MIGRATION

Censuses were conducted on 29-30 September and 9-12 November 2007. Seventy-four species of 32 families were encountered during the fall census period *(***Appendix 3-7** Tables 1 and 2*)*. Sixty-nine species were detected during timed point counts (**Appendix 3-7** Table 1) and twenty-seven species were encountered during the driving census (**Appendix 3-7** Table 2).

A total of 1759 individuals were observed during the fall migration in and around the project corridor (**Appendix 3-7** Table 1). Point census sites 11 (Mississippi River shore) and 12 (Fulton Marsh) accounted for 572 individuals or 33 percent of the total fall migration observations. Both of these sites (**Appendix 3-4** Figure 5) occur within the Mississippi River floodplain and lie outside the project corridor. Within the project corridor, point census sites 4 (26 species, 219 individuals) and 1 (25 species, 155 individuals) contained the most species and individuals. Point census site 4 occurs between Interstate 88 and the Lyndon-Agnew Railroad prairie Nature Preserve (**Appendix 3-4** Figure 2). The area is a borrow lake surrounded by shrubland. The area was populated by Canada goose, red-winged blackbird, common grackle, cedar waxwing, tree swallow, American goldfinch, and barn swallow. Point census site 1 occurs along the Rock River (**Appendix 3-4** Figure 1). The area is a forested wetland. Common species included the common grackle, European starling, brown-headed cowbird, Canada goose, and mallard.

There are a number of groups of birds that have important functions within the terrestrial and aquatic ecosystems. Some of these groups are subject to national plans. These groups include the following.

Waterfowl

Eight species of waterfowl (Family Anatidae) were observed in and around the project corridor (**Appendix 3-1** Table 2). These species were abundant in and around the project corridor during the spring migration (**Appendix 3-5** Table 1), breeding season (**Appendix 3-6** Table 1), and fall migration (**Appendix 3-7** Table 1). Point census sites 11 and 12 in the Mississippi River floodplain and site 1 along the Rock River contained the most species and numbers of waterfowl during the three season censuses. The species with the most numbers were Canada geese, wood ducks, mallards, and blue-winged teal.

Shorebirds

Shorebirds include the plovers, yellowlegs, sandpipers, and snipes. These species forage in areas containing shallow water and sparse vegetation, such as wetlands, river floodplains, sand and gravel bars, and flooded agricultural fields. Eight species of shorebirds were identified in or near the project corridor (**Appendix 3-1** Table 2). The most common shorebird in the project corridor was the killdeer and it occurred throughout the corridor. The remaining species of shorebirds within the corridor were uncommon and occurred mainly at point census site 11 near the Mississippi River.

Wading Birds

Bitterns, herons, egrets, and cranes are often referred to as wading birds. Five species of wading birds were observed in and around the project corridor (**Appendix 3-1** Table 2). The most common species within the project corridor during all three season censuses was the great blue heron. Point census sites 11 and 12 on the Mississippi River floodplain are important use areas for these wading birds during the spring, breeding, and fall periods.

Herons tend to nest near the tops of trees in a communal setting called a rookery. There can be hundreds of herons nesting within these rookeries. There were no rookeries observed in the project corridor. The only known heron rookery in the vicinity occurs on Beaver Island within the Mississippi River just south of Clinton, Iowa. This rookery is approximately 3.5 mil (2 km) southwest of the western end of the project corridor. Most likely, the great blue herons observed at sites 11 and 12 are from this rookery.

Raptors

Raptors include birds of prey such as eagles, hawks, falcons, owls, and vultures. Nine species of raptors were observed in and around the project corridor (**Appendix 3-1** Table 2). The most common raptors in the project corridor were turkey vultures, red-tailed hawks, American kestrels, and coopers hawks. During the breeding season, turkey vultures were common at point census sites 2 (Forest), 3 (Forest), and 4 (Shrubland/Borrow Lake). Red-tailed hawks were observed at point census sites 1

(Riparian Forest), 2 (Forest), and 10 (Shrubland/Grassland). During the fall driving census, a large number of broad-winged hawks were observed over the pasture/hayfield cover type (**Appendix 3-7** Table 2).

Neotropical migrants

Neotropical migrants are birds that winter in the American tropics and migrate to the United States and Canada to breed. Groups such as flycatchers, vireos, swallows, thrushes, and warblers are Neotropical migrants. A total of 50 species of Neotropical migrants were observed within and near the project corridor (**Appendix 3-1** Table 2). The breeding season survey (**Appendix 3-6** Table 1) detected 30 species of these migrants that nest within and around the project corridor. The most abundant Neotropical migrant species were the northern rough-winged swallow (105 individuals) at point census sites 11 and 12 and the chimney swift (79 individuals) at point census sites 11 and 5. The most widely distributed species within the project corridor were the house wren (10 point census sites), eastern wood-pewee (8 point census sites), and the indigo bunting (8 point census sites). The house wren nests in cavities and will use nest boxes. It occurs in woodlands, shrublands, farmlands, and suburban areas. The eastern wood-pewee occurs within areas of open forests or woodlands, wooded edges, and parks. The indigo bunting occurs within wooded edges, shrublands, and weedy fields.

All of the thirteen breeding bird point census sites (**Appendix 3-6** Table 1) contained Neotropical migrants. The species composition and the number of individuals present at a point varied. Point census site 11 (along the Mississippi River) contained the most species (12) and the most individual birds (131). Within the project corridor point census sites 2 and 7 contained the most species (11) but point census site 5 contained the most individuals (47).

Species of Neotropical migrants occupy many different kinds of habitat from woody streamside thickets, forest edges, open woodlands, shrubby areas, parks, old brushy fields, early success ional fields, hedgerows to grasslands and forests. The more sensitive species are area-sensitive and require large contiguous acreages of grassland or forest habitat. These area-sensitive species rarely nest in small habitat blocks, avoid habitat edges, or do not nest successfully near edges. These species generally do poorly in areas where the habitat is broken into small isolated blocks of varying sizes by roads, pipelines, power lines, and residential areas. This process of breaking large contiguous habitat into smaller areas is called habitat fragmentation.

Herkert et al. (1993) have provided a list of those forest and grassland species of Illinois that are area-sensitive. They have divided them into those species that are “highly sensitive” to fragmentation and those that are “moderately sensitive”. During the 2007 avian survey a number of these area-sensitive species were detected within the project corridor (**Appendix 3-6** Table 1). With regards to forested areas, those that are “highly sensitive” included the yellow-throated vireo and American redstart. Those that are “moderately sensitive” included the red-eyed vireo, scarlet tanager, northern parula, blue-gray gnatcatcher, and wood thrush. The only area-sensitive species of grassland bird identified in the project corridor was the savannah sparrow which is listed as “highly sensitive”.

Recreationally and Commercially Important Species

Thirty-three game species have been reported in the area (**Appendix 3-1** Table 1), 21 waterfowl, four upland game birds, three rails (including the coot), two shorebirds, the mourning dove, and the American and fish crows. Most of the waterfowl occur in pools near the Mississippi and Rock rivers.

Eight species of waterfowl were observed in or near the corridor (**Appendix 3-1** Table 2). Ducks are an important recreational species in the Fulton, IL area. However, no significant duck hunting areas are located in the project corridor. Upland game species, wild turkey, ring-necked pheasant, American crow, and mourning dove) were also encountered in the project area. None of these species is likely to be particularly important to the economy of the area.

Bald eagles winter along the Mississippi in the Fulton area and are a tourist attraction. Bald eagles have nested near the corridor in recent years (**Appendix 3-4** Figure 2, Figure 9).

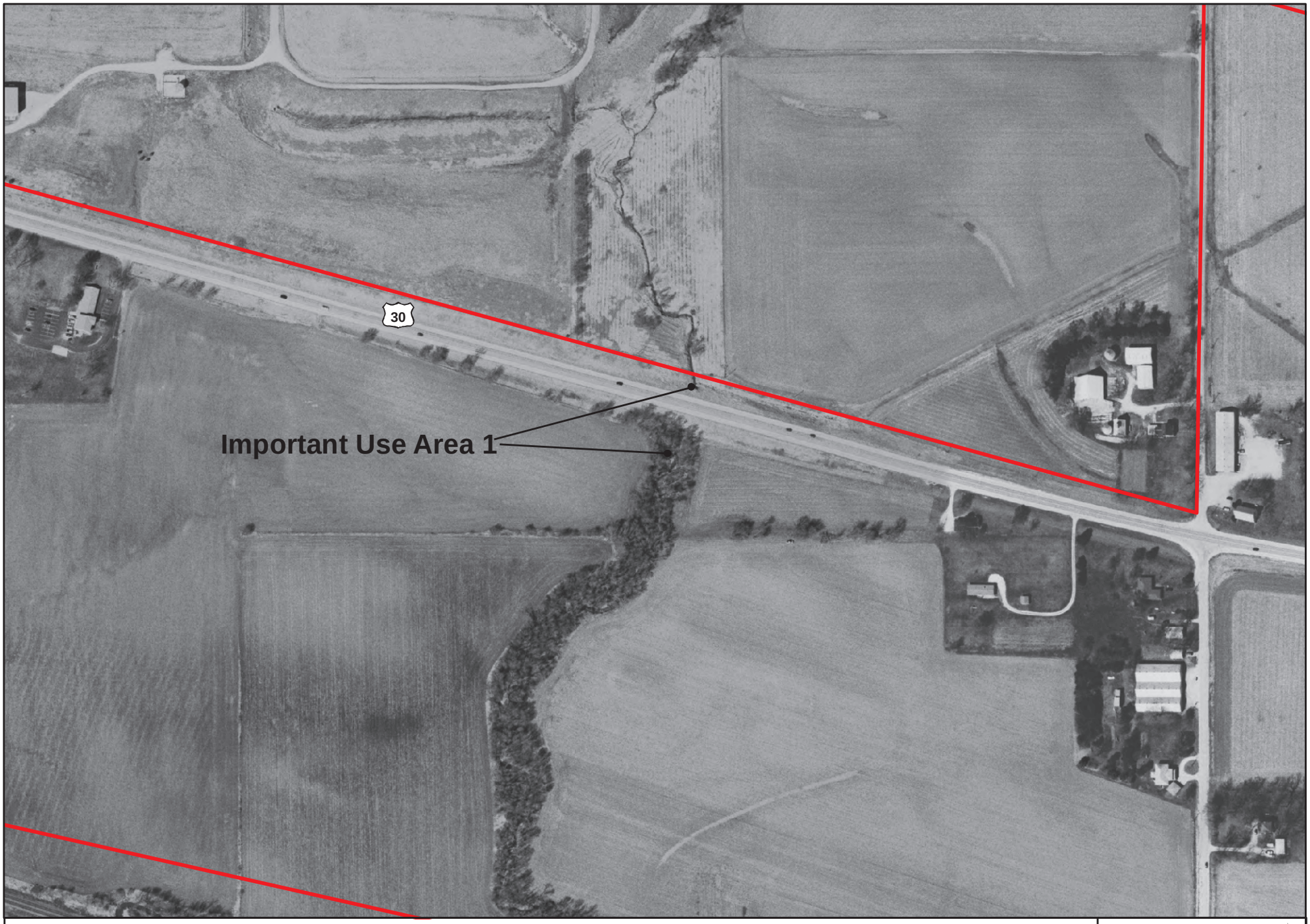


Figure 3-1: Amphibian and Reptile Important Use Area 1, north of Round Grove. Aquatic site 6/Terrestrial site 6, Whiteside County, Illinois.

INHS

0 100 200 41 400 Feet

N

Jarvis, 7/25/08

Figure 3-2: Amphibian and reptile Important Use Area 2, 7.0 km East-southeast of Fulton (Aquatic sites 9&10), Whiteside County, Illinois.

INHS

0 100 200 43 400 Feet

N

Jarvis, 7/25/08

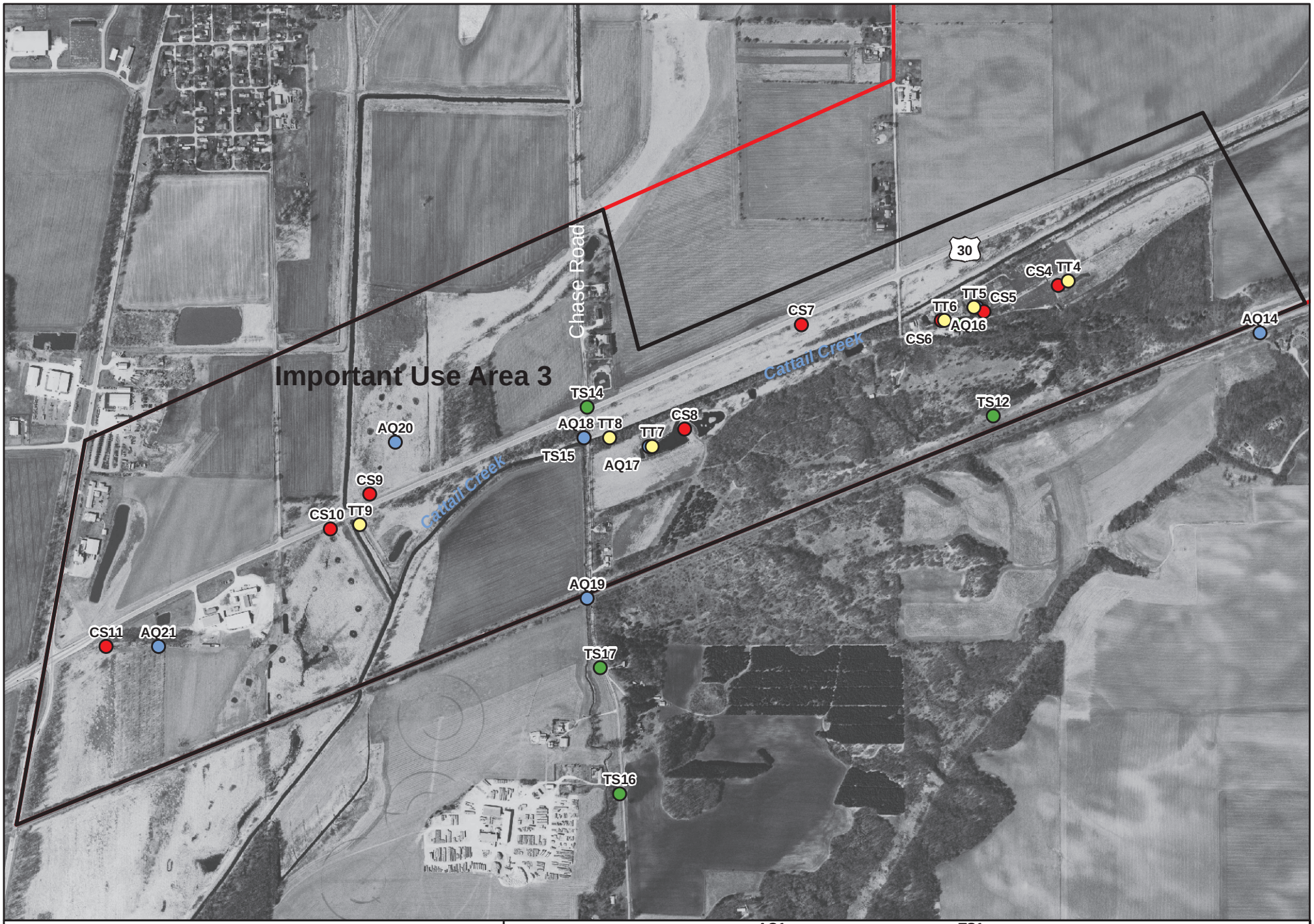


Figure 3-3: Amphibian and Reptile Important Use Area 3, Whiteside County, Illinois.

Legend

- Study Area
- Important Use Area 3
- AQ1 — Acquatic Survey
- CS1 — Call Survey
- TS1 — Terrestrial Survey
- TT1 — Turtle Trap
- INHS

0 250 500 1,000 Feet

N

Jarvis, 10/20/08

Figure 3-4: Amphibian and reptile survey sites in the proposed US 30 project corridor, Whiteside County, Illinois. Green dots represent terrestrial sites, blue dots represent aquatic sites, red dots represent amphibian call survey sites, and yellow dots represent turtle trap sites.

Legend

- Study Area
- AQ1 — Acquatic Survey
- CS1 — Call Survey
- TS1 — Terrestrial Survey
- TT1 — Turtle Trap

INHS

0 2,640 5,280 10,560 Feet

N

Jarvis, 7/24/08

Chapter 4: Aquatic Resources

- Mark J. Wetzel, Steven J. Taylor, Christopher A. Taylor, Jeremy S. Tiemann, and Jens D. Sanberger

Introduction.

This chapter summarizes the results of our 2007 assessments of and surveys for aquatic resources associated with streams within or adjacent to the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois. Field methods used during this 2007 study are described in **Appendix 3-8**.

Riverine and Lacustrine cover types.

Table 2-1 (Chapter 2: Vegetation: Botanical Surveys and Cover Typing) summarizes the areas within the U.S. Route 30 project corridor that have been categorized as Lacustrine and Riverine. Of the 21,985.72 acres (34.35 m^2) encompassed by the project corridor, 0.12% (26.3 acres / 0.041 m^2) was cover typed as Lacustrine, and 0.03% (6.26 acres / 0.0098 m^2) was cover typed as Riverine.

Site Reconnaissance - Steven J. Taylor and Mark J. Wetzel

On 12-13 March 2007, Steven J. Taylor and Mark J. Wetzel visited the U.S. Route 30 project corridor to conduct a reconnaissance of the proposed corridors designated in the Further Studies Transmittal / project tasking (dated 6 March 2007). During our March visit, 21 sites associated with the 13 streams noted in the project tasking were visited; one additional site (Rock Creek, US30-22) was added in June. **Table 4-1** presents abbreviated locality information for the 22 sites discussed herein. All stream sites are designated on the map in **Figure 4.1A**. **Appendix 4-1** includes photographs of these 22 stream sites.

Habitat Assessments - Steven J. Taylor and Mark J. Wetzel

Habitat assessments were completed at 22 stream sites within and adjacent to the proposed IDOT U.S. Route 30 project corridor to ascertain their status and possible consideration for further study to document aquatic resources (surveys for fishes, freshwater mussels, other aquatic macroinvertebrates, and water quality monitoring).

Mean habitat scores for these 22 sites ranged from 30.5 to 95.5 (**Figure 4-1B**); 19 sites (2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21) received 'poor' average habitat quality ratings; the remaining three sites (1, 6, 7) received ‘fair’ average habitat quality ratings. No sites were ranked as ’good’ or 'excellent', and the average of all habitat assessment scores was 63.6. **Appendix 4-2** presents the average rating for each of 12 parameters contributing to overall habitat assessment scores for these 22 stream sites.

Based upon the habitat assessment scores and proximity of the 22 sites to the proposed corridor alignments, 16 sites were chosen for further study; surveys for fishes, unionid mussels, and other aquatic macroinvertebrates, and water quality monitoring were conducted at these 16 sites during the Spring, Summer, and Autumn seasons of 2007. Six sites (4, 5, 8, 11, 17, 19) were eliminated from further study based upon their low habitat assessment scores, proximity to the proposed alignment, and/or potential to become intermittent during the study period.

Table 4-1. Site number and abbreviated locality information for 22 stream sites within or adjacent to the proposed IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, where surveys for aquatic resources were conducted by INHS personnel during 2007. Although habitat assessments were completed for all 22 sites, six sites (those shaded in gray: sites 4, 5, 8, 11, 17, 19) were eliminated from further study (surveys for fishes, unionid mollusks, other aquatic macroinvertebrates, and water quality monitoring) based upon their low habitat assessment scores, proximity to the proposed alignment, and/or potential to become intermittent during the study period. **Appendix 4-1** includes photographs of these 22 stream sites.

Site No.

US30-1. Union drainage ditch, @ U.S. Route 30 culvert, NE edge of Allen (town); latitude: 41.7722°N, longitude: 89.7222°W.

US30-2. Rock River, @ U.S. Route 30 bridge, 0.8 mi W of Allen (town); latitude: 41.7723°N, longitude: 89.7457°W.

US30-3. Elkhorn Creek, @ U.S. Route 30 bridge, 0.4 mi NNW of Como (town); latitude: 41.7721°N, longitude: 89.7720°W.

US30-4. Elkhorn Creek, @ Como Road, 0.5 mi W of Como (town); latitude: 41.7662°N, longitude: 89.7797°W.

US30-5. Elkhorn Creek, @ I-88 access ramp, 0.7 mi WSW Como (town); latitude: 41.7603°N, longitude: 89.7842°W.

US30-6. Deer Creek, @ U.S. Route 30 culvert, 1.4 mi ENE Round Grove (town); latitude: 41.7891°N, longitude: 89.8447°W.

US30-7. Deer Creek, @ Blue Goose Road bridge, 1.8 mi ESE Round Grove (town); latitude: 41.7722°N, longitude: 89.8434°W.

US30-8. Deer Creek, @ I-88 bridges, 2.0 mi SSE Round Grove (town); latitude: 41.7627°N, longitude: 89.8473°W.

US30-9. Unnamed tributary of Rock River, @ U.S. Route 30 culvert, 0.5 mi NW Round Grove (town); latitude: 41.7914°N, longitude: 89.8771°W.

US30-10. Unnamed tributary of Rock River, @ Bunker Hill Road bridge, 0.9 mi SW Round Grove (town); latitude: 41.7722°N, longitude: 89.8819°W.

US30-11. French Creek, @ U.S. Route 30 bridge, 1.6 mi ESE of Morrison (town); latitude: 41.8032°N, longitude: 89.9354°W.

US30-12. French Creek, at Sawyer Road bridge, 0.9 mi ESE Morrison (town); latitude: 41.8019°N, longitude: 89.9498°W.

[Table 4-1 concluded on following page]

Table 4-1 (concluded).

Site No.

US30-13. Rock Creek, downstream of Prairie Center Road bridge, adjacent to (east side of) Lister Road, 1.0 mi SSW Morrison (town); latitude: 41.7940°N, longitude: 89.9728°W.

US30-14. Unnamed tributary of Rock Creek, @ Lister Road bridge (~60 yds upstream of its confluence with Rock Creek), 1.4 mi SSW Morrison (town); latitude: 41.7908°N, longitude: 89.9738°W.

US30-15. Unnamed tributary (1-E) of Rock Creek, @ Garden Plains Road culvert, at S edge Unionville (town); latitude: 41.8177°N, longitude: 89.9881°W.

US30-16. Unnamed tributary (2-W) of Rock Creek, @ Garden Plains Road culvert, 1.1 mi WSW Unionville (town); latitude: 41.8179°N, longitude: 90.0040°W.

US30-17. Spring Brook Creek, @ RR trestle crossing, just SW of Hillside Road, 3.0 mi WNW of Unionville (town); latitude: 41.8393°N, longitude: 90.0334°W.

US30-18. Spring Brook Creek, @ Acker Road bridge, just N of U.S. Route 30, 3.5 mi E of Fulton (town); latitude: 41.8604°N, longitude: 90.0865°W.

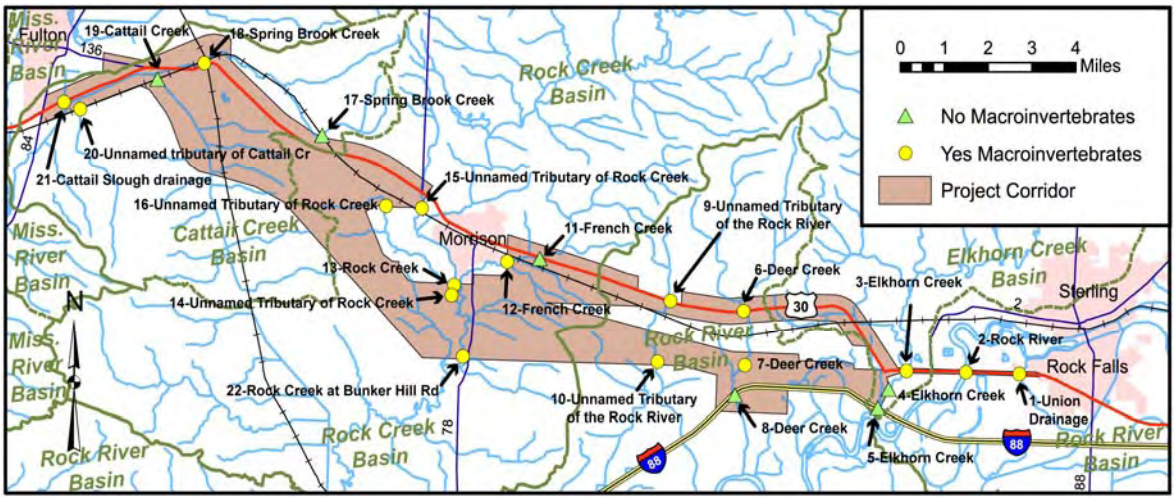
US30-19. Cattail Creek, ~350 yds ENE Frog Pond Road (co. rd. 700E), @ RR trestle/bridge, ~2.7 mi ESE Fulton (town); latitude: 41.8549°N, longitude: 90.1067°W.

US30-20. Unnamed tributary of Cattail Creek, adjacent to (along W side of) Chase Road, ~50yds S (upstream) of Chicago & Northwestern RR trestle crossing (*over* Chase Road), 1.8 mi SE Fulton (town) (and 0.3 mi S U.S. Route 30); latitude: 41.8447°N, longitude: 90.1404°W.

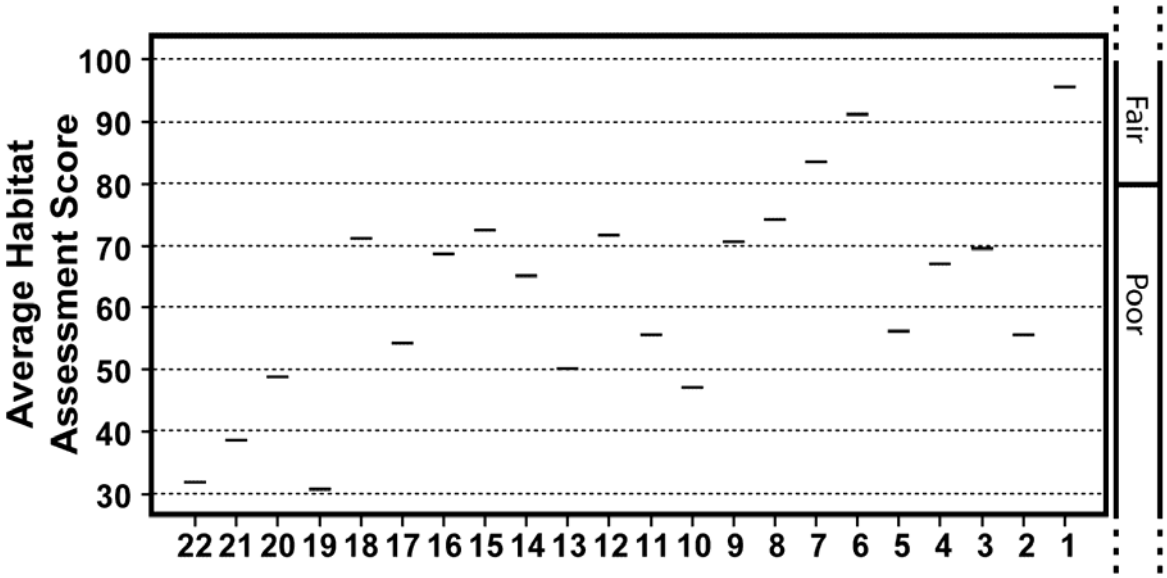
US30-21. Cattail Slough drainage, @ U.S. Route 30 culvert, 1.5 mi S Fulton (town); (0.4 mi E IL Route 84), along east side Millroad Marsh Waterfowl conservation area; latitude: 41.8466°N, longitude: 90.1477°W.

US30-22. Rock Creek at Bunker Hill Road bridge, 4.2 mi S Morrison (town); latitude: 41.7718°N, longitude: 89.9680°W°W.

Figure 4-1. Map (**A**), and mean habitat assessment scores (**B**) for 22 stream sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, completed by INHS personnel S.J. Taylor and M.J. Wetzel on 13-14 March (sites 1-21) and on 5 July (Site 22) 2007. Specific locality information for these 22 sites is presented in **Table 4-1**. EPA watershed boundaries are shown in green, labeled in italics. Assessment scores represent an average of scores determined by two researchers. A site is considered to be: "Excellent" with a habitat score of ≥130; "Good" with a habitat score of 110-129.9; "Fair" with a habitat score of 80-109.9; or "Poor" with a habitat score <80. **Appendix 4-1** includes photographs of these 22 stream sites.



A. Map of the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois.



B. Mean habitat assessment scores for 22 stream sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois.

Fishes - Christopher A. Taylor

Introduction and Historical Data

Aquatic sites in the U.S. Route 30 project corridor are contained, for the most part, within the Rock River drainage basin of Illinois. Exceptions include sites 18, 20, and 21 (**Table 4-1**) which are in the Upper Mississippi drainage basin; these three sites are located on small streams which all drain into Cattail Creek, a tributary of the Mississippi River (**Figure 4-1A**). To compile historical records for fishes known to occur in the project corridor, the Illinois Natural History Survey Fish Collection database was searched. The INHS Fish Collection is the most comprehensive collection of fish records in Illinois as it contains vouchered fish specimens from collections made by both INHS staff and IDNR fisheries biologists. Illinois Department of Natural Resources creel census data for sites near the project corridor was also examined for the presence of additional fish records.

Fishes recorded from the Rock River and the Cattail Creek drainages total 109 species in 22 families (**Appendix 4-3**). Five state endangered and five state threatened (IESPB 2004) are known from these systems; none of these species, however, were collected during our 2007 surveys for fishes in the U.S. Route 30 project corridor (see Chapter 6 "Threatened and Endangered Species – Fishes" in this report).

Results and Discussion

A total of 46 fish species in 13 families were collected by INHS personnel in the U.S. Route 30 project corridor during 2007 (**Appendix 4-4**). No species listed at either state or federal as threatened or endangered were collected or observed in the proposed project corridor.

Stream Quality.

US30-1. Site 1, a first order tributary of the Rock River, exhibited low levels of siltation and clear water and contained a mix of shallow gravel riffles and pools **(Appendix 4-1: Figure 1**). These habitat attributes usually indicate higher quality streams. However, the low number of total number of individuals (34) (**Appendix 4-4**) indicates that stream quality at this site may be low. All species encountered are intermediate or tolerant species and were common inhabitants of similar sized streams in northern Illinois. Reasons for the low number of individuals encountered were not obvious during site visits.

US30-2. With 27 species present, the Rock River at Site 2 (**Appendix 4-1: Figure 2**) represented one of the most diverse sites sampled for the current study. However, that high level of diversity – when compared to other sites in the project corridor – may be due more to its large catchment size rather than habitat quality. Large rivers can be difficult to collect with standard techniques and – given the large channel width (>80 m) and depth (> 1.5 m) at Site #2 – our results may not accurately represent the total fish fauna present at the site. It is likely that at least 15 to 20 other species may occur there in small numbers. Shallow gravel riffles lacking silt accumulations present on and along the west bank of Site 2 indicate that overall habitat quality was good. The presence of three intolerant species (bullhead minnow, smallmouth bass, and banded darter) in higher numbers (>10) (**Appendix 4-4**) supports a higher quality habitat designation for this site.

US30-3. With 27 species present (**Appendix 4-4**), Site 3 represented one of the most diverse sites sampled for the current study. Elkhorn Creek (**Appendix 4-1: Figures 3,**

4) represents one of the larger streams sampled in the project corridor; however, the presence of clean riffles and alternating pools indicate higher quality habitat. Both stream banks also had intact, wooded riparian corridors. These habitat attributes likely contribute to the high species diversity and total number of individuals (>400) found at this site. The presence of two intolerant darter species (slenderhead darter and banded darter) and three other intolerant species (smallmouth bass, highfin carpsucker, and northern hogsucker) supports a higher quality habitat designation for this site.

US30-6. Site 6, on Deer Creek, was a narrow (<5 m wide) third order stream with relatively high levels of siltation in pools. Some clean riffles were also present. All species present are common inhabitants of small, headwater streams in northern Illinois; the most abundant species collected at this site (bluntnose minnow, central stoneroller, and johnny darter) are intermediate and represent some of the most common fishes in Illinois (**Appendix 4-4**). Over 75% of species present were intermediate or tolerant (**Appendix 4-4**). A high number (33) of the intolerant southern redbelly dace were collected at this site; however, that species is frequently encountered in streams with degraded habitat across central and northern Illinois. Two individuals of the intolerant banded darter were also collected at Site 6. We believe the presence of two intolerant fish species is not indicative of high quality habitat at Site 6.

US30-7. Site 7, also on Deer Creek, is located 1.2 mi downstream (south) of Site 6, and was similar in overall habitat conditions with the exception of being wider (~ 8m) and having less riparian vegetation. With minor exception, fish diversity and number of individuals at Site 7 (**Appendix 4-4**) were very similar to those at Site 6. All species present are common inhabitants of small, headwater streams in northern Illinois. Over 85% of species present were intermediate or tolerant and represent some of the most common fishes in Illinois. A high number (44) of the intolerant southern redbelly dace were collected at this site; however, that species is frequently encountered in streams with degraded habitat across central and northern Illinois. The fish fauna present at Site 7 is not indicative of high quality habitat.

US30-9. Site 9, an unnamed tributary of the Rock River, is a small (~ 2m wide) second order stream surrounded by agricultural land (**Appendix 4-1: Figure 9**). Abundant accumulations of silt were found in pool habitats upstream of US 30. The small size and catchment area accounts for the low observed diversity (4) (**Appendix 4-4**). This site may also be devoid of water during dry times of the year. With the exception of a single southern redbelly dace, all other fishes collected at Site 9 are tolerant and widespread species. The lack of benthic fishes and the dominance of common and very tolerant species (bluntnose minnow, creek chub, and green sunfish) indicates that lower quality and/or intermittent habitat is present at Site 9.

US30-10. Site 10, located on the unnamed tributary of the Rock River 1.5 mi downstream (SSW) of Site 9, was similar in overall habitat conditions to those present at Site 9, with the exception of being wider (~ 8m) and completely lacking an overhead tree canopy. Both streambanks at Site 10 were composed entirely of grasses (**Appendix 4-1: Figure 10**) and surrounding land use practices was entirely agricultural. Species diversity was significantly higher (17) at Site 10 compared to Site 9 (4 speices) (**Appendix 4-4**). All species encountered at Site 10 are common inhabitants of northern Illinois streams and are either intermediate or tolerant species. While two species of darters (fantail and johnny darter) were collected at Site 10, both are intermediate species frequently found in low to moderate quality streams in Illinois. The higher

species diversity at Site 10 is more likely accounted for by its larger catchment size and permanence rather than reflecting higher quality habitat.

US30-12. Site 12, on French Creek, contained a dichotomy of habitat types. Upstream of Sawyer Road, the stream appeared channelized and was devoid of woody riparian vegetation. Downstream it was composed of alternating shallow pools and riffles (**Appendix 4-1: Figure 12**) and was wooded along the north bank. The presence of gravel and cobble substrates and low levels of siltation downstream of the bridge contributed to the presence of high numbers of two darter species (fantail and johnny darter). Over 90% of species present were intermediate or tolerant and represent some of the most common fishes in Illinois (**Appendix 4-4**). The single tolerant species present (southern redbelly dace) is frequently found in lower quality streams in Illinois and is not indicative of higher quality habitat. While the total number of individuals was high, the fish fauna present (12 total species) at Site 12 and upstream habitat attributes reflect a site of lower quality.

US30-13. Rock Creek at Site 13 is a third order stream approximately 15 m wide with both open and tree-lined banks. Stream banks were very steep. Instream habitat was rather uniform and composed entirely of a run. The low number of species (8) and total number of individuals (21) (**Appendix 4-4**) was due to sampling conditions rather then poor quality habitat. During both of our visits to this site to conduct our surveys for fishes, water levels were high and sampling with a minnow seine was less than ideal. Likewise, stream size and depth and steep banks found at Rock Creek at Site 13 precluded the use of boat or barge-mounted electroshocking equipment. While the habitat at Site 13 was uniform (i.e., lacking alternating riffles and pools), we believe that additional sampling at lower water levels would yield additional species and individuals. Those additional efforts would not likely find other intolerant species not already observed in the US Route 30 project corridor, and would not significantly increase the percent of intolerant species found at the site. While our sampling results were not representative of the fish community present, we believe that the physical appearance of habitat at Site 13 indicates that average habitat quality for northwestern Illinois streams is present.

US30-14. Site 14 was sampled for fishes at Prairie Center Road rather than Lister Road. This unnamed tributary of Rock Creek at Prairie Center Road was narrow (2 m) and shallow (< 0.3 m) with clean gravel riffles and shallow pools and thinly wooded banks. The fish fauna present at Site 14 was composed entirely of intermediate and tolerant species (**Appendix 4-4**). Although all common species, the species diversity at the site was rather high (12) for a stream of that size and we believe that may be due to higher habitat quality. Siltation levels at Site 14 were low, and much of the surrounding land use practices upstream of Prairie Center Road appeared to be non-row crop agricultural or undeveloped.

US30-15. Site 15 was a small (~1 m wide) second order tributary of Rock Creek (**Appendix 4-1: Figure 15**) with open or tree-lined banks. Shallow (<0.2 m) riffles and pools were present. The low species diversity (4) is not indicative of low habitat quality but rather the small size of the stream. Site 15 may also be intermittent. All species collected are either intermediate or tolerant (**Appendix 4-4**) and are common inhabitants of small first or second order streams in Illinois. The lack of large amounts of siltation and the fish fanua present support an average habitat quality designation for Site 15.

US30-16. Site 16 was a small (~1 m wide) first order tributary of Rock Creek (**Appendix 4-1: Figure 16**) with open banks. Instream habitat was composed entirely of a flowing run with an average depth of 0.4 m. The deeper depths may account for the slightly higher species diversity (7) found here (**Appendix 4-4**). All species collected are either intermediate or tolerant (**Appendix 4-4**), and are common inhabitants of small first or second order streams in Illinois. The lack of large amounts of siltation and the fish fanua present support an average habitat quality designation for Site 16.

US30-18. Site 18 is located o;n a 5-7 m wide second order tributary of Cattail Creek (**Appendix 4-1: Figure 18**) with open banks. Instream habitat was good with alternating riffles and pools. Siltation levels were low, most likely due to upstream land use practices not being entirely in row-crop agriculture. Species diversity (9) was average for second order streams in northern Illinois and with one exception, all species were either intermediate or tolerant (**Appendix 4-4**). The single intolerant species collected (southern redbelly dace) is not indicative of high quality habitat as that species is frequently encountered in streams with degraded habitat across central and northern Illinois. The low level of siltation present at Site 18 may explain the very high number of blacknose dace (>100) collected at this site. Blacknose dace rarely occur in such large numbers. While the fish fauna present is average for a second order stream in northwestern Illinois, the high number of blacknose dace, low siltation levels, and alternating series of riffles and pools supports a higher quality habitat designation for Site 18.

US30-20. Site 20 is located on a 1-2 m wide first order tributary of Cattail Creek with both open and tree-lined banks (**Appendix 4-1: Figure 20**). Shallow (<0.2 m) riffles and pools were present. Fish diversity was high (11) for a stream of this size and three (hornyhead chub, emerald shiner, and southern redbelly dace) intolerant species were collected at the site (**Appendix 4-4**). While southern redbelly dace are not indicative of high habitat quality, the presence of two additional intolerant species and a high level of species diversity indicates that Site 20 is of higher quality relative to other first and second order streams in the proposed project corridor.

US30-21. Site 21, Cattail Slough drainage, was composed of a habitat type not seen at other sites in the US Route 30 project corridor – slow to non-flowing slough with open banks devoid of woody vegetation, and situated in the historic floodplain of the Mississippi River. During our spring and summer sampling visits, the slough was overgrown with aquatic vegetation which made sampling ineffective. High nutrient input from surrounding agricultural activities and the lack of tree canopy to shade the water body facilitated the abundant growth of aquatic vegetation. Only 8 species of fishes (**Appendix 4-4**) and a high number of the intolerant emerald shiner (>100) were collected at Site 21. We believe that additional sampling efforts when aquatic vegetation does not dominate the water column would yield additional fish species. However, those additional efforts would not likely find other intolerant species not already observed in the US 30 project corridor or known to occur in the Mississippi River floodplain of northwestern Illinois. While our sampling results were not representative of the fish community present, we believe that the physical appearance of habitat at Site 21 indicates that average habitat quality for low-laying floodplain water bodies in northwestern Illinois is present.

US30-22 Rock Creek at Site 22, located 2 mi downstream (south) of Site 21, waas approximately 15 m wide with open banks devoid of woody vegetation (**Appendix 4-1:**

Figure 22). Water depths were shallower than at Site 13 and sampling with a minnow seine proved effective. Alternating riffles and runs were present at the site, with some siliation present. Surrounding land use practices were entirely agricultural, with little to no buffer between those activities and Rock Creek. For a stream the size of Rock Creek at Site 22 (third order), fish diversity (8) and total number of individuals (84) (**Appendix 4-4**) was low. With one exception, all species collected at Site 22 were common to northern Illinois streams and were either intermediate or tolerant. We do not believe that the 4 individuals of the intolerant banded darter that were collected at Site 22 were indicative of high quality habitat. The low species diversity and the habitat and surrounding land use practices found at Site 22 suggest a low habitat quality designation.

In summary, all fish species collected from the US 30 project corridor during 2007 by INHS personnel are common inhabitants of northern Illinois streams, and levels of diversity detected at sites are within normal ranges for first, second and third order streams. Intolerant species that were collected in the US 30 project corridor such as the southern redbelly dace, banded darter, bullhead minnow are generally those that can inhabit lower quality streams in Illinois. One stream in the U.S. Route 30 project corridor, Elkhorn Creek (US30-3), is rated as Highly Valued Aquatic Resources (Class B) under the Biological Stream Characterization criteria (Bertrand et al. 1996); another stream, the Rock River (US30-2), is rated as Moderate Aquatic Resource (Class C). Both of these sites contained the highest of level of fish diversity (27 species) recorded during our surveys.

Of the fish species of special concern discussed in Chapter 6, only the starhead topminnow, weed shiner, and blacknose shiner have been recently collected near the U.S. Route 30 project corridor. All of these species were collected from first or second order streams draining into the Green River or Rock River south of Prophetstown. The starhead topminnow, weed shiner, and blacknose shiner usually occur in clearer streams, with sand or mixed sand and silt substrates. Streams with predominately sandy substrates were not found at any of the sites in the U.S. Route 30 project corridor. This fact, in addition to a lack of historical records for these three species in the project corridor, likely preclude them from occurring there.

Surveys for Freshwater Mussels - Jeremy S. Tiemann

Introduction and Historical Data

A literature review and a search of the INHS Mollusk Collection and other museum collections for historical and recent records of freshwater mussels revealed that the Rock River basin near (within 5 miles of) the IDOT U.S. Route 30 project corridor (**Figure 4-1A**) supports an abundant and species rich (31 species) native freshwater mussel fauna, whereas the Cattail Creek basin does not (**Appendix 4-5**). A summary of the historical collections in the Rock River basin is presented below.

Prior to the present survey, four collections of freshwater mussels had been made in the Rock River basin near the U.S. Route 30 project corridor since 1990. These surveys resulted in collection of 14 live species, plus nine species collected only as shells. On 27 September 1990, INHS biologist P.A. Ceas, assisted by G.A. Miller and P.D. Monson, conducted a freshwater mussel survey in the Rock River in Sterling (T21N, R7E, sec. 28 NW) and collected one live black sandshell (*Ligumia recta*) and a relict valve for two other species - the purple wartyback (*Cyclonaias tuberculata*) and the spike (*Elliptio dilatata*); all three species are state-threatened. On 7 August 1992, INHS biologists K.S. Cummings and C.A. Mayer revisited this site and collected a relict valve of the black sandshell. A survey on 6 September 1995 by INHS biologists K.S. Cummings and C.A. Taylor in the Rock River at the Rock Falls boat ramp (T21N, R7E, sec. 28 NE) failed to yield any state-listed species. On 12 October 1997, INHS biologists T.J. Near and J.M. Serb collected a relict valve of the black sandshell during a freshwater mussel survey in the Rock River at a site, 1.5 mi NE Como (T21N, R7E, sec. 28).

Historically, the Rock River basin has supported a diverse (47 species) and abundant freshwater mussel fauna (Cummings and Mayer 1997; Tiemann et al. 2007). Several sub-basin surveys (e.g., Green and Kyte river basins) have occurred recently (Schanzle and Kruse 1994; Tiemann et al. 2005). In addition, spot collections have been made in the mainstem by INHS and IDNR biologists working on various projects over the last 22 years. The results of these recent surveys have shown that the fauna is still relatively intact (32 live species) and contains occasional individuals of uncommon to rare species (Cummings and Mayer 1997; Tiemann et al. 2007).

Results and Discussion

Evidence of freshwater mussels was found at only four of the 16 sites surveyed during 2007 (**Appendix 4-5**): Union Drainage Ditch (site US30-1), Rock River (site US30-2), Elkhorn Creek (site US30-3), and Deer Creek at Blue Goose Road (site US30-7). Eleven species were found alive, including the state-threatened black sandshell. Nine additional species were found only as shells, including the purple wartyback and the spike – both of which are state-threatened (**s**ee Chapter 6 “Threatened and Endangered Species – Mussels” in this report).

Six man-hours were spent during our surveys for mussels in the Rock River at site US30-2 (area surveyed: 3,500 m^2). A total of 92 individuals representing 10 species were found alive, including five live back sandshells; an additional eight species were found as valves, including purple wartyback and spike (**Appendix 4-5**). Catch-per-unit-effort (CPUE) was 15.3 individuals per hour, and individuals appeared to be scattered throughout the entire area. The substrate of the river in the area surveyed was predominately silted sand/gravel with small patches of silted rip-rap.

Three man-hours were spent during our surveys for mussels in Elkhorn Creek at site US30-3 (area surveyed: 3,000 m^2). A total of 33 individuals representing three species were found alive (**Appendix 4-5**). CPUE was 11 individuals per hour, and, as with site US30-2, freshwater mussels appeared to be scattered throughout the entire area. The substrate of the creek in the area surveyed was predominately sand with small patches of silted gravel.

Sampling techniques for freshwater mussels vary depending on the desired objectives with the most commonly used methods being timed searches and area searches (e.g., systematic sampling with quadrats). Timed searches are the most cost effective method for most survey applications and allow many different habitats to be explored relatively quickly. Area searches are better suited for determining density and size demography, but survey costs dramatically increase with the complexity of the sampling technique. Neither method guarantees discovery of all species at a given site and both methods can give similar estimates of certain assemblage variables, including relative abundance and species richness.

We cannot provide density estimates for freshwater mussels at these sites because we did not use quadrats. We did not incorporate a quantitative sampling approach using quadrats at these sites because of time and cost restraints associated with quantitative sampling and the timed search method is the one most commonly used the the Illinois Department of Natural Resources.

In summary, no evidence of freshwater mussels was observed at nine of the 13 sites within the Rock River basin) (US30-6, 9, 10, 12, 13, 14, 15, 16, 22), nor at any of the three Cattail Creek basin sites (US30-18, 20, and 21), and no historical information for mussels was available for the Cattail Creek basin.

Excluding the black sandshell, all of the freshwater mussels collected alive during this study were common inhabitants of central Illinois streams. The Rock River is one of the highest mollusk diversity streams in the state, and therefore, all possible efforts should be made to minimize run-off from construction related activities.

<u>Aquatic Macroinvertebrates</u> - Steven J. Taylor and Mark J. Wetzel

<u>Introduction</u>

Surveys for aquatic macroinvertebrates (other than unionid mussels) were completed by S.J. Taylor and M.J. Wetzel at stream sites in the U.S. Route 30 project corridor (**Table 4-1**) on three occasions during 2007: 9-10 April (Spring sampling period), 4-5 July (Summer sampling period), and 24-25 September (Autumn sampling period). Methodologies used for field collection and lab processing and identification of freshwater mussels follow protocols outlined in the 2007 project tasking from IDOT to INHS, and as discussed in recent project reports compiled by INHS for IDOT (Edwards (ed.] et al. 2006, Feist [ed.] et al. 2006, Feist and Trester [eds.] et al. 2005; Wetzel and Hofmann [eds.] et al. 2003, Wetzel and Hofmann [eds.] et al. 2005), and Taylor and Wetzel (2008). These methods are presented in Appendix 3-8.

<u>Results and Discussion</u>

During this study, 14,273 macroinvertebrates (**Appendix 4-6**) were sorted and identified from aquatic samples taken at the 16 sites in the U.S. Route 30 project corridor. This material includes specimens representing seven phyla, 12 classes, 27 orders, at least 77 families, and well over 100 species. Most sites are represented by 3 replicate samples in one or two major habitat types for each sampling period (April, July, and September of 2007), with the exception of site 22 which was not include during the April 2007 sampling.

We assessed relationships between the metrics Cumulative EPT Richness (EPT Richness is the total number of taxa of Ephemeroptera, Plecoptera, and Trichoptera – an index commonly used in water quality assessments [Plafkin *et al*., 1989]), Mean Taxa Richness, Mean Habitat Assessment Score, and the Mean Family-Level IBI for the sixteen sites at which we collected aquatic macroinvertebrates. In general, these metrics were not well correlated **(Appendix 4-7**), in spite of examination of the data in various ways. For example, on a per-sample basis, Taxa Richness explained only 0.02% of the variation in the Family-Level Biotic Index (p=0.8527, N=147), a non-significant finding. With samples pooled by site (i.e., all dates and replicates pooled), the Mean Habitat Assessment Score explained only 0.04% of the Mean Taxa Richness, another nonsignificant result, largely explained by the much greater numbers of taxa at site 18. The Mean Habitat Assessment Score did a somewhat better job of explaining variability in the Mean Family-Level IBI, with 13.1% of the variation explained by linear regression and up to 24.7% of the variation explained by a simple polynomial regression (**Appendix 4-8**; Mean Habitat Assessment Score = -18.297*[Mean Family-Level IBI]+208.69*[Mean Family-Level IBI]-522.6).

There was a significant difference in taxa richness between sites and between collection dates, and the interaction of site and collection date was significant (**Appendix 4-9**). *Post hoc* multiple comparisons (**Appendix 4-10**) showed that taxa richness was significantly higher at site 18 than at the other sites, for which taxa richness differences could not be disentangled. *Post hoc* multiple comparisons (**Appendix 4-10**) also showed that taxa richness was lower in the April sampling period than in either the July or the September sampling periods; in fact, these latter two sampling seasons did not differ from one another in taxa richness. The Family-Level Biotic Index differed significantly – both across sites and across sampling dates – with a significant interaction term

(sampling data and site). *Post hoc* multiple comparisons (**Appendix 4-10**) failed to clearly tease apart the significant differences in the Family-Level IBI among sites, but *did* reveal that the Family-Level Biotic Index was significantly better (lower) in July and September than in April.

No Plecoptera (stoneflies) were recorded in this study. In general, Plecoptera are among the most sensitve of aquatic insect orders, and are commonly restricted to flowing waters with higher levels of dissolved oxygen (Bouchard 2004).

Notable taxa recorded during this study include an unidentified freshwater sponge (Porifera) from Elkhorn Creek @ U.S. Route 30 (site US30-3), an abundance of gammarid amphipods (Crustacea) at several sites (US30- 9, 14, 15, and 21), large numbers of Corixidae (Hemiptera) at Spring Brook Creek @ Aker Road (site US30-18), and notably diverse ephemeropteran and trichopteran faunas at Elkhorn Creek @ U.S. Route 30 (site US30-3).

Ranking of sites by Cumulative EPT Richness, Mean Taxa Richness, Mean Habitat Assessment Score, and Mean Family-Level IBI (**Appendix 4-11**) gives some indication of which sites might be consider the 'best' with respect to aquatic macroinvertbrate communities. Elkhorn Creek @ US30 (site US30-3) stands out in terms of EPT Richness, with far more taxa recorded than for any other site, and a relatively high Mean Taxa Richness. This same site (US30-3), however, was not particularly notable for Mean Family-Level IBI, where it fell into the middle of the range of values – and as it did initially in the habitat assessments (**Appendix 4-7**). Spring Brook Creek @ Aker Road (site US30-18) had about twice as many individuals as any of the other sites (**Appendix 4-6),** most notably having high numbers of Chironomidae, but also a high level of taxa richness and a reasonably high Mean Family-Level IBI (**Appendix 4-7**). Chironomidae have long been recognized as an important but taxonomically difficult group, with various taxa spanning a broad range of water quality tolerance (e.g., Saether 1970). Deer Creek @ Blue Goose Road (site US30-7) is another notable site – it is the one of the few sites that consistently scored fairly well for all four of the metrics in **Appendix 4-7**. Finally, Rock Creek @ Bunker Hill Road (site US30-22) had relatively high Mean Taxa Richness as well as scoring quite well on the Mean Family-Level IBI (**Appendix 4-7**), and although the site fared less admirably in Cumulative EPT Richness and was the poorest ranking site in the Habitat Assessment, it may also be viewed as an important site in terms of aquatic macroinvertebrate communities.

We also attempted to parse out possible relationships among sites by comparing taxon presence/absence data (derived from **Appendix 4-6**) to examine similarities in taxon occurrence among sites. In general, there were few strong affinities among sites (**Appendix 4-12**), essentially suggesting 'every site is different'. If this interpretation is correct, then, we might infer that sites which appear structurally similar (e.g., size, flow, canopy cover) may vary considerably in water quality. We have already observed that the sites included in this study span a wide array of scales – from the Rock River (which does not even qualify as a wadeable stream – a limitation under which the Family-Level IBI was developed), to small ditches (often with little flow).

Potential impacts on streams evaluated in this study include sedimentation and agricultural chemicals from row crop agriculture, channelization of streams, garbage and appliance dumping, indiscriminate/haphazard bank 'stabilization' with old concrete and asphalt pieces, septic waste associated with urbanization, and sedimentation and

chemical pollution resulting from rural and urban developments. While streams in the U.S. Route 30 project corridor appear to support moderately interesting and typically diverse aquatic macroinvertebrate communities, existing distributional data and information on natural community associations is quite limited, precluding more detailed summaries of unique, rare or exotic species. No federal or state listed endangered or threatened (non-molluscan) aquatic invertebrates are known to occur in the project area.

Water Quality Monitoring. - Mark J. Wetzel and Jens D. Sandberger

Introduction

As outlined in the early 2007 tasking from IDOT, water quality monitoring was to be conducted by INHS personnel at all aquatic sites in the IDOT U.S. Route 30 project corridor during spring, summer, and autumn seasons in 2007.

Table 4-1 provides the site name, locality information, and latitude and longitude coordinates for each of the stream sites surveyed by INHS personnel during 2007; each site is designated on the map in **Figure 4-1A**. Photographs of all sites are provided in **Appendix 4-1**.

Spring 2007 WQ sampling period. Field water quality parameters were measured at and water samples collected from 15 stream sites by M.J. Wetzel and K.L. Moss on 3 & 4 April 2007.

Summer 2007 WQ sampling period. Field water quality parameters were measured at and water samples collected from 15 stream sites by M.J. Wetzel and L.N. Martin on 19 & 20 June 2007.
Autumn 2007 WQ sampling period. Field water quality parameters were measured at and water samples collected from 16 stream sites by M.J. Wetzel and K.L. Moss on 1 and 2 October.

All values for field water quality measurements and for analyses completed in the laboratory on water samples collected from stream sites in the U.S. Route 30 project corridor during the spring, summer, and autumn sampling periods in 2007 are presented in **Appendices 4-13 through 4-21.**

Site US30-22 (Rock Creek at Bunker Hill Road, south of Morrison) was tasked for inclusion in our surveys *after* we completed our summer (19-20 June) water quality monitoring visit to the project corridor; thus, an off-cycle collection of water samples for analyses was completed on 5 July during our summer surveys for aquatic macroinvertebrates at this site. The water sample collected from this site for nutrient analyses (laboratory) was compromised, so no values for those constituents are available for this off-cycle (5 July) collection from this one site; however, values for field water quality measurements, and for metals and other inorganic constituents in samples collected from site US30-22 in July *are* included at the top of **Appendix 4-15 and Appendix 4-21**, respectively (the two appendices reporting the autumn water quality data for those parameters).

Results

Values for field water quality parameters measured at sites located in the U.S. Route 30 project corridor in April, June, and October 2007 can be found in **Appendices 4-13, 4-14**, and **4-15**, respectively. These parameters include: water and ambient temperatures, dissolved oxygen, % saturation of dissolved oxygen, hydrogen ion concentration (as *p*H), specific conductivity, salinity, total dissolved solids, and turbidity.

The results from analyses of physical-chemical properties of, and for nutrients and other consitutents in water samples collected from sites located in the U.S. Route 30 project corridor in April, June, and October 2007 are presented in **Appendices 4-16, 4-17**, and **4-18**, respectively. These parameters include: dissolved inorganic carbon, total dissolved carbon, dissolved organic carbon, sulphates, ammonia nitrogen, nitrate nitrogen, nitrate nitrogen, total phosphorus, hardness, chlorides, total dissolved solids, total alkalinity, and mercury.

The results from analyses of metals and other inorganic constituents in water samples collected from stream sites located in the U.S. Route 30 project corridor in April, June, and October 2007 are presented in **Appendices 4-19, 4-20**, and **4-21**, respectively. Many of the values for inorganic constituents in water samples, from all three sampling periods, were near to or below detection limits (which are noted at the top of each column for each constituent in the appendices).

Appendix 4-22 summarizes some of the physical and biological parameters of the streams in the IDOT U.S. Route 30 project corridor that are being surveyed by INHS personnel in 2007; these include surrounding land use, riparian vegetation, stream substrate type, stream width and depth, aquatic habitat quality, dominant fish species, total # of fish species, flow characteristics, and National Wetland Inventory (NWI) classification.

Chapter 5 Wetlands

JASON ZYLKA, BRIAN WILM, SCOTT WIESBROOK, VALERIE SIVICEK, IAN DRAHEIM, BRAD ZERCHER

Wetland determinations were conducted along the proposed corridor from Sterling/Rock Falls to IL 84 in Whiteside County.All potential wetlands within the project corridor were examined. Wetland delineations follow guidelines and definitions set forth by the U.S. Army Corps of Engineers (Environmental Laboratory 1987). Other reference material used in wetland delineations included: Mohlenbrock (2001), Reed (1988), Swink and Wilhelm (1994), Taft et al. (1997), Sabata (1995) and USDA-Natural Resources Conservation Service (2002). Eighty-three wetland determinations were performed. Sixty-one sites were determined to be wetlands. These sites are depicted in **Appendix 5-1.** Wetland acreage in the US30 corridor totals approximately 98.6 ha (243.6 acres). More details on these sites can be found in the comprehensive wetland summary table, included as **Table 5-1**, or in the individual wetland delineation forms in **Appendix 5-2**.

Wetland Site descriptions

Wet meadows were the most frequently encountered wetland type in the US30 corridor, accounting for just less than half of all wetlands in the corridor (35 sites). These sites accounted for approximately 36.3 ha (89 acres) of the total wetland area, or 36.8% of the total wetland acreage in the corridor. Forested wetlands accounted for 14 sites within the corridor and a total of approximately 15.5 ha (38.4 acres). Two of these sites (sites 73 and 78) were quantitatively sampled, that data is included in **Table 5-3**. Marshes had the largest acreage of any wetland type in the corridor. Seven marshes were present in the project corridor and totaled 44 ha (108 acres) and accounted for 44% of all wetland acreage in the corridor. Two sedge meadows were present in the corridor and totaled 1.6 ha (4.0 acres). One of these sites (Site 19) represented the second most floristically rich site in the corridor with an FQI of 25.5. Two ponds were present and totaled .2 ha (.5 acres). There was one scrub-shrub wetland present in the corridor for a total of .9 ha (2.1 acres). Wetland types are compared to all other cover types in the project area in **Table 2-1**.

Reed canary grass (*Phalaris arundinacea*) was by far the most dominant plant in wet meadows. Other commond dominants in wet meadows included giant ragweed (*Ambrosia trifida*) and water heartsease (*Polygonum amphibium*). Most wet meadows in the corridor were of low natural quality, with the notable exception of Site 81, which had the highest FQI score of any wetland at 25.8, a value indicative of some evidence of native character.

Canopy level dominants in floodplain forests in the US30 corridor usually consisted of cottonwood (*Populus deltoides),* black willow (*Salix nigra)*, silver maple (*Acer saccharinium*), or box elder (*Acer negundo*). Common understory dominants were reed canary grass (*Phalaris arundinacea*) and wood nettle (*Laportea canadensis*). These sites ranged from low to fair quality. Two forested wetlands, site 73 and site 78 (**Table 5-1**), were quantitatively sampled. Each of these sites represent a significant forested wetland in the corridor and each site has a significant portion of wetland acreage extending out of the corridor.

Site 73 is located between Como Road and Moline Road along Elhorn Creek, north of I-88. The site occupies the floodplain on either side of Elkhorn creek and receives floodwater as well as runoff and sheetflow from adjacent uplands. Ten canopy level species were present at this site (**Table 5-3**). By far the most common species was Box elder (*Acer negundo*) followed distantly by Black willow (*Salix nigra*). Cottonwood (*Populus deltoides*) and American elm (*Ulmus americana)* were also dominants at this site, with the other six tree species being less common. The tree density of this site was 706.51 trees/ha, with much of this density coming from Box elder. The understory dominants were Virginia wild rye (*Elymus virginicus*), wood nettle (*Laportea canadensis*), and ground ivy (*Glechoma hederacea*). The soils at this site were determined to be Birds silt loam. The NRCS classifies Birds as a Typic Fluvaquents that is poorly and very poorly drained. The FQI of this site is 13.8, which is indicative of average natural quality. Adventive plants counted for 22.5% of the total species at this site.

Site 78 is located along the Rock River along the west bank of the river. Nine canopy level species were present at this site (**Table 5-3**). This site occupies a relatively small area within the project corridor, but continues to the north along the river and out of the project area. American elm (*Ulmus americana)* was the most common species at this site, with significant numbers of honey locust (*Gleditsia triacanthos*), black walnut (*Juglans nigra*), hackberry (*Celtis occidentalis*), and a lesser amount of silver maple (*Acer saccharinum*) and box elder (*Acer negundo*) as well. Three other tree species are also present but less common. Tree density at this site was 392.8 trees/ha. Canada clearweed (*Pilea pumila*), reed canary grass (*Phalaris arundinacea*), and wood nettle (*Laportea canadensis*) were understory dominants at this site. The soils at this site were determined to be Craigmile fine sandy loam. The NRCS classifies Craigmile as a Fluvaquentic Endoaquolls that is very poorly drained. The FQI of thie site is 17.7 which is indicative of average natural quality. Adventive plants counted for 19.2% of the total species at this site.

The most frequent dominant species in marshes in the corridor were reed canary grass (*Phalaris arundinacea*) and common cattail (*Typha latifolia*). Most marshes in the project area were of fair quality.

In the two sedge meadows in the corridor, common tussock sedge (*Carex stricta*) was a common dominant in both. As noted earlier, one of these sites was of fair quality, and the other (Site 19) had enough floristic quality to possibly be considered an environmental asset.

The two pond wetlands in the corridor did not share any common dominants and were both of low to medium quality.

The one scrub-shrub wetland was dominated by sandbar willow (*Salix exigua*), reed canary grass (*Phalaris arundinacea*), and late goldenrod (*Solidago gigantea*). It was of low quality.

Table 5-1 Wetland Summary Table

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 1	Dominant vegetation: Reed canary grass (herb)						
	Wet meadow	PSS1C	Gilford loam	5.0 (12.5)	14.2	-1.2	17.6
Site 2	Dominant vegetation: Reed canary grass (herb), Purslane speedwell(herb)						
	Wet meadow	PSS1C	Gilford loam	1.2 (3.0)	4.3	-1.3	30.0
Site 4	Dominant Vegetation: Potomogeton nodosus (herb), Narrow-leaved cattail (herb)						
	Pond	None	Water	0.11 (0.29)	7.2	0.6	52
Site 6	Dominant Vegetation: Reed canary grass (herb)						
	Marsh	PEMC, PSS1C, PSS1A, PFO1A, PEMADF	Sawmill silty clay loam	33.7 (83.3)	18.6	-0.9	31.9
Site 7	Dominant Vegetation: Reed canary grass (herb), Sandbar willow (shrub), Late goldenrod (herb)						
	Scrub-shrub wetland	PEMC	Sawmill silty clay loam	0.86 (2.1)	8.0	-0.7	17.6
Site 8	Dominant Vegetation: Reed canary grass (herb), Cottonwood (tree)						
	Forested wetland	None	Ambraw clay loam	0.40 (1.0)	8.2	0.7	29.2

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 9	Dominant Vegetation: Reed canary grass (herb), River bulrush (herb)						
	Marsh	PUBGX	Ambraw clay loam	1.3 (3.19)	12.2	-3.0	3.7
Site 10	Dominant Vegetation: Reed canary grass (herb)						
	Wet meadow	None	Ambraw clay loam	.20 (.49)	5.7	-0.1	40.0
Site 11	Dominant Vegetation: Reed canary grass (herb)						
	Wet meadow	PEMC	Ambraw clay loam	.91 (2.3)	9.9	-1.0	17.4
Site 13	Dominant Vegetation: Reed canary grass (herb)						
	Wet meadow	PEMC	Ambraw clay loam	0.08 (0.20)	4.3	-.04	10.0
Site 14	Dominant Vegetation: Cottonwood (tree), Reed canary grass (herb)						
	Wet meadow	PEMCX	generic Typic Psammaquent	0.06 (0.16)	5.7	-0.7	27.3
Site 15	Dominant Vegetation: Cottonwood (sapling), Panicled aster (herb), Ludwigia palustris (herb), Reed canary grass (herb), Great bulrush (herb)						
	Pond	None	Ambraw clay loam	0.1 (0.3)	15.0	-3.2	8.6
Site 17	Dominant Vegetation: Reed canary grass (herb)						
	Wet meadow	None	Ambraw clay loam	0.06 (0.1)	6.6	-0.1	21.4

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 18	Dominant Vegetation: Giant ragweed (herb)						
	Wet meadow	None	Palms muck	2.7 (6.6)	5.7	-2.0	40.0
Site 19	Dominant Vegetation: Common tussock sedge (herb)						
	Sedge Meadow	PEMA, PEMC	Palms muck	1.0 (2.5)	25.5	-3.3	10.6
Site 20	Dominant Vegetation: Reed canary grass (herb)						
	Marsh	PEMC	Sable silt loam	2.4 (5.9)	12.5	-3.4	13.0
Site 21	Dominant Vegetation: Reed canary grass (herb), Needle spike rush (herb)						
	Marsh	PEMC	Sable silt loam	0.3 (0.7)	4.5	-2.0	50.0
Site 22	Dominant Vegetation: Reed canary grass (herb), Brown fox sedge(herb)						
	Wet Meadow	PEMC	generic Typic Endoaquoll	0.01 (0.02)	10.7	-0.7	22.2
Site 23	Dominant Vegetation: Reed canary grass (herb), Small duckweed (herb)						
	Marsh	PEMC, PUBG	Birds silt loam	0.57 (1.4)	9.5	-1.6	10.5
Site 24	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PEMC	Orio loam	0.04 (0.1)	2.3	-0.8	18.2

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 25	Dominant Vegetation: Sandbar willow (shrub), Common cattail (herb)						
	Marsh	PEMC	Millington silt loam	4.9 (12.0)	12.5	-1.3	14.3
Site 26	Dominant Vegetation: Giant ragweed (herb), Late goldenrod (herb),Canada goldenrod (herb)						
	Wet Meadow	None	Drummer silt loam	2.3 (5.8)	9.0	-0.8	14.3
Site 27	Dominant Vegetation: Common cattail (herb)						
	Wet Meadow	None	Drummer silt loam	0.7 (1.6)	12.2	-2.1	8.3
Site 28	Dominant Vegetation: Giant ragweed (herb), Dark green bulrush (herb)						
	Wet Meadow	PEMA	Drummer silt loam	0.6 (1.5)	10.6	-1.3	17.9
Site 29	Dominant Vegetation: Sawtooth sunflower (herb)						
	Wet Meadow	PEMA	Drummer silt loam (	1.0 (2.4)	7.7	-0.7	21.1
Site 30	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PEMA	Sawmill silty clay loam	2.3 (5.6)	8.4	-2.3	8.3
Site 34	Dominant Vegetation: Black willow (tree), Reed canary grass (herb), Water pepper (herb), Pinkweed (herb)						
	Forested wetland	None	Birds silt loam	0.1 (0.2)	9.5	-2.9	29.4

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 35	Dominant Vegetation: Three-seeded mercury (herb), Reed canary grass (herb), Mild water pepper (herb)						
	Wet Meadow	None	Birds silt loam	0.1 (0.2)	7.8	-1.8	20.8
Site 36	Dominant Vegetation: Reed canary grass (herb)						
	Wet meadow	PEMC, PSS1C	Ambraw clay loam	5.2 (13.0)	6.7	-0.5	26.3
Site 39	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PEMF	Birds silt loam	0.4 (0.9)	9.6	-1.5	13.6
Site 40	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	None	Birds silt loam	6.5 (16.0)	14.4	-1.5	16.3
Site 41	Dominant Vegetation: Acer saccharinum (tree), (shrub), (sapling); Black willow (tree), (shrub), (sapling); Sandbar willow (shrub), (sapling); Orange jewelweed (herb), Reed canary grass (herb)						
	Forested wetland	None	Birds silt loam	0.6 (1.5)	9.1	-3.3	12.5
Site 42	Dominant Vegetation: Cottonweed (tree), Black willow (shrub), (tree)						
	Forested wetland	None	Birds silt loam	0.4 (0.9)	9.7	-2.0	5.3
Site 43	Dominant Vegetation: Common water plantain(herb), Reed canary grass (herb)						
	Marsh	PUBF	Birds silt loam	0.9 (2.1)	9.7	-4.2	10.0

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 44	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PEMA	Birds silt loam	0.02 (0.06)	7.4	-1.7	20.0
Site 45	Dominant Vegetation: Reed canary grass (herb), Bur cucumber(vine)						
	Wet Meadow	PEMF	Birds silt loam	0.1 (0.2)	8.5	-2.9	6.3
Site 46	Dominant Vegetation: Green ash (tree), Wood nettle (herb)						
	Forested wetland	PFO1A	Drummer silt loam	0.2 (0.6)	9.3	-0.5	5.9
Site 47	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PSS1A	Birds silt loam	0.3 (0.6)	7.8	-1.8	14.3
Site 48	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	None	Birds silt loam	0.4 (1.0)	15.0	-1.7	11.8
Site 50	Dominant Vegetation: Silver maple (tree), Cottonweed (tree), Virginia wild rye (herb), Reed canary grass (herb)						
	Forested wetland	PFO1C	Birds silt loam	1.9 (4.7)	11.1	-1.6	21.7
Site 51	Dominant Vegetation: Black willow (tree), Redtop (herb), Common tussock sedge (herb), Rice cutgrass (herb)						
	Sedge Meadow	PEMA	Elvers silt loam	0.6 (1.6)	16.6	-2.5	21.1

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 52	Dominant Vegetation: Box elder (tree), Cottonwood (tree), Black willow (tree), (shrub); Giant ragweed (herb), Side-flowered aster (herb), Hairy-fruited lake sedge (herb), Wood nettle (herb)						
	Forested wetland	PEMA	Elvers silt loam	1.7 (4.2)	18.3	-1.6	11.8
Site 54	Dominant Vegetation: Honey locust (tree), Black willow (tree), Cottonweed (tree), Poison ivy (shrub), Reed canary grass (herb)						
	Forested wetland	None	Blackoar silt loam	3.6 (8.8)	15.2	-1.2	13.3
Site 55	Dominant Vegetation: Giant ragweed (herb), Wild balsam-apple(herb), Reed canary grass (herb),Water knotweed (herb)						-
	Wet Meadow	PEMF	Blackoar silt loam	0.3 (0.7)	7.2	-2.7	6.7
Site 58	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PFO1A	Undetermined	0.01 (0.02)	2.8	1.0	71.4
Site 60	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	PEMCD	Prophetstown silt loam	3.5 (8.7)	4.3	-1.8	10.0
Site 62	Dominant Vegetation: Black walnut (tree), American elm (tree), American elm (sapling), Honewort (herb) Wood nettle (herb)						
	Forested wetland	PFO1A	Sawmill silty clay loam	0.7 (1.8)	13.8	-0.3	0

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 63	Dominant Vegetation: Barnyard grass(herb), Salt-marsh cockspur grass (herb)						
	Wet meadow	PUBGh	Seaton silt loam	0.1 (0.2)	3.7	-1.3	33.3
Site 64	Dominant Vegetation: Cottonweed (tree), American elm (tree), Glyceria striata (herb), Wood nettle (herb), Rice cutgrass (herb), Canada clearweed (herb)						
	Forested wetland	None	Undetermined	0.4 (1.0)	15.5	-1.0	14.3
Site 65	Dominant Vegetation: Rice cutgrass (herb)						
	Wet Meadow	None	Prophetstown silt loam	0.1 (0.3)	6.7	-1.9	18.8
Site 67	Dominant Vegetation: Cottonweed (tree), Black willow (tree), Black willow (sapling), Sandbar willow (shrub), Reed canary grass (herb), Narrow-leaved cattail (herb)						
	Forested Wetland	PEMCh	Drummer silty clay loam	2.2 (5.4)	11.2	-1.9	20.6
Site 68	Dominant Vegetation: Quack grass(herb), Yellow nut-sedge(herb), Water knotweed (herb), Common cattail (herb), Common ironweed (herb)						
	Wet Meadow	None	Undetermined	0.1 (0.4)	7.1	-1.2	25.0
Site 70	Dominant Vegetation: Pinkweed (herb), Narrow-leaved cattail (herb), Stinging nettle (herb)						
	Wet Meadow	None	Drummer silt loam	0.3 (0.8)	2.3	0.4	56.0

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 71	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow	None	Drummer silt loam	0.3 (0.7)	7.5	-1.0	26.7
Site 72	Dominant Vegetation: Reed canary grass (herb)						
	Wet Meadow (Vegetated Gravel Bar)	None	Undetermined	.03 (.08)	6.5	-1.6	20.0
Site 73	Dominant Vegetation: Box elder (tree),Cottonweed (tree), Black willow (tree),American elm (tree), Virginia wild rye (herb), Ground ivy (herb), Wood nettle (herb)						
	Forested wetland	PFO1C	Birds silt loam	1.7 (4.2)	13.8	-1.1	22.5
Site 74	Dominant Vegetation: Reed canary grass (herb), Polygonum lapathifolium (herb)						
	Wet Meadow	None	undetermined	0.1 (0.2)	4.3	-1.5	26.3
Site 78	Dominant Vegetation: Silver maple (tree), Canada clearweed (herb), Reed canary grass (herb), Wood nettle (herb)						
	Forested wetland	PFO1A, PUBH	Craigmile fine sandy loam	0.4 (1.1)	17.7	-1.7	19.2
Site 81	Dominant Vegetation: Orange jewelweed (herb), Rice cutgrass (herb), Reed canary grass (herb)						
	Wet Meadow	None	Ambraw clay loam	1.2 (3.0)	25.8	-1.6	11.5
Site 82	Dominant Vegetation: Box elder (tree), Jerusalem artichoke(herb), Reed canary grass (herb)						
	Forested wetland	PFO1A	undetermined	1.3 (3.2)	10.0	-0.8	20.7

	Plant community	NWI Classification	Soil Series	Size ha (acres)	FQI	Wetness coefficient	% Adventive
Site 83	Dominant Vegetation: Broad-leaved wooly sedge (herb), Sawtooth sunflower (herb), Canada goldenrod (herb), Narrow-leaved cattail (herb)						
	Wet Meadow	PEMA	Drummer silt loam	0.2 (0.4)	12.5	0.5	17.9

Wildflife Habitat

Wetlands along riparian corridors in the project area provide valuable wildlife habitat for migrating wildlife and also serve as refugia for wildlife traveling through the natural corridors within the project area.

Two sites, Site 19 and Site 81, have the potential to provide high quality wildlife habitat due to the high quality vegetation present at these sites.

Pond wetlands, regardless of low floristic quality, are important year-round water sources for wildlife, as well as important breeding habitat for amphibians. Marshes are important cover, nesting habitat, and foraging habitat for birds such as rails and bitterns. Wet meadows and scrub-shrub wetlands can also provide cover, nesting habitat, and foraging habitat for a number of birds and mammals.

Floristic Quality Index

The Floristic Quality Index (FQI) was applied to the vegetation of each wetland site. For the purposes of discussion here, wetlands with FQI values of less than 10 indicate low natural quality; 5 or less indicate very low quality. Sites with values of 20 or more (mean C ≥ 3.0) have at least some evidence of native character and may be considered environmental assets.

FQI averaged 10.0, for all wetlands associated with the US30 project corridor, with a low of 2.3 and a high of 25.8 (Site 81). Wet meadows ranged from 2.3 to 25.8 averaging 8.5. Forested wetlands ranged from 8.2 to 18.3, with an average of 12.3. Marshes had values ranging from 4.5 to 12.5, with an average of 9.7. The sedge meadows in the project area ranged between 16.6 and 25.5. Their average quality was comparatively high at 21.0. The two ponds in the project area were of considerably lower quality, ranging from 7.2 to 15.0 with an average of 11.1. The sole scrub-shrub wetland had a value of 15. FQI values for all wetland sites are presented in the wetland summary table (**Table 5-1**).

Wetness Coefficient

A wetness coefficient was determined for all wetlands sites associated with the US30 project corridor and included in the summary table (**Appendix 5-1**). Each plant species occurring in a particular wetland site is given a coefficient of wetness (W), based on its indicator status (**Table 5-2**). These numbers are then summed for all species within the site and then divided by the number of species present to determine the mean wetness coefficient, or the wetness coefficient for the site (Taft et al. 1997).

Table 5-2 Wetness coefficients as based on wetland indicator status.

Indicator Status	Wetness Coefficient
OBL	-5
FACW+	-4
FACW	-3
FACW-	-2
FAC+	-1
FAC	0
FAC-	1
FACU+	2
FACU	3
FACU-	4
UPL	5

Table 5-3
Tree sampling results for Site 73, (n=29).

Species	Density (trees/ha)	Relative Density	Dominance (m^2/ha)	Relative Dominance	Frequency	Relative Frequency	Importance Value
Box elder	468.98	66.38	18.91	33.32	0.97	45.16	144.86
Black willow	42.63	6.03	11.73	20.68	0.24	11.29	38.00
Cottonwood	36.54	5.17	10.87	19.16	0.17	8.06	32.40
Honey locust	36.54	5.17	5.75	10.12	0.14	6.45	21.75
Hackberry	30.45	4.31	3.44	6.06	0.14	6.45	16.83
Silver maple	24.36	3.45	2.92	5.15	0.14	6.45	15.05
American elm	24.36	3.45	0.94	1.65	0.10	4.84	9.94
White mulberry	18.27	2.59	1.06	1.87	0.10	4.84	9.30
Green ash	18.27	2.59	0.49	0.86	0.10	4.84	8.28
Black walnut	6.09	0.86	0.63	1.11	0.03	1.61	3.59
	706.51 (total)		56.74 (total)				

Table 5-3 continued

Tree sampling results for forested wetland reference site 78 (n=25).

Species	Density (trees/ha)	Relative Density	Dominance (m^2/ha)	Relative Dominance	Frequency	Relative Frequency	Importance Value
American elm	121.83	31.00	4.85	16.25	0.84	29.17	76.41
Honey locust	66.81	17.00	10.62	35.60	0.52	18.06	70.66
Black walnut	58.95	15.00	3.09	10.35	0.44	15.28	40.63
Hackberry	55.02	14.00	2.75	9.21	0.44	15.28	38.49
Silver maple	35.37	9.00	5.73	19.19	0.16	5.56	33.75
Box elder	31.44	8.00	0.98	3.29	0.24	8.33	19.62
Green Ash	11.79	3.00	1.10	3.70	0.12	4.17	10.87
White mulberry	7.86	2.00	0.68	2.28	0.08	2.78	7.06
Downy hawthorn	3.93	1.00	0.04	0.12	0.04	1.39	2.51
	392.98 (total)		29.84 (total)				

Chapter 6 Threatened and Endangered Species

Plants
William Handel and John Taft
No species listed as threatened or endangered (T&E) by the Illinois Endangered Species Protection Board were known from within the US Route 30 survey area prior to the botanical surveys. Three T&E species were known from the one-mile buffer zone bordering the US 30 study corridor: beach heather, Gray's sedge, and water pennywort (*Hydrocotyle ranunculoides*). During the botanical surveys, populations of six T&E species were discovered within the US Route 30 survey area: beach heather, Gray's sedge, kitten tails, large-flowered beard tongue, prairie dandelion, and broomrape. Element of Occurrence Records for each species are in **Appendix 6-1.** These newly discovered populations occur at scattered locations in the western half of the study area (**Figure 6-1, attached at the end of Chapter 6**).

Kitten tails (*Besseya bullii* [Eat.] Rydb.). Scrophulariaceae. State Threatened.
This species occurs in savannas with sand and sandstone substrates, and gravel prairies along the Mississippi, Illinois, and Rock rivers in the northwestern part of the state, and is known from 34 populations in eight counties (Endangered Species Technical Advisory Committee 2002). This plant is endemic to the Midwestern United States and is found mainly in the upper Midwest (NatureServe 2007). Kitten tails has a Global Conservation Status Rank of G3 (Vulnerable), indicating a moderate risk of extinction (NatureServe 2007). Threats for G3 species are due primarily to restricted range, relatively few populations (often 80 or fewer), recent and widespread decline, or other factors. In the US Route 30 study area, Kitten tails was found at dry sand hill prairie and the dry-mesic gravel hill prairie (**Appendix 6-1**); the largest population, over 400 individuals, was in the dry-mesic gravel hill prairie **(Figure 6-1).**

Gray's sedge (*Cyperus grayioides* Mohlenbr.). Cyperaceae. State Threatened.
This species is restricted to blowouts in dry sand prairies of the Illinois and Mississippi Rivers Sand Areas Division, but often is locally abundant where it occurs in open areas of deep sand deposits. This plant is restricted to areas with periodic disturbance by wind and/or erosion and is vulnerable to encroachment by competing vegetation. Sand prairie habitats have declined severely as a result of agricultural and residential development, fire suppression, and grazing (Schwegman 1990). Gray's sedge has a G3 Global Conservation Status Rank (Vulnerable), indicating a moderate risk of extinction (NatureServe 2007). Threats for G3 species are due primarily to restricted range, relatively few populations (often 80 or fewer), recent and widespread decline, or other factors. Five populations of Gray's sedge were found in the savanna (dry to dry-mesic sand savanna) cover type (**Appendix 6-1**), all concentrated along the dune adjacent to the Chicago Northwestern Railroad **(Figure 6-1).**

Beach heather (*Hudsonia tomentosa* Nutt.). Cistaceae. State Endangered.
This species occurs in open sands, beaches, and blowouts, and in Illinois it is restricted to the northwestern counties. It is known from four localities in the state, including a state nature preserve, federal property, and a natural heritage landmark (Endangered Species Technical Advisory Committee 2002). One small population was found in a blow out within the savanna (dry to dry-mesic sand savanna) land cover **(Appendix 6-1; Figure 6-1).**

Prairie dandelion (*Microseris cuspidata* [Pursh] Schultz-Dip.). Asteraceae. State Endangered.
This species reaches its eastern range limit in dry-mesic prairies in Illinois. It was originally scattered locally throughout the northern half of the state, but has been largely extirpated by

woody encroachment, overgrazing, gravel mining, and urban growth. Eight Illinois populations are known, four in state nature preserves (Endangered Species Technical Advisory Committee 2002). One population was located on the northernmost dry sand hill prairie **(Appendix 6-1; Figure 6-1).**

Broomrape (*Orobanche ludoviciana* Nutt.) Orobanchaceae. State Threatened.
This species reaches its eastern limit in Illinois, where it occupies blowouts in dry sand prairies and on alluvial floodplains along rivers. It is parasitic on the roots of various members of the Asteraceae (Gleason and Cronquist 1991). Two populations of this plant were found in the northernmost dry sand hill prairie. Suitable habitat and host species are found throughout the savanna (dry to dry-mesic sand savanna community) but it was not located in that habitat during the 2007 surveys **(Figure 6-1).**

Large-flowered beard tongue (*Penstemon grandiflorus* Nutt.). Scrophulariaceae. State Endangered.
This species reaches its eastern range extent in northwestern Illinois. It is extant at four stations, all state nature preserves in Whiteside and Winnebago counties, and a state forest in Henderson County (Endangered Species Technical Advisory Committee 2002). Because of its showy flowers these populations are threatened by plant collectors (Gleason 1910, Mohlenbrock and Stritch 1985). Two populations occur in the Savanna land cover (dry to dry-mesic sand savanna), adjacent to the Chicago Northwestern Railroad **(Appendix 6-1; Figure 6-1).**

Other Scarce Species for Illinois Found in the Route 30 Study Area.
Hill's thistle (*Cirsium hillii* [Canby] Fern.). Asteraceae. Unlisted; formerly State Threatened.
Hill's thistle was formerly widespread in dry prairies in the northern two-thirds of Illinois. It was delisted in Illinois in 2004 because it was determined to be more common than previously believed (Herkert and Ebinger 2002), and it is presently known from forty locations in twenty-three counties. Over a hundred individuals were found in the northernmost dry sand hill prairie and it was abundant in the dry-mesic gravel hill prairie as well **(Figure 7-1).**

Butternut (*Juglans cinerea* L.). Juglandaceae. Unlisted; former Federal candidate species.
Several mature and sub-mature trees were found in the US Route 30 study area at the dry-mesic sand forest south of the southernmost dry sand hill prairie in **Forest 6 (Figure 2-1).** This species has been severely impacted by a canker fungus (*Sirococcus clavigignenti-juglandacearum*) that is spreading rapidly throughout the range of butternut, and few stands remain uninfected. According to Anderson (1988), 40- year-old cankers have been observed in North Carolina. Long noted as suffering from a canker dieback (frequently called "butternut decline"), scientists from Wisconsin first identified the disease agent as a new species of *Sirococcus* in 1967, although tests of trees in North Carolina demonstrated its presence there in 1952 (Nature Serve 2007).

Figure 6-1 has been removed to protect confidentiality.

Amphibians and Reptiles
John Petzing
No threatened/endangered amphibians or reptiles are known from the proposed US 30 project corridor. However, the state-threatened Blanding's turtle (*Emydoidea blandingii*), the state-endangered yellow mud turtle (*Kinosternon flavescens*), and the state-threatened western hog-nosed snake (*Heterodon nasicus*) are known to historically occur within Whiteside County.

Blanding's turtle *(Emydoidea blandingii*). Emydidae. State-threatened.

The Blanding's turtle is a medium-sized, semi-aquatic turtle with a helmet-shaped shell and it possesses a long neck with a bright yellow throat and chin. A prairie species, the Blanding's turtle prefers open, grassy marshes, mesic prairies, backwater sloughs, prairie potholes, and shallow lakes (Vogt, 1981). It is rarely found in forested regions and fast-moving rivers (Vogt, 1981). Minton (2001) observed the Blanding's turtle in small prairie ponds and grassy marshes as well as sluggish streams, drainage ditches, and shallow inlets of lakes. Pope (1964) described the habitat of the Blanding's turtle as shallow, plant-grown water of ponds, swamps, sloughs, ditches, low fields, sluggish streams, and lake or river bays. Blanding's turtles in northeastern Illinois were primarily carnivorous and mainly ingested snails and aquatic insects (Rowe, 1992). The Blanding's turtle exhibits delayed sexual maturity, with females maturing between the ages of 14 and 20 years (Congdon et al, 1993). It is a long-lived species, with a longevity record of a 77 year-old female, which may have been reproductive for 60 of those years. Habitat destruction has been the greatest threat to the Blanding's turtle (Phillips et al, 1999) and it was listed in Illinois as state-threatened in 1999. The Blanding's turtle is historically known from northwestern Whiteside County ("2 mi N Fulton"; University of Illinois Museum of Natural History 50662; collected 1953) and north-central Whiteside County ("NE of White Pigeon, E of Rock Creek, S of Pilgrim Rd./Co. Rd. 2200N, and W of Yorktown Rd."; Illinois Natural History Survey 18021).

Yellow mud turtle *(Kinosternon flavescens)*. Kinosternidae. State-endangered.
The yellow mud turtle is a medium-sized aquatic turtle with a dark olive, dark brown, or black carapace (Smith, 1961; Phillips et al, 1999). It is a relict from the past xerothermic period (Smith, 1961). Habitat of the yellow mud turtle consists of ponds (temporary and permanent) and river backwaters in sand areas in western and northwestern Illinois. Terrestrial sand areas surrounding aquatic habitats are used for aestivation, nesting, and overwintering sites (Tuma, 2006). Tuma (2006) studied a population of yellow mud turtles in Henry County, Illinois, which borders Whiteside County to the south. He identified critical aquatic habitat for yellow mud turtles at his study site as shallow, ephemeral ponds with dense, emergent aquatic vegetation and a soft, muddy substrate; critical terrestrial habitat included sparsely vegetated sand dunes with an elevation of 5 to 13 m above the level of the ponds. Diet of the yellow mud turtle includes snails, insects, fish, and crayfish. Current threats to populations in Illinois include lowered water tables and farming practices (Phillips et al, 1999). The yellow mud turtle is historically known from one museum specimen (Illinois Natural History Survey 7937) collected in southwestern Whiteside County ("SE Erie").

Western hog-nosed snake *(Heterodon nasicus)*. Colubridae. State-threatened.

The western hog-nosed snake is a medium-sized, stout-bodied snake with an upturned rostral plate and brown dorsal blotches (Smith, 1961). Populations are located in sand prairies or other sandy areas in western and northwestern Illinois. Food of the western hog-nosed snake consists of rodents, toads, frogs, small lizards and snakes, and reptile eggs (Platt, 1969). Kolbe (1999) observed western hog-nosed snakes consuming turtle eggs and lizards (six-lined racerunner, *Cnemidophorus sexlineatus*) in a relictual sand prairie in Carroll and Whiteside counties. Museum specimens document the western hog-nosed snake at the following localities in Whiteside County: "1 mi N Fulton" (University of Illinois Museum of Natural History 50768); "2 mi N Fulton" (University of Illinois Museum of Natural History 50766); and "~1 km S Thomson-Fulton Nature Preserve" (Illinois Natural History Survey 19854). A photograph of a Whiteside County western hog-nosed snake deposited at the Illinois Natural History Survey bears vague locality data ("0.5 mi from Carroll Co. border, approximately 50 ft from Mississippi River backwater"). Observation records of western hog-nosed snakes from the Illinois Department of Natural Resources Natural Heritage Database include the following localities in Whiteside County: "2 mi N Fulton" and "5 mi NW of Erie, E of junction Stropes Rd. and Pryor Rd.". Suitable habitat for the western hog-nosed snake is present in the proposed US 30 project corridor.

Threatened and Endangered Mammals
J.E. Hofmann, J. M. Mengelkoch, J.F. Merritt, S.B. Amundsen

The federal endangered (U.S. Fish and Wildlife Service 1991) Indiana bat (*Myotis sodalis*) and the state threatened (Illinois Endangered Species Protection Board 2004) Franklin's ground squirrel (*Spermophilus franklinii*) are widely distributed in Illinois. The Indiana bat has been documented in several southern and central Illinois counties (Gardner et al. 1996, INHD) and the range of Franklin's ground squirrel includes the northern two-thirds of the state (Hoffmeister 1989). The potential occurrence of these two species in the corridor was investigated.

INDIANA BAT (*Myotis sodalis*). Vespertilionidae. Federal endangered.

Indiana bats congregate in caves or abandoned mines for hibernation, but are more widely dispersed during the summer (Barbour and Davis 1969). Maternity colonies primarily roost beneath slabs of exfoliating bark on dead trees, but also have been found beneath the "shaggy" bark of certain live hickories (*Carya*) and oaks (*Quercus*), and in tree crevices (Cope et al. 1973; Humphrey et al. 1977; Gardner et al. 1991; Kurta et al. 1993a, b, 1996, 2002; Callahan et al. 1997; Carter 2003). Maternity colonies, however, recently have been found roosting in buildings (a church, house, and barn), artificial roosting structures (e.g. bat houses), and utility poles (Carter et al. 2001, Butchkoski and Hassinger 2002, Chenger 2003, Hendricks et al. 2005, Kurta 2005, Ritzi et al. 2005). Males and non-reproductive females use caves, mines, bridges, and artificial roosting structures as well as trees for diurnal roosts during summer (Mumford and Cope 1958, Gardner et al. 1991, Salyers et al. 1996, Ford et al. 2002, INHD).

Many known maternity roost trees have been relatively large, with a dbh (diameter at breast height) of at least 12 in (30 cm) (e.g. Gardner et al. 1991; Kurta 1993a, 1996; Callahan et al. 1997; Whitaker and Brack 2002). Female and juvenile Indiana bats have been documented roosting in more than 30 species of trees (Kurta 2005). Tree species known to have been used by Indiana bat maternity colonies in Illinois are northern red oak (*Q. rubra*), white oak (*Q. alba*), post oak (*Q. stellata*), pin oak (*Q. palustris*), slippery elm (*Ulmus rubra*), American elm (*U. americana*), shagbark hickory (*C. ovata*), bitternut hickory (*C. cordiformis*), silver maple (*Acer saccharinum*), cottonwood (*Populus*

deltoides), sycamore (*Platanus occidentalis*), green ash (*Fraxinus pennsylvanica*), and sweetgum (*Liquidambar styraciflua*) (Gardner et al. 1991, Kurta et al. 1993a, Carter 2003). A maternity colony uses more than one tree during the summer (e.g. Gardner et al. 1991, Kurta et al. 1996, Callahan et al. 1997), but the number of roost trees a colony needs presumably is variable (Menzel et al. 2001). A colony in Michigan roosted in 23 trees (Kurta et al. 1996) and four Missouri colonies used 10-20 roost trees each (Callahan et al. 1997). In Michigan, members of a maternity colony occupied trees that were up to 5.1 mi (8.2 km) apart during a summer and traveled as much as 3.6 mi (5.8 km) between roost trees overnight (Kurta et al. 2002). Individual roost trees have a limited "lifespan," making them an ephemeral resource (Gardner et al. 1991).

Trees used by Indiana bats in Illinois have been located in upland and floodplain forests, a swamp, and pastures (Gardner et al. 1991, Kurta et al. 1993a, Carter 2003). There is a consensus that Indiana bat maternity colonies occupy primary roosts that are exposed to high levels of solar radiation (Menzel et al. 2001). The death of an overstory tree creates a light-gap in the forest canopy that exposes remaining trees to solar radiation. Dead trees along forest edges or in areas impacted by flooding also have high levels of exposure to sunlight. Some alternate maternity roosts, as well as roosts used by male Indiana bats, are in shaded locations (Gardner et al. 1991, Callahan et al. 1997). Most Indiana bat roost trees have been close to (or surrounded by) water (e.g. Humphrey et al. 1977; Gardner et al. 1991; Callahan et al. 1997; Kurta et al. 1996, 2002; Carter 2003), but some have been found more than 1.2 mi (2 km) from a perennial stream (Gardner et al. 1991, Kurta et al. 1993a). Trees occupied by reproductively active female and juvenile Indiana bats in Illinois (n = 56) were rarely within 1637 ft (500 m) of a paved highway (Gardner et al. 1991). In contrast, a maternity colony in Indiana recently was found roosting in trees near a major highway (J.M. Mengelkoch, personal observation). Some adult male Indiana bats roosted less than 786 ft (240 m) from a paved highway in Illinois (Gardner et al. 1991) and an adult male in West Virginia occupied a tree only 43 ft (13 m) from a road (Ford et al. 2002).

Most Indiana bat maternity colonies in the Midwest have been found in landscapes that were a mosaic of forest and agricultural areas (Cope et al. 1973; Humphrey et al. 1977; Gardner et al. 1991; Kurta et al. 1993a, b, 2002; Callahan et al. 1997; Carter 2003). Despite the fact that they roost in trees, the presence of Indiana bats does not seem to be correlated with forest cover. In Missouri, for example, the amount of forest cover did not differ significantly between sites where Indiana bats were captured and not captured (Miller et al. 2002). In Illinois, Carter et al. (2002) found significantly fewer and smaller patches of urban development in the vicinity of Indiana bat roosts than at random sites. There also was less residential land around Indiana bat capture sites than unsuccessful netting sites in Missouri (Miller et al. 2002). Belwood (2002), however, documented a maternity colony occupying trees in a wooded subdivision in Ohio and a colony near the Indianapolis Airport occupies a rural area surrounded by urban/suburban development (Whitaker et al. 2004, Sparks et al. 2005).

Although more needs to be learned about habitat requirements of Indiana bat maternity colonies at the landscape level (Menzel et al. 2001, U.S. Fish and Wildlife Service 2007), it seems reasonable that sustainable habitat would include a variety of snags, hickories, and numerous large, senescent trees that would provide future roost sites. Requirements for foraging habitat are less restrictive; habitats used by foraging Indiana bats include riparian corridors, wetlands, upland forests, ponds, and fields (Menzel et al. 2001).

The Indiana bat was listed as a federal endangered species in 1967. The population estimate for the species (based on censuses at hibernacula) declined 57% from 1965 to 2001 (U.S. Fish and Wildlife Service 2007). Since then the total number of Indiana bats appears to have increased (U.S. Fish and Wildlife Service 2007). Population changes, however, do not seem to be occurring uniformly throughout the species' range. Numbers have decreased or remained stable recently in parts of the species' range, but the number hibernating in Illinois has increased (U.S. Fish and Wildlife Service 2007).

The INHD contains no recent records for the Indiana bat in Whiteside County and there are no museum specimens from the county (Hoffmeister 1989). Limited mist netting for bats has occurred in Whiteside County (INHS Bat Survey Database, maintained by J.E. Hofmann). Netting was conducted within the US 30 corridor at Deer Creek south of Mathew Road on 24 June 1988 (T.21N, R.6E, SW/4 Sec. 29, Como 7.5' topographic quadrangle; INHS Bat Survey database). There were 11 bat captures, but none were Indiana bats. Bats tested for rabies by the Illinois Department of Public Health have been sent to the INHS for many years for identification. None of 63 bats from Whiteside County identified since 1965 has been an Indiana bat (INHS Rabies Specimen Database, maintained by J.E. Hofmann).

Although most Indiana bat hibernacula in Illinois are in the southern part of the state, several hundred Indiana bats hibernate in Blackball Mine in LaSalle County in northern Illinois (INHD). Three Indiana bats were collected in a lead mine southeast of Galena in JoDaviess County during December 1953 (Hoffmeister 1989), but this does not seem to be a regular hibernaculum. Summer records for the Indiana bat nearest to Whiteside County are of males in and near Blackball Mine in LaSalle County and a maternity colony in Henderson County (INHD).

Mist netting was conducted at only one location within the US 30 corridor – a relatively narrow channel on the west side of the Rock River at US 30 (**Figure 6-2.**). The Rock River's main channel is far too large to net. Habitat along Elkhorn Creek in the corridor was judged to be unsuitable for Indiana bats because of a lack of potential roost trees. There are some dead trees in the riparian corridor along Rock Creek south of Morrison, but the creek is deeply entrenched and the water was too deep for netting during 2007. Other waterways in the corridor are either very narrow streams or channelized, entrenched ditches, sometimes with no trees along the banks. They are unsuitable for mist netting and generally do not provide suitable roosting habitat for Indiana bats. A sand forest on the dunes south of US 30 and east of Cattail Creek (T.22N, R.4E, Sec. 31, Union Grove 7.5' topographic quadrangle) was examined to determine its suitability as Indiana bat habitat. There were several trails and roads through the forest, but netting was not conducted because the area had very few potential roost trees and a dense understory.

Figure 6-2 Location of mist netting site for bats, US 30 project corridor, Whiteside County, Illinois, 31 July and 1 August 2007

The Rock River side channel was netted on the nights of 31 July and 1 August 2007, following guidelines of the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 2007). The legal location of the site was T.21N, R.7E, SE corner Sec. 25 (Sterling 7.5' topographic quadrangle) and its UTM coordinates were 271602mE, 4628222mN (Zone 16T, NAD 83). A 12-m wide net was suspended from a pair of 6.1-m tall poles across the channel 344 ft (105 m) north (upstream) of the US 30 bridge and a 9-m wide net was placed 187 ft (57 m) north of the bridge (**Figure 6-2.**, **Figure 6-3.**). The channel was approximately 50 ft (15 m) wide and lacked a closed canopy. The water dropped during the day on 31 July and there were only very narrow, shallow pools of water under the nets. The substrate was mud. Floodplain forest on the west bank and on the island east of the channel was dominated by silver maple (*Acer saccharinum*). The understory was relatively open. The riparian zone was approximately 130 ft (40 m) wide and consisted of a gradual slope to a terrace (where there was an ATV trail) and a steep, forested slope. There was a cornfield beyond the riparian zone. The island was at least 328 ft (100 m) wide at the net site.

Figure 6-3. Mist-netting site on side channel of Rock River, US 30 project corridor, Whiteside County, Illinois.

On the night of 31 July there were no clouds and the air was still. The temperature was 80°F (26°C) at dusk and 72°F (22°C) at the end of the netting session (0122h). A waning gibbous moon rose above the trees at 2345h. The sky was clear and the air still on the night of 1 August. The temperature was 80°F (26°C) at dusk and 74°F (23°C) at 0121h. The moon did not rise above the trees until 0015h.

Thirteen bats were captured at this site (**Table 6-1.**), ten on 31 July and three on 1 August. Four species were positively identified – big brown bat, eastern red bat, northern bat, and little brown bat. Two additional *Myotis* individuals (a post-lactating female and a juvenile) exhibited some, but not all, the diagnostic features characteristic of the Indiana bat. Thus, although a definitive identification was not made, it is possible that an Indiana bat maternity colony inhabits the riparian corridor or island on the west side of the Rock River.

Table 6-1.. Bat captures during mist netting in the US 30 project corridor, Whiteside County, Illinois, 31 July and 1 August 2007.

Common Name	Species Name	No.	Age	Sex	Reprod
big brown bat	*Eptesicus fuscus*	1	A	F	PL
eastern red bat	*Lasiurus borealis*	1	J	F	NR
northern bat	*Myotis septentrionalis*	1	A	F	PL
		1	A	F	NR
little brown bat	*Myotis lucifugus*	2	A	F	PL
		2	A	F	NR
		2	J	F	NR
		1	J	M	NR
Myotis sp.		1	A	F	PL
		1	J	M	NR

A = adult; J = juvenile (young-of-year); F = female; M = male; PL = post-lactating; NR = non-reproductive

The undersides of the US 30 bridges over the Rock River and Elkhorn Creek were examined. They do not have suitable structure (e.g. expansion joints) for use as day roosts by Indiana bat maternity colonies. A bridge over Rock Creek on farmland east of Lister Road (T.21N, R.5E, SE/4 Sec. 19, Morrison 7.5' topographic quadrangle) has a deck of open metal grids and also is not a suitable day roost. An eastern pipistrelle was found roosting under a bridge across Cattail Creek during October 2007 (migration season). This bridge probably is not a suitable day roost during the summer because the expansion joints were too narrow for the pipistrelle to crawl completely into them.

There are no potential hibernacula (caves or mines) for Indiana bats in the corridor.

FRANKLIN'S GROUND SQUIRREL (*Spermophilus franklinii*). Sciuridae. State threatened.

Although a characteristic species of tallgrass and mid-grass prairie regions, Franklin's ground squirrel does not inhabit only open prairie. Throughout its range it also occupies the ecotone between woodlands and grasslands, forest openings, thickets, aspen parklands, and marsh and bog borders (Sowls 1948, Murie 1973, Jones et al. 1983, Erlien and Tester 1984, Sargeant et al. 1993). An important habitat requirement for Franklin's ground squirrel is a tall, dense cover of vegetation -- grasses, forbs, shrubs, and even small trees (Jones et al. 1983, Choromanski-Norris and Sargeant 1982, Martin 2003). It prefers habitats that experience infrequent disturbance to vegetation or soil (Choromanski-Norris et al. 1989) and typically avoids the short grass of closely grazed pastures or mowed areas such as golf courses, cemeteries, and lawns (Wood 1910, Haberman and Fleharty 1972, Hoffmeister 1989). Recently, however, Franklin's ground squirrels have been found living in a mowed area along a bike path in Springfield, Illinois (INHD).

Franklin's ground squirrels occupy burrows year-round (for hibernation during winter) and the availability of suitable sites for burrowing is a limiting factor (Hoffmeister 1989). Burrows must be sufficiently insulated (deep enough) to remain cool during summer and above freezing during winter, and well drained to avoid flooding. Accordingly, burrows are located in areas with well-drained soils (Haberman and Fleharty 1972, Jones et al. 1983, Martin and Heske 2005a) and often on steep slopes (Haberman and Fleharty 1972, Hoffmeister 1989). Martin and Heske (2005a) found that burrows excavated by a population in east-central Illinois were often near large objects that provided cover, such as trees, buildings, and trash heaps. Thus, in intensively agricultural areas of the Midwest suitable habitat for Franklin's ground squirrels remains in fencerows, old fields, roadsides (if not mowed frequently), prairie remnants or restorations, ditch banks, and railroad embankments (Jackson 1961, Mumford and Whitaker 1982, Masulis and Wells 1988, Hoffmeister 1989, Kurta 1995, Martin et al. 2003).

Although not as social as some species of ground squirrels, Franklin's ground squirrels live in small colonies (Jones et al. 1983). They are somewhat nomadic, shifting their ranges several times during their brief active season (Jackson 1961, Krohne et al. 1973, Jones et al. 1983). The mean annual home range of males in North Dakota was 60.8 ac (24.6 ha), while the mean for females was 21.5 ac (8.7 ha) (Choromanski-Norris et al. 1989). Some juvenile Franklin's ground squirrels radiotracked in east-central Illinois dispersed more than 0.6 mi (1 km) from their natal burrows during late summer (Martin and Heske 2005b). Dispersers apparently traversed row-crop fields because the crops had not yet been harvested and the plants provided sufficient cover (Martin and Heske 2005b).

Franklin's ground squirrel is thought to be declining in the eastern portion of its range, primarily as a result of habitat loss (Lewis and Rongstad 1992, Johnson and Choromanski-Norris 1992, Pergams and Nyberg 2001). It was designated as a state threatened species in Illinois in 2004 (Illinois Endangered Species Protection Board 2004). The INHD contains no recent records for this species in Whiteside County and there are no museum specimens from the county (Hoffmeister 1989). Mohr (1943) observed Franklin's ground squirrels in Whiteside County during the period 1931-1942; the location is represented by a dot in the center of the county.

Trapping was conducted at five areas within the US 30 corridor judged to be suitable habitat for Franklin's ground squirrel on the basis of their vegetation and soil types (**Figure 6-4., Appendix 6-1.**). Other areas in the corridor appeared to have suitable vegetation, but the soils were poorly drained (Sabata 1995) so they were not included in the survey. Some segments of roadside embankments that seemed to be mowed infrequently also had potentially suitable vegetation, but were not trapped because they were very small and isolated. A prairie restoration (located on the west side of Millard Road) also was not trapped because it was relatively recent and isolated.

Site 1 was a dry sand prairie/savannah located south of US 30, west of Frog Pond Road, and north of the Burlington Northern Santa Fe Railroad (T.22N, R.3E, Sec. 34, Clinton IA-IL 7.5' topographic quadrangle; UTM coordinates: 737910mE, 4636871mN, Zone 15T; NAD 83). The site was a large sand dune complex dominated by black oak (*Q. velutina*) and sand prairie vegetation. Vegetation at the site included yarrow (*Achillea millefolium*), western ragweed (*Ambrosia psilostachya*), androsace (*Androsace occidentalis*), beach three awn grass (*Aristida tuberculosa*), whorled milkweed (*Asclepias verticillata*), poppy

mallow (*Callirhoe triangulata*), sand bracted sedge (*Carex muhlenbergii*), smooth-fruited oak sedge (*Carex tonsa*), horseweed (*Conyza canadensis*), gray dogwood (*Cornus racemosa*), Schweinitz flatsedge (*Cyperus schweinitzii*), purple love grass (*Eragrostis spectabilis*), flowering spurge (*Euphorbia corollata*), common rockrose (*Helianthemum canadense*), golden aster (*Heterotheca camporum*), hairy hawkweed (*Hieracium longipilum*), crested hair grass (*Koeleria macrantha*), dwarf dandelion (*Krigia virginica*), bush clover (*Lespedeza capitata*), hairy puccoon (*Lithospermum caroliniense*), horsemint (*Monarda punctata*), Virginia creeper (*Parthenocissus quinquefolia*), purple milkwort (*Polygala polygama*), American plum (*Prunus americana*), wafer ash (*Ptelea trifoliate*), aromatic sumac (*Rhus aromatica*), raspberry (*Rubus flagellaris*), bristly green brier (*Smilax hispida*), Indian grass (*Sorghastrum nutans*), and drop seed (*Sporobolus asper*). The 30 traps at this site were placed near trees or shrubs along the perimeter of the prairie to provide better cover from the sun. Soils at this site were Plainfield sand, which is excessively drained (Sabata 1995). The total number of trap-days at this site was 87.5 (1 trap-day = 1 trap set for 1 day; corrected for any half-days when a trap was sprung, but unoccupied).

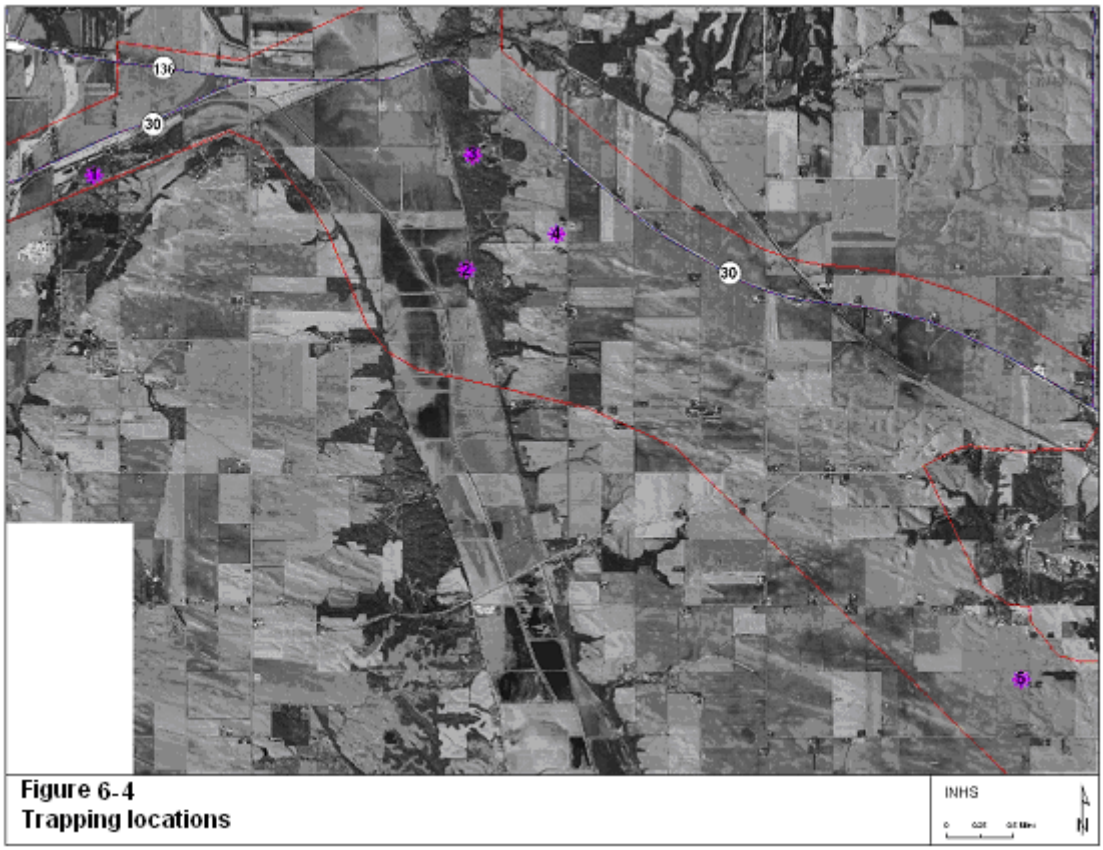


Figure 6-4 Locations of trapping sites for Franklin's Ground Squirrels, US 30 project corridor, Whiteside County, Illinois August 2007

Site 2 was an old field of grass with scattered trees adjacent to the Burlington Northern Santa Fe railroad and south of US 30 (T.21N, R.4E, Sec. 6, Union Grove 7.5' topographic quadrangle; UTM coordinates: 742476mE, 4635861mN, Zone 15T; NAD 83). The field was between the railroad right-of-way and a mowed farm road at the edge of a cornfield. It was dominated by cool season grasses and some weedy native forbs. Black walnut (*Juglans nigra*) trees appeared to be planted or some may have invaded the field

naturally. Vegetation in the field included box elder (*Acer negundo*), smooth brome grass (*Bromus inermis*), gray dogwood, Queen-Anne's-lace (*Daucus carota*), black raspberry (*Rubus occidentalis*), and Canada goldenrod (*Solidago canadensis*). At this site 12 traps were placed in two parallel rows. According to the Whiteside County soil survey (Sabata 1995), the soil was well drained Lacrescent cobbly loam, which occurs on steep slopes. The site, however, was level. There were 34.5 trap-days at this site.

Site 3 was a hill prairie with sandy soil located west of Millard Road and south of US 30 (T.22N, R.4E, Sec. 31, Union Grove 7.5' topographic quadrangle; UTM coordinates: 742503mE, 4637263mN, Zone 15T; NAD 83). This area is on a sand dune at the top of a small bluff to the east of Cattail Creek. It was located within a large forested tract. The site was dominated by dry sand prairie vegetation and a few exotic species. Vegetation included yarrow, cheat grass brome (*Bromus tectorum*), sand bracted sedge, Hill's thistle (*Cirsium pumilum*), hairy puccoon, horsemint, Virginia creeper, pale beards tongue (*Penstemon pallidus*), field sorrel (*Rumex acetosella*), little bluestem (*Schizachyrium scoparium*), ragwort (*Senecio pauperculus*), Indian grass, drop seed, posion ivy (*Toxicodendron radicans*), and six week fescue (*Vulpia octoflora*). The 20 traps at this prairie also were placed near trees or shrubs along the perimeter to provide better cover from the sun. The soil was Plainfield sand (Sabata 1995). The number of trap-days for this site was 60.

Site 4 was a grassland west of Millard Road and south of US 30 (T.21N, R.4E, Sec. 5, Union Grove 7.5' topographic quadrangle; UTM coordinates: 743558mE, 4636338mN, Zone 15T; NAD 83). It consisited of a mix of cool and warm season grasses that had been planted for the CRP program. Vegetation at the site included big bluestem (*Andropogon gerardii*), smooth brome grass, meadow fescue (*Festuca pratensis*), and Indian grass. The grassland was bordered by a pasture to the south, a farmstead to the north, and woods to the west. The field was large and only part of it was trapped. The 50 traps were arranged in two 5 x 5 grids. Two well-drained soils were present at this grassland: Port Byron silt and Oakville-Tell Complex (Sabata 1995). There were 129 trap-days at this site.

Site 5 was an old field surrounding a radio antenna west of Henry Road between Prairie Center Road and Harvey Road (T.21N, R.4E, Sec. 23, Morrison 7.5' topographic quadrangle; UTM coordinates: 250837mE, 4631096mN, Zone 16T; NAD 83). This field also was large and only a portion was trapped. The vegetation consisted of dominated by smooth brome grass and small white mulberry (*Morus alba*) trees. Twenty traps were set in three parallel rows. Soils at this site were well-drained Lamont loam (on steeper slopes) and Waukegan silt loam (Sabata 1995). The number of trap-days at this field was 60.

Sites 1 and 2 were trapped 14-16 August 2007. Maximum temperatures on these three days were 84°F (28°C), 80°F (26°C), and 75°F (23°C) at nearby Clinton, IA (www.weatherunderground.com). It rained for about 90 minutes on the morning of 14 August, but the sky was clear during the afternoon. The sky was overcast on the morning of 15 August, but it cleared during the afternoon. On 16 August the sky was clear in the morning and partly cloudy to overcast during the afternoon.

Sites 3, 4, and 5 were trapped 21-23 August 2007. Maximum temperatures were 86°F (30°C), 89°F (31°C), and 80°F (26°C) at Clinton (www.weatherunderground.com). The

sky was overcast much of the day on 21 August. On 22 August the sky was overcast in the morning, but cleared over the course of the day. It rained heavily for about 90 minutes during the afternoon on 23 August and the sky was overcast much of the day.

Trapping was conducted for a total of 371 trap-days in the corridor. Nine thirteen-lined ground squirrels were caught at Site 4. No Franklin's ground squirrels were captured. This does not prove conclusively that the species is absent from the corridor, however.

Seven Illinois Endangered species have been reported in the vicinity of the US 30 project area within the past four years.

Threatened and Endangered Bird Species

Seven Illinois Endangered species have been reported in the vicinity of the US 30 project area within the past four years.

Black-Crowned Night-Heron (*Nycticorax nycticorax*) Illinois Endangered

This species was reported by both the Whitside County Spring Bird Count and by the Geneseo l Breeding Bird Survey (Route 34008). Black-Crowned Night-Herons could nest at Fulton Marsh, but no other habitat for this species was found near the project area.

Mississippi Kite (*Ictinia mississippiensis)* Illinois Endangered

This is a very rare visitor to the area and was seen on along the Mississippi River during the 2006 Whiteside County Spring Bird Count. This species does not breed in the area.

Northern Harrier (*Circus cyaneus*) Illinois Endangered

A Norhern Harrier was found found dead on a roadside just outside the corridor (**Appendix 3-4**, Figure 7) during the fall migration, but no evidence of breeding was found in the project area. Northern Harriers have been known to nest in northwestern Illinois. They require 'large grassland tracts' for breeding (over 200 acres, J. Herkert personal communication) and will breed in both dry and wet grasslands (Apfelbaum & Seelbach 1983).

Bald Eagle (*Haliaeetus leucocephalus*) Illinois Threatened and protected by *The US Bald and Golden Eagle Protection act (16 U.S.C. 668a-d)*

Bald Eagles are increasing in number and have come off the Federal Endangered and Threatened Species list. However, the Bald Eagle still has Illinois Threatened status, although this will likely be changed in the next year, and is protected by *The US Bald and Golden Eagle Protection act (16 U.S.C. 668a-d)*.

A Bald Eagle was seen flying over the corridor on 9 April 2007 and likely nest along the Rock and Mississippi Rivers. Bald Eagles have nested along the Rock River very near the corridor in the recent past (**Appendix 3-4**, Figure 2 & 9). Bald Eagles have also nested along the Rock River near Prophetstown, IL (41°41'07"N, 89°56'06"W), and near Colona, IL (41°30'18"N, 90°21'16"W).

Both sightings were in 2006 and both nests are not near the project area. Bald Eagles are winter residents along both rivers each year.

Least Bittern (*Ixobrychus exilis*) Illinois Threatened

Several breeding pairs Least Bitterns of (Illinois Threatened) nested at Fulton Marsh in 2007 and one bird responded to playback on 1 June 2008. There is no other breeding habitat for this species near the study area.

Sandhill Cranes (*Grus Canadensis*) Illinois Threatened
Three Sandhill Cranes were flushed in a field within the corridor, on 9 April (**Appendix 3-4**, Figure 7). These individuals were followed approximately 1.2 mi (2 km) outside the project area and no evidence of breeding was found. This species has been expanding its range in Illinois in recent years and nesting records are know from northwestern Illinois.

Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) Illinois Endangered
Yellow-headed Blackbirds nest at Fulton Marsh to the north of the project area in the town of Fulton. (**Appendix 3-4,** Figure 6). On 1 June 2008 an estimated 4 breeding males were present at Fulton Marsh. There is no other breeding habitat for this species near the study area.

Threatened and Endangered Fish
Christopher A. Taylor

A total of 47 fish species in 13 families were collected by INHS personnel in the U.S. Route 30 project corridor during 2007 (Appendix 4-4). No species listed at either state or federal as threatened or endangered were collected or observed in the proposed project corridor.

Historical data show fishes recorded from the Rock River and the Cattail Creek drainages total 109 species in 22 families (Appendix 4-3). Five state endangered and five state threatened (IESPB 2004) are known from these systems.

Lake sturgeon (*Acipenser fulvescens*). Acipenseridae State endangered.

The state endangered lake sturgeon (*Acipenser fulvescens*) has been found at two locations in the Rock River drainage. One record is the Rock River at Sterling, Whiteside Co., October 1934. Smith (1979) cited this specimen and claimed "specimens from the Rock River are still reported with some regularity". On 9 April 1992, two specimens were caught and released by a commercial fisherman in the Rock River at the east end of Carr Island (between Milan and Rock Island), just below a steel dam.

Blacknose shiner (*Notropis heterolepis*). Cyprinidae. State endangered.

The state endangered blacknose shiner (*Notropis heterolepis*) is known to historically occur in the Kishwaukee River system, Coon Creek in Whiteside Co., and Fairfield Ditch No. 1 in Bureau Co. The species was recently reported from Fairfield Union Special Ditch (Bureau Co.) in September 2006 when 11 individuals were collected.

Weed shiner (*Notropis texanus*). Cyprinidae. State endangered.

The state endangered weed shiner (*Notropis texanus*) is known to occur sporadically throughout the Rock River drainage. Historical records and dates of collection include: Sugar River, Winnebago Co., 29 August 1963; South Branch Kishwaukee River, Dekalb Co., 2 August 1901; Yellow Creek, Stephenson Co., 5 May 1880; Rock River, Ogle Co., 5 June 1877; Green River, Henry Co., 19 August 1885; Coon Creek and County Ditch #1, Whiteside Co., 23 May 1990; Fairfield Ditch #1, Bureau Co., July 1963, 23 May 1990, and 29 July 1991. A recent (Lutterbie et al. 2007) survey of lower Rock River tributaries in southern Whiteside, northeastern Henry, and northwestern Bureau counties found weeds shiners at 13 different locations. These recent collection records from the lower Rock River indicate that the weed shiner continues to persist – sometimes commonly – in smaller, channelized tributaries of the Rock River drainage.

Pallid shiner (*Notropis amnis*). Cyprinidae. State endangered.

The state endangered pallid shiner (*Notropis amnis*) and state threatened river redhorse (*Moxostoma carinatum*) and blackchin shiner (*Notropis heterodon*) are all species known to historically occur in the Rock River drainage from single collections. Three pallid shiners were collected from the Rock River in southeastern Rock Island Co. on 10 July 1925. A single blackchin shiner was collected from the Pecatonica River at Freeport, Stephenson Co. on 4 May 1880. A single river redhorse was collected from the Rock River at Oregon, Ogle Co. on 19 August 1901.

Gravel chub (*Erimystax x- punctatus*). Cyprinidae. State threatened.

The state threatened gravel chub (*Erimystax x- punctatus*) has been collected from 30 locations within the Rock River drainage between 1958 and 2002, including nine sites in Winnebago Co. The most recent records for the species include the Rock River at Roscoe and at Blackhawk Park in Rockford in August of 2002, and the Rock River at the Rockford dam on 23 July 1998. In total, these records indicated that the gravel chub continues to occur in the Rock River drainage of Illinois.

Starhead topminnow (*Fundulus dispar).* Fundulidae. State threatened.

The state threatened starhead topminnow (*Fundulus dispar*) occurs in the Pecatonica and Green river basins within the Rock River drainage. The species has been collected from Raccoon Creek on three occasions between 1968 and 1998, and once from the Sugar River near Shirland on 17 August 1968. In the Green River drainage, *F. dispar* was collected from two sites in Fairfield Union Special Ditch during August 2005 and September 2006.

Iowa darter (*Etheostoma exile*). Percidae. State threatened.

The state threatened Iowa darter (*Etheostoma exile*) is found sporadically in the Rock River drainage, and has been collected from eight locations: North Branch Otter Creek (4.5 mi NNE Davis, Stephenson Co., 7 August 1963, and 3.5 mi NW Durand, Winnebago Co. 20 November 1962, 19 June 1963, and 7 July 1971); Pecatonica River (0.5 mi N Pecatonica, Winnebago Co., 23 June 1963); North Branch Kishwaukee River (5 mi W Woodstock, McHenry Co., 12 July 1965); Larsons Gravel Pits (4.5 mi E Dekalb, Dekalb Co., 10 October 1967); Raccoon Creek (4 mi NW Rockton, Winnebago Co., 23 June 1976, and 24 May 1990); Laughing Creek (6 mi S Woodstock, McHenry Co., 23 May 1994); Raccoon Creek (3 mi W Rockton, Winnebago Co., 19 August 1998); and a tributary of Raccoon Creek (5 mi WSW South Beloit, Winnebago Co., 5 Oct. 1999). The latter four records indicate that the Iowa darter continues to occur in the Pecatonica and Kishwaukee river basins of the Rock River drainage in Illinois.

Western sand darter (*Ammocrypta clara*). Percidae. State endangered.

The state endangered western sand darter (*Ammocrypta clara*) has been collected from the Rock River drainage on a single occasion. Two specimens were collected from a pond near the Sugar River 4 mi NW Shirland, Winnebago Co., on 17 August 1968.

Threatened and Endangered Mussels
Jeremy S. Tiemann

Historical records (1920s to present) for freshwater mussel from the Rock River basin near the U.S. Route 30 project corridor include six listed species: the state-threatened purple wartyback, the state-threatened spike, the state-threatened butterfly (*Ellipsaria lineolata*), the state-endangered sheepnose (*Plethobasus cyphyus*), the state-threatened black sandshell, and the federally-endangered Higgins eye (*Lampsilis higginsii*). All six species have been recorded in the Rock River mainstem, and two – the spike and the

black sandshell – have been recorded in tributaries. Of these six species, only three – the spike, the butterfly, and the black sandshell – have been collected alive in the Rock River basin since 1970 (Cummings and Mayer 1997; Tiemann et al. 2007). As recent as 2003, both the spke and the butterfly have been collected alive in the Rock River mainstem, and the black sandshell has been collected alive in the Kishwaukee, Kyte, and Rock rivers (Tiemann et al. 2005; Tiemann et al 2007). It also is important to note that fresh-dead specimens of both the purple wartyback and the sheepnose have been collected in the Rock River mainstem since 2005, suggesting that there could be small, isolated populations of these two species remaining in the basin. The Higgins eye is represented by two records, both from the mainstem of the Rock River: a dead specimen collected in 1925, and a relict specimen collected in 1988.

Black sandshell (*Ligumia recta*). Unionidae. State threatened.
During this survey, only one listed species, the black sandshell (state-threatened), was collected alive – five specimens from site US30-2 (Rock River in the vicinity of the U.S. Route 30 bridge), and three specimens from site US30-3 (Elkhorn Creek in the vicinity of the U.S. Route 30 bridge). Two other listed species – the purple wartyback and the spike (both listed as state-threatened) were collected only as relict shells, and only from site US30-2 (Rock River in the vicinity of the U.S. Route 30 bridge).

Threatened and Endangered Aquatic Macroinvertebrates other than Mussels
Mark J. Wetzel and Steven J. Taylor
None of the aquatic macroinvertebrate species (exclusive of unionid mollusks) collected from the aquatic sites within U.S. Route 30 project corridor are listed as endangered or threatened at either the federal or state level (USDI-FWS 1996, 1997; IESPB 2005, 2006), nor are any of the listed species known or thought likely to occur there.

Chapter 7 Ecological Sensitive Areas

Illinois Natural Areas

The Illinois Natural Areas Inventory (INAI) was conducted over a three-year period during the mid 1970's to document remaining significant and exceptional examples of natural communities and other features in Illinois (White 1978). The INAI established seven categories of natural areas based on significant features and a grading system to rank natural quality (White 1978). The natural quality of a community type was graded as A (relatively stable or undisturbed communities), B (late successional or lightly disturbed communities), C (mid-successional or moderately to heavily disturbed communities), D (early successional or severely degraded communities), or E (very early successional or very severely disturbed communities). There has been an ongoing effort to update the inventory since the original study as new sites are discovered and other sites lose qualification through habitat destruction or degradation. In general, only A and B communities are designated as significant or exceptional features, although many natural areas include some Grade C areas.

No INAI sites are known from within the US Route 30 corridor. One Natural Areas Inventory Site occurs within a one-mile buffer. Part of Lyndoṇ Agneẓ Prairie Nature Preserve is considered an Illinois Natural Area. Approximately 35 acres of this 78 acres site includes Grades A, B, and C dry-mesic, mesic, and wet mesic prairie.

Illinois Nature Preserves

Nature preserves are areas of land or water in public or private ownership that are formerly dedicated to receive maximum protection of significant natural features. The central goal of the nature preserve system, currently with slightly over 340 preserves in the state, is to protect and preserve examples of all significant natural features found in Illinois for the purposes of scientific research, education, conserving biodiversity, and esthetic enjoyment. Nature preserves are administered largely by the Illinois Nature Preserves Commission (INPC). Preserves usually are the shared responsibility of the INPC, the Illinois Department of Natural Resources, and land owners (McFall and Karnes 1995). Part of Lyndoṇ-Agneẓ Prairie Nature Preserve is within the US Route 30 study corridor; however, the highest quality portion recognized by the INAI is outside the project limits. Two areas cover typed as prairie **(Figure 7-1, attached at the end of Chapter 7)** are buffer areas for the Lyndon-Agnew Prairie Nature Preserve and are owned by the Natural Land Institute (pers. com. Jerry Paulson, Director, Natural Land Institute). These two sites are under active management by the Whiteside Soil and Water Conservation District (pers. comm. David Harrison, NRCS), but are not considered high-quality remnants.

Illinois Land and Water Reserves

Land and Water Reserves are similar to nature preserves but have fewer restrictions on land use. The program is administered by the Illinois Nature Preserves Commission and there are a total of 112 dedicated Land and Water Reserves in Illinois. No Land and Water Reserves occur within the US Route 30 corridor or within the one-mile buffer.

The Natural Heritage Landmarks

The Natural Heritage program was established in 1981 and recognizes landowners who voluntarily preserve land with a non-binding agreement, which is often a first step toward dedication of land as a nature preserve. Land or water may qualify for the program if it is an outstanding natural area or endangered species site that is included on the state's Natural Areas Inventory. The program provides a sign and certificate recognizing the Landmark designation. No Natural Heritage Landmarks occur within the US Route 30 project corridor,

although one exists within the one-mile buffer. Prairie Trails Natural Heritage Landmark occurs just south of Chicago Northwestern Railroad and is adjacent to Savanna described in **Chapters 2, 6, and 7.** It is a large area with dry sand savanna and dry sand prairie communities.

Ecologically Sensitive Botanical Areas

Apart from the above categories, there were three sites in the IL Route 30 study corridor that, based on the botanical surveys, were considered ecologically sensitive **(Figure 7-1).** They are considered ecologically sensitive areas because they either: 1) contain one or more populations of threatened or endangered species, 2) have a concentration of plants that are rare or uncommon in the Illinois and/or have a concentration of species ranked with Coefficients of Conservatism (Taft et al. 1997) greater than 6, and 3) they are plant community types that are considered rare or uncommon in Illinois. Three sites were identified in the US Route 30 study corridor: the Dry to Dry-mesic Sand Savanna, Dry-Mesic Gravel Prairie, and Dry Sand Hill Prairie described previously (Chapters 2 and 6) and shown on **Figure 7-1.** One other dry sand hill prairie community occurred within the corridor. It had a population of kitten tails, a state threatened species. This latter site was not considered an ecological sensitive area because it was not as botanically diverse as the other three sites and there is continuing human disturbance evident at the site.

Dry to Dry-mesic Sand Savanna **(Savanna Cover Type)** - This area is a mixture of dry to dry-mesic sand savanna and dry sand prairie communities. The whole area was cover-typed as Savanna because of very fine-scale heterogeneity among the savanna and prairie communities. The soil type in this savanna community is Plainfield sand with 6 - 20% slopes. This area occurs on a series of sand dunes reaching their greatest height in the study area adjacent to the Chicago Northwestern Railroad. The dry sand savanna communities occur on the ridge tops. On some of the sand dunes, there are stands of dense, small-to-medium size (10 - 20 cm dbh) black oak. Some ridges were planted in pines (*Pinus* spp.). Sand blowouts exist throughout the area. Most of the rare flora associated with savanna habitat occurred in these blowout areas. On the more level terrain, between the dunes and swales, dry-mesic savanna and dry-mesic sand prairie communities existed and the vegetation is less sparse. There is evidence of past disturbance with some old livestock fences, but livestock grazing has ceased. Past fire also is evident, and fire scars occur on some of the trees near the railroad.

A total of 147 species, 86% native, were found at this site (**Appendix 7-1)**. Twenty-nine species had a coefficient of conservatism (C) value of 7 or above, totaling 19.7% of the flora found during the survey. The site contains eight populations of three state endangered or threatened species: Gray's sedge, beach heath and large-flowered beard tongue. Complete species list and results from Floristic Quality Assessment are found in **Appendix 7-1.** Element of Occurrence data can be found in **Appendix 6-1.** The dominant tree in this community is black oak. Dominant sapling/shrubs in this community include: gray dogwood, wafer ash (*Ptelea trifoliata*), aromatic sumac, and common dewberry (*Rubus flagellaris*). Dominant Grass/sedge species include beach three-awn grass (*Aristida tuberculosa*), Indian grass (*Sorghastrum nutans*), six-weeks fescue (*Vulpia octoflora*), sand-bracted sedge (*Carex muhlenbergii*), Smooth-fruited oak sedge (*Carex tonsa),* Schweinitz's flatsedge, and the non-native cheat grass (*Bromus tectorum*). Dominant forbs include horsemint, western ragweed, poppy mallow, nodding spurge (*Chamaesyce maculata*), golden aster, common rock rose, bush clover, and pale beard-tongue. Common non-native species include yarrow (*Achillea millefolium*), cheat grass, and smooth brome grass. Species that have a coefficient of conservatism (C) value of 7 or greater include; fame flower (*Talinum rugospermum*; C = 9), beach heather (C = 9), poppy mallow (C = 9), hairy grama (*Bouteloua hirsute*; C = 9), green milkweed (*Asclepias viridiflora*; C = 9), beach three awn grass (*Aristida tuberculosa*; C = 9), Carolina anemone (*Anemone*

caroliniana; C = 9), rock selaginella (*Selaginella rupestris;* C = 8), Canada plum, (*Prunus nigra;* C = 8), large-flowered beard tongue (C = 8), Plains prickly-pear (*Opuntia macrorhiza*; C = 8*),* Gray sedge (C = 8), New Jersey tea (*Ceanothus americanus*; C = 8), smooth-fruited oak sedge (C = 8), lead plant (*Amorpha canescens*; C = 8), bird's foot violet (*Viola pedata*; C = 7), goat's rue (*Tephrosia virginiana*; C = 7), purple milkwort (*Polygala polygama v. obtusata*; C = 7), cleft phlox (*Phlox bifida*; C = 7), slender-leaved panic grass (*Panicum linearifolium*; C = 7) starved panic grass (*Panicum depauperatum*; C = 7), rough blazing star (*Liatris aspera*; C = 7), June grass (C = 7), western sunflower (*Helianthus occidentalis*; C = 7), common rockrose (*Helianthemum canadense*; C = 7), tansy mustard (*Descurainia pinnata*; C = 7), Canada milk vetch (*Astragalus canadensis*; C = 7*)*, sand milkweed (*Asclepias amplexicaulis*; C = 7), and lyre-leaved rock cress (*Arabis lyrata*; C = 7*)*.

Dry Sand Hill Prairie - The dry sand hill prairie is located on the bluff east of Cattail Creek **(Figure 7-1).** Species composition is very similar to the sand prairie communities in the Savanna cover type with a few exceptions. This natural community is rare in Illinois (pers. comm., Randy Nyboer, IDNR). Woody vegetation is encroaching along the edges, but the prairie is still open and dominated by sand prairie grasses and forbs. The soil is mapped as Plainfield sand, the same soil that makes up the dunes of the Savanna community (Sabata 1995).

Seventy-one species, 94% native, were found at this site. Twenty species had a coefficient of conservatism (C) value of 7 or greater, totaling 28.1% of the flora found during the survey. The site contains four populations of three state endangered or threatened species: kitten tails, prairie dandelion, and broomrape. Complete species list and results from Floristic Quality Assessment are found in **Appendix 7-1.** Dominant grasses and sedges that occurred in this community type include little bluestem, sand-bracted sedge, and the non-native cheat grass. Common forbs included Hill's thistle, horsemint, pale beard tongue, western ragweed, hairy puccoon, and field sorrel. The most common non-native species were cheat grass and yarrow. Species that have a coefficient of conservatism (C) value of 7 or greater include broom rape (C = 10), prairie cinquefoil (*Potentilla arguta*; C = 10), poppy mallow (*Callirhoe triangulata*; C = 9), white prairie clover (*Dalea candida*; C = 9), prairie dandelion (C = 9), lead plant (C = 8), candle anemone (*Anemone cylindrica*; C = 8), kitten tails (C = 8), purple prairie clover (*Dalea purpurea*; C = 8), Hill's thistle (C = 7), rockrose (*Helianthemum bicknellii;* C = 7), June grass (C = 7), rough blazing star (C = 7), hairy puccoon (C = 7), starved panic grass (C = 7), goat's rue (C = 7), false pennyroyal (*Trichostema brachiatum*; C = 7), and prairie alumroot (*Heuchera richardsonii*; C = 7).

Dry-mesic Gravel Hill Prairie - This natural community is very rare in this part of Illinois (pers comm., Randy Nyboer, IDNR). This area has limestone bedrock near the surface; weathered limestone forms the gravelly substrate. The prairie vegetation is common on limestone terrace upslope from rock outcroppings (up to 30 feet in height) bordering the western boundary of the Cattail Creek floodplain. The prairie includes an interesting mix of floristic elements from the local sand prairies with many species characteristic of calcareous soils associated with limestone outcroppings including small yellow flax, rock sandwort, and ladies' tresses (*Spiranthes magnicamporum*). Fire absence has caused some of the area to become infested with woody exotic and native species, including an abundance of eastern red cedar (*Juniperus virginiana*). Sixty-eight species (79% native) were found at this site. Eighteen species had a coefficient of conservatism (C) value of 7 or greater, totaling 26.4% of the flora found during the survey. The site contains one population of kitten tails, a state threatened species (**Appendix 6-1**). Complete species list and results from Floristic Quality Assessment are found in **Appendix 7-1.**

Dominant tree and shrub species include red cedar, wafer ash, aromatic sumac*, and the non-native species* Siberian elm (*Ulmus pumila*) and bush honeysuckle (*Lonicera maackii)*. Dominant grasses include side-oats grama, little bluestem, and the non-native smooth brome. Common herbaceous ground-cover species include yarrow, Lyre-leaved rock cress, kitten tails, bastard toad-flax, spiked lobelia (*Lobelia spicata*), pale beard tongue, and dyersweed goldenrod (*Solidago nemoralis*). Species that have a coefficient of conservatism (C) value of 7 or above include rock sandwort (C = 10), Jointweed (*Polygonella articulate; C = 9*), Long-stalked panic grass (*Panicum perlongum*; C = 9), Downy gentian (*Gentiana puberulenta*; C = 9), hairy grama (*Bouteloua hirsute; C = 9*), northern prairie drop seed (C = 9), Fringed puccoon (*Lithospermum incisum; C = 8*), lead plant (C = 8), kitten tails (C = 8), purple prairie clover (C = 8), candle anemone (C = 8), Hill's thistle (C = 7), small yellow flax (C = 7), side-oats grama (C = 7), aromatic aster (*Aster oblongifolius; C = 7*), sky-blue aster (*Aster azureus; C = 7*), and lyre-leaved rock cress (C = 7).

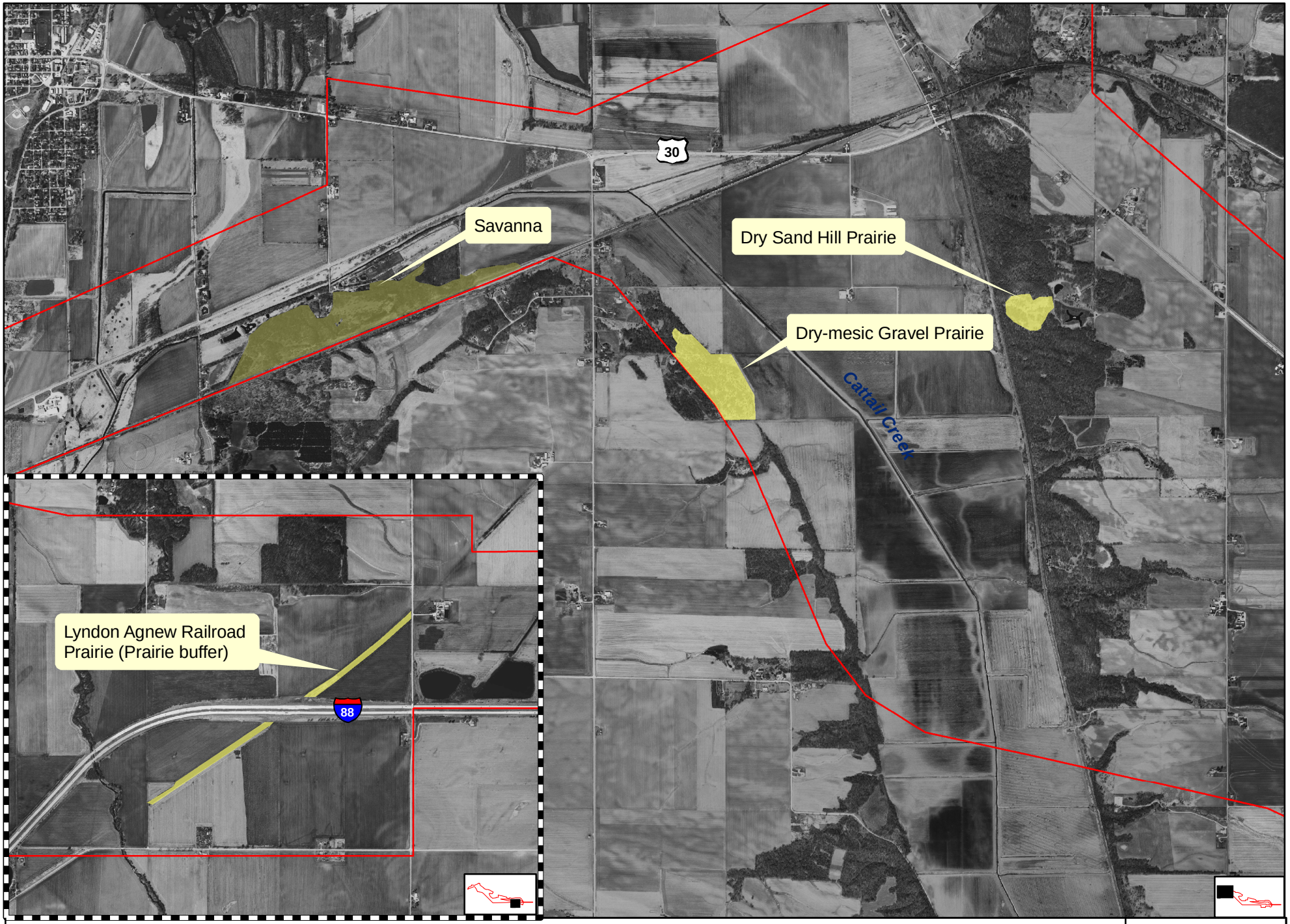


Figure 7-1. Ecologically Sensitive Areas, Natural Areas, Nature Preserves, and Heritage Landmarks within the US Route 30 corridor

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Chapter 8 Invasive and Noxious Species Surveys
William Handel

Methods for Invasive and Noxious Species Surveys

Large populations of plant species classified as Illinois Noxious Weeds, and other potentially invasive species, were noted. Species identified in the Illinois Noxious Weed Law as Noxious Species include both native and non-native taxa: common ragweed (*Ambrosia artemisiifolia),* giant ragweed *(Ambrosia trifida),* hemp *(Cannabis sativa),* musk thistle (*Carduus nutans*)*,* Canada thistle (*Cirsium arvense*)*,* field sow thistle (*Sonchus arvensis*)*,* sorghum (*Sorghum almum*)*,* Johnson grass (*Sorghum halepense*). Non-native taxa not included on this list but known to be highly invasive in natural communities also were noted where found in significantly large populations. Examples of these species include garlic mustard (*Alliaria petiolata*), crown vetch *(Coronilla varia), Lonicera maackii*, other non-native honeysuckles *Lonicera* spp., wild parsnip (*Pastinaca sativa),* and multi-flora rose (*Rosa multiflora)*. The survey focused on Invasive and Noxious Species within areas of natural cover types. Not every woodland or pasture area was closely examined in this large study corridor during the field season. Some highly degraded areas were not intensively surveyed; consequently, evaluations of invasive and noxious species in these areas were incomplete in order to devote needed attention to surveys of areas with higher botanical integrity that included habitat for endangered and threatened species.

Invasive and Noxious Species (Upland Areas)

Populations of species identified in the Illinois Noxious Weed Law as Noxious Species were found in the study corridor. These species include both native and non-native taxa: common ragweed*,* giant ragweed*,* musk thistle*,* Canada thistle*,* and field sow thistle. These five species were found scattered throughout the corridor mainly in crop field borders and heavily pastured areas, but were not extensive. Giant ragweed was the dominant in a large area along Cattail

Creeks **(see wetlands Chapter 5).** Common ragweed is a common native species often found in disturbed sand prairies. This species, along with western ragweed, (*Ambrosia psilostachya*) was found in the Tree Savanna (**see Chapters 2 and 7**). Musk thistle occurred in the dry-mesic gravel prairie (**see Chapters 2 and 7**). Other highly invasive species were also observed in the study area including garlic musard, crown vetch, honeysuckle, wild parsnip, black locust (*Robinia pseudoacacia*), and multi-flora rose.

garlic mustard (*Alliaria petiolata*)- This species primarily invades forests and forest edge throughout the state, and is well established throughout northwestern Illinois (pers. observation Handel 2007). In the US 30 corridor forest communities, garlic mustard is common component, and is dominant especially in the forest habitat with sandy soils in the western portion of the corridor.

crown vetch (*Coronilla varia*) - This species is localized throughout the study area. Most of the populations were small along roadsides, where it was perhaps planted for erosion control and grazing.

honeysuckle (*Lonicera maackii*) - It is scattered in forest and old field communities throughout the corridor. A large population occurs in the Dry-mesic gravel prairie.

wild parsnip (*Pastinaca sativa*) -Wild parsnip occurred throughout most of the non-native grassland, hayfields, and pastures throughout the US Route 30 study area.

multiflora rose (*Rosa multiflora*) - This species occurs in a wide range of habitats including old fields, forests, and prairies. It usually increases with grazing. It was common in the forest bluff east of Cattail Creek.

black locust (*Robinia pseudoacacia*) - Occurs in some forests and old field habitats in the corridor. This was a common species near the dry sand hill prairie**.**

Invasive and Noxious Species (Wetlands)

reed canary grass (*Phalaris arundinacea)* – Is a common species found frequently in wet meadows and other wetland sites in the Route 30 corridor. This species was dominant in many wet meadows throughout the project area.

Invasive and Noxious Species (Aquatics)

Common carp (Cyprinus carpio) - This species has been established in Illinois waterways for over 125 years. It occurs in all types of aquatic habitats from large rivers to small ponds. In the US 30 study corridor the species occurred commonly in the Rock River at the US 30 bridge. While not collected at other sites, it is highly likely that populations also occur in Elkhorn Creek, Rock Creek, and Deer Creek in the project corridor.

Rusty Crayfish (Orconectes rusticus) - The Rusty Crayfish occurs in creeks and lakes with rocky substrates. While not collected in the US 30 project corridor, the invasive Rusty Crayfish does occur in Rock Creek approximately three miles upstream of US 30. It is likely for the species to spread downstream into the project corridor within a five year time-span.

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Appendix 2-1

List of vascular plants known from US Route 30 corridor

Appendix 2-1. List of vascular plants known from US Route 30 corridor																
Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Abutilon theophrasti	buttonweed									x					x	x
Acer negundo	boxelder	x	x	x				x		x			x			
Acer saccharinum	silver maple		x										x			x
Acer saccharum	sugar maple	x								x			x			
Achillea millefolium	common milfoil	x	x	x	x	x	x	x								
Acorus calamus	sweet flag									x	x	x				
Actaea pachypoda	doll's eyes	x	x													
Adiantum pedatum	maidenhair fern	x	x													
Agastache nepetoides	yellow giant hyssop	x	x	x				x								
Agrimonia gryposepala	tall agrimony		x													
Agrimonia parviflora	swamp agrimony									x						
Agrimonia pubescens	soft agrimony	x				x				x						

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Agropyron repens	quack grass									x						
Agropyron smithii	Colorado bluestem			x				x								
Agrostis gigantea	large bent grass									x	x					
Alisma plantago-aquatica	small water plantain								x	x	x	x				
Alliaria petiolata	garlic mustard	x	x					x		x			x			x
Allium burdickii	wild leek	x	x													
Allium canadense	wild garlic	x														x
Amaranthus tuberculatus	tall waterhemp								x	x						
Ambrosia artemisiifolia	common ragweed			x				x	x	x	x		x			
Ambrosia psilostachya	western ragweed			x	x			x								
Ambrosia trifida	giant ragweed		x							x	x		x			
Amorpha canescens	lead plant			x	x	x		x								x
Amphicarpa bracteata	hog peanut	x	x						x	x	x					

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Andropogon gerardii	big bluestem				x		x							x		
Androsace occidentalis	androsace			x				x								
Anemone canadensis	meadow anemone			x	x		x		x	x						
Anemone caroliniana	Carolina anemone							x								
Anemone cylindrica	candle anemone				x	x										x
Anemone virginiana	tall anemone	x	x													x
Angelica atropurpurea	angelica												x			
Antennaria neglecta	cat's foot			x	x	x		x								
Antennaria plantaginifolia	pussy toes	x			x											
Apios americana	ground-nut								x				x			
Apocynum cannabinum	dogbane															
Aquilegia canadensis	colombine					x										
Arabis glabra	toothed cress			x				x								
Arabis lyrata	lyre-leaved rock cress			x	x	x		x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Arctium lappa	burdock															x
Arctium minus	burdock								x	x			x			x
Arisaema dracontium	green dragon												x			
Arisaema triphyllum	Indian turnip	x	x													
Aristida tuberculosa	beach three awn grass			x				x								
Artemisia campestris	beach wormwood			x				x								
Artemisia ludoviciana	white sage			x				x								
Asarum canadense	Canada wild ginger	x	x										x			
Asclepias amplexicaulis	sand milkweed			x	x			x								
Asclepias incarnata	swamp milkweed		x						x	x	x					
Asclepias syriaca	common milkweed		x	x	x		x	x	x	x	x		x	x		
Asclepias tuberosa	butterfly weed													x		
Asclepias verticillata	horsetail milkweed			x	x	x		x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Asclepias viridiflora	green milkweed			x				x								
Asparagus officinalis	garden asparagus															x
Asplenium platyneuron	ebony spleenwort			x				x								
Aster azureus	sky blue aster					x										
Aster ericoides	heath aster						x							x		
Aster lanceolatus	panicled aster		x						x	x	x		x			x
Aster lateriflorus	side-flowering aster		x										x			x
Aster novae-angliae	New England aster						x		x	x	x			x		
Aster oblongifolius	aromatic aster					x										
Aster pilosus	hairy aster			x			x	x	x	x			x			
Aster praealtus	willow aster						x									
Aster puniceus	swamp aster		x						x	x	x					
Aster shortii	Short's aster	x	x													

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Astragalus canadensis	Canadian milk vetch			x				x								
Athyrium filix-femina	lady fern	x	x													
Avena sativa	oats															x
Besseya bullii	kitten tails				x	x										x
Betula nigra	river birch									x						x
Bidens cernua	nodding bur marigold									x	x	x				
Bidens connata	purple-stem tickseed								x	x	x	x				x
Bidens frondosa	common beggar's ticks								x	x	x	x				
Boehmeria cylindrica	false nettle									x	x	x	x			
Botrychium dissectum	dissected grapefern	x														
Botrychium virginianum	rattlesnake fern	x														
Bouteloua curtipendula	side-oats grama					x		x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Bouteloua hirsuta	gramma grass					x		x								
Brachyelytrum erectum	long-awned wood grass	x	x													
Brickellia eupatorioides	false boneset						x									x
Bromus commutatus	hairy brome		x						x	x			x			x
Bromus inermis	Hungarian brome					x	x	x		x	x		x	x		
Bromus pubescens	woodland brome	x	x													
Bromus tectorum	cheat grass			x	x			x								
Calamagrostis canadensis	blue joint grass						x		x	x	x					
Callirhoe triangulata	clustered poppy mallow			x	x			x								
Caltha palustris	marsh marigold										x					
Calystegia sepium	American bindweed								x	x			x			
Campanula americana	American bellflower	x	x							x			x			

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
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Campanula aparanoides	marsh bellflower										x					
Cannabis sativa	hemp									x						
Cardamine bulbosa	bulb bittercress								x	x	x					
Carduus nutans	musk thistle					x				x						
Carex annectens	fox sedge								x	x	x					
Carex bebbii	sedge								x	x	x					
Carex blanda	common wood sedge	x	x													
Carex brevior	plains oval sedge							x								
Carex cristatella	crested oval sedge								x	x	x					
Carex gravida	heavy sedge	x														
Carex grayi	sedge												x			
Carex grisea	sedge	x	x													
Carex hystricina	sedge								x	x	x	x				

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Carex jamesii	grass sedge	x														
Carex lacustris	common lake sedge								x			x				
Carex laeviconica	long-toothed sedge								x			x				
Carex laevivaginata	sedge											x				
Carex lupulina	hop sedge								x							
Carex meadii	mead's sedge			x	x	x		x								
Carex molesta	field oval sedge															x
Carex muhlenbergii	sand bracted sedge			x	x			x								
Carex pensylvanica	Pennsylvania sedge	x	x	x	x			x								
Carex rosea	wood sedge	x	x													
Carex sartwellii	sedge									x						
Carex scoparia	sedge								x							

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
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Carex sparganioides	bracted sedge	x	x													
Carex stipata	common fox sedge								x	x	x	x				
Carex stricta	tussock sedge								x	x	x					
Carex tonsa	stiff sedge			x				x								
Carex tribuloides	awl-fruited sedge								x	x						
Carex trichocarpa	hairy-fruited sedge								x	x	x		x			
Carex umbellata	umbel sedge			x		x										
Carex vescaria	sedge								x	x						
Carex vulpinoidea	brown fox sedge		x						x	x	x		x			x
Carya cordiformis	bitternut hickory	x	x	x				x					x			
Carya ovata	shagbark hickory	x	x													
Cassia fasciculata	partridage pea			x				x		x						
Catalpa bignoniodes	cigar tree		x													

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Catalpa speciosa	cigar tree		x						x		x					x
Caulophyllum thalictroides	blue cohosh	x														
Ceanothus americanus	New Jersey tea			x				x								
Celastrus scandens	climbing bittersweet	x	x	x				x								
Celtis occidentalis	hackberry	x	x										x			
Cenchrus longispinus	mat sandbur			x												x
Chaerophyllum procumbens	streambank chervil	x														
Chamaesyce geyeri	Gyere's spurge			x				x								x
Chamaesyce maculata	nodding spurge			x				x								
Chenopodium album	lamb's quarters									x	x					
Cichorium intybus	chickory													x	x	x
Cinna arundinacea	common wood reed	x	x							x			x			
Circaea lutetiana	enchanter's nightshade	x	x													

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Cirsium arvense	Canada thistle									x	x			x	x	x
Cirsium discolor	pasture thistle			x				x		x	x		x	x		x
Cirsium hillii	Hill's thistle				x	x										
Cirsium vulgare	bull thistle									x	x				x	x
Claytonia virginica	spring beauty	x	x					x		x	x					
Comandra umbellata	bastard toad-flax					x										
Commelina communis	common day flower												x			
Commelina erecta	day flower			x				x								
Conium maculatum	poison hemlock									x			x			x
Conyza canadensis	horseweed			x				x		x				x		x
Cornus drummondii	rough-leaved dogwood									x						
Cornus obliqua	pale dogwood								x	x	x		x			
Cornus racemosa	gray dogwood	x	x	x	x			x		x				x		x
Coronilla varia	crown vetch														x	x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
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Corylus americana	American filbert	x	x					x								
Crataegus mollis	downy hawthorn								x	x			x			
Croton glandulosus septentrionalis	croton			x				x								
Cryptotaenia canadensis	honewort	x	x						x	x			x			
Cuscuta compacta	dodder								x			x	x			
Cycloloma atriplicifolium	winged pigweed			x				x								x
Cyperus diandrus	umbrella flat sedge								x			x				x
Cyperus erythrorhizos	red-rooted nut sedge								x	x	x	x				
Cyperus esculentus	field nut sedge								x	x	x	x				
Cyperus filiculmis	slender sand sedge			x				x								
Cyperus grayioides	galingale			x				x								
Cyperus odoratus	nut sedge											x				
Cyperus rivularis	nut sedge			x					x			x				
Cyperus schweinitzii	rough sand sedge			x				x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Cyperus strigosus	long-scaled nut sedge								x	x	x	x	x			
Cystopteris protrusa	fragile fern	x	x													
Dactylis glomerata	orchard grass									x	x		x	x	x	x
Dalea candida	white prairie clover				x	x										
Dalea purperea	purple prairie clover				x	x										
Datura stramonium	jimsonweed														x	x
Daucus carota	Queen Anne's lace					x				x			x	x	x	
Dentaria laciniata	toothwort	x	x													
Descurainia pinnata	tansy mustard			x				x								
Desmodium canadense	Canada tick trefoil			x			x	x								
Desmodium glutinosum	pointed tick trefoil	x														
Desmodium illinoense	Illinois tick trefoil					x	x									
Dianthus armeria	deptford pink															x

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Dicentra cucullaria	dutchman's breeches	x	x													
Diodia teres	buttonweed															
Dioscorea villosa	wild yam	x														
Dodecatheon meadia	shooting star				x	x										
Draba reptans	Common whitlow grass			x				x								
Echinochloa crusgalli	barnyard grass									x	x					
Echinochloa muricata	spiny barnyard grass									x	x	x	x			
Echinocystis lobata	wild cucumber								x	x		x	x			
Elaeagnus umbellata	autumn olive			x				x								
Eleocharis acicularis	Spikerush								x	x	x	x				
Eleocharis erythropoda	red-rooted spike rush								x	x	x	x				x
Eleocharis obtusa	blunt spike rush								x	x	x	x				x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Ellisia nyctelea	Aunt Lucy	x														x
Elymus canadensis	Canada wild rye			x			x	x						x		
Elymus villosus	silky wild rye	x														
Elymus virginicus	Virginia wild rye	x	x							x			x			
Equisetum arvense	common horsetail	x	x	x				x	x	x	x					
Equisetum fluviatile	horsetail								x							x
Equisetum hyemale	scouring rush				x				x							
Eragrostis pectinacea	small love grass									x						
Eragrostis spectabailis	tumblegrass			x				x								
Erigeron annuus	annual fleabane						x		x	x	x		x	x		
Erigeron philadelphicus	marsh fleabane	x								x			x			
Erigeron strigosus	fleabane				x	x		x								
Erythronium albidum	white adder's tongue	x														x
Eupatorium altissimum	tall boneset					x	x							x		

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Eupatorium maculatum	spotted Joe Pye weed									x	x					
Eupatorium perfoliatum	common boneset								x	x	x	x				
Eupatorium purpureum	purple Joe Pye weed	x	x													
Eupatorium rugosum	white snakeroot	x	x										x			
Eupatorium serotinum	late boneset			x				x	x	x	x	x				
Euphorbia corollata	flowering spurge	x		x			x	x								x
Festuca elatior	fescue	x					x							x		x
Festuca obtusa	nodding fescue	x	x										x			
Fragaria virginiana	wild strawberry	x			x			x	x			x				
Fraxinus americana	white ash	x	x						x	x	x		x	x		
Froelichia floridana	cottonweed			x				x								
Froelichia gracilis	cottonweed			x				x								
Galium aparine	annual bedstraw	x	x	x				x		x			x			

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Galium mollugo	rough bedstraw					x			x							
Galium triflorum	sweet-scented bedstraw	x														
Gentiana andrewsii	closed gentian									x	x					
Gentiana puberulenta	downy gentian					x										
Geranium maculatum	wild geranium	x	x													
Geum aleppicum	yellow avens								x		x					
Geum canadense	white avens	x	x							x			x			
Glechoma hederacea	ground ivy								x	x			x			
Gleditsia triacanthos	honey locust	x				x				x			x			
Glyceria striata	fowl manna grass		x						x	x	x		x			
Gnaphalium obtusifolium	old field balsm			x				x								
Gratiola neglecta	clammy hedge hyssop		x						x	x	x					
Hackelia virginiana	stickseed	x	x	x				x	x							

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Helenium autumnale	sneezeweed								x	x	x					x
Helianthemum bicknellii	rockrose				x											
Helianthemum canadense	common rockrose			x				x								
Helianthus grosseserratus	sawtooth sunflower						x		x	x	x		x			
Helianthus hirsutus	bristly sunflower															x
Helianthus occidentalis	western sunflower			x				x								x
Helianthus rigidus	prairie sunflower															x
Helianthus strumosus	pale-leaved sunflower		x													
Helianthus tuberosus	Jerusalem artichoke								x				x			
Heliopsis helianthoides	false sunflower						x			x				x		
Heracleum lanatum	cow parsnip								x	x						x
Hesperis matronalis	dame's rocket					x										x
Heterotheca camporum	golden aster			x	x			x								

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Heuchera richardsonii	Alumroot				x		x									
Hieracium longipilum	long-bearded hawkweed			x	x			x								
Hordeum jubatum	squirrel-tail grass									x	x					
Hudsonia tomentosa	false heather			x				x								
Hydrophyllum virginianum	Virginia waterleaf	x														
Impatiens capensis	spotted touch-me-not									x	x	x	x			x
Iris virginica	blue flag										x	x	x			
Juglans cinerea	butternut		x													
Juglans nigra	black walnut	x	x										x	x		
Juncus dudleyi	Dudley's rush								x	x	x	x				x
Juncus interior	inland rush				x					x	x					
Juncus nodosus	rush									x	x					x
Juncus tenuis	path rush	x	x				x									x

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Juniperus virginiana	eastern red cedar			x	x	x		x		x						
Kochia scoparia	summer cypress			x				x								
Koeleria macrantha	June grass			x	x			x								
Krigia virginica	dwarf dandelion			x	x			x								
Lactuca canadensis	wild lettuce		x				x									
Lactuca floridana	blue lettuce	x	x										x			
Lactuca serriola	prickly lettuce								x	x			x			
Laportea canadensis	Canada wood nettle	x	x						x	x	x		x			x
Lathyrus palustris	marsh vetchling										x					x
Leersia oryzoides	rice cut grass								x	x	x	x	x			
Leersia virginica	white grass	x	x							x	x		x			
Leonurus cardiaca	motherwort												x			
Lepidium virginicum	common peppergrass															x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Leptoloma cognatum	fall witch grass			x				x				x				
Lespedeza capitata	round-headed bush clover			x	x		x	x						x		
Leucanthemum vulgare	ox-eye daisy															x
Liatris aspera	rough blazing star			x	x			x						x		
Linaria canadensis	blue toadflax			x				x								
Lindernia dubia	false pimpernel											x				x
Linum medium texanum	grooved yellow flax					x										
Lithospermum canescens	hoary puccoon			x				x								x
Lithospermum carolinense	sand puccoon			x	x			x								x
Lithospermum incisum	yellow puccon				x	x										
Lobelia inflata	Indian tobacco		x													
Lobelia siphilitica	great blue lobelia		x						x	x	x		x			
Lobelia spicata	pale spiked lobelia	x				x			x							

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Lonicera maackii	bush honeysuckle	x				x				x		x	x			
Lonicera morrowi	bush honeysuckle			x				x								
Lonicera tatarica	Tartarian honeysuckle									x			x			
Lotus corniculatus	birdsfoot trefoil									x						
Lycopus americanus	common water horehound								x	x	x		x			
Lycopus virginicus	bugle weed									x	x		x			x
Lysimachia lanceolata	lance-leaved loosestrife					x				x						x
Maclura pomifera	Osage orange					x										
Matricaria matricarioides	pineapple weed															x
Matteuccia struthiopteris	ostrich fern		x													
Medicago lupulina	black medic					x			x	x	x					x
Medicago sativa	alfalfa													x	x	x
Melilotus alba	white sweet clover			x			x	x	x					x		x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Melilotus officinalis	yellow sweet clover			x			x	x		x				x		x
Menispermum canadense	moonseed	x											x			x
Mentha arvensis	field mint									x	x					
Mertensia virginica	Virginia bluebells	x														
Microseris cuspidata	prairie dandelion				x											x
Mimulus ringens	monkey flower								x	x	x		x			
Minuartia stricta	stiff sandwort					x										
Mirabilis nyctaginea	wild four o'clock		x					x								
Miscanthus sacchariflorus	silver grass															x
Mollugo verticillata	carpet weed			x				x								
Monarda fistulosa	wild bergamot					x	x	x		x				x		
Monarda punctata	horsemint		x	x	x	x		x								x
Morus alba	white mulberry	x	x					x		x			x			
Nelumbo lutea	American lotus									x		x				

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Nepeta cataria	catnip		x	x				x								x
Oenothera biennis	evening primrose						x		x	x	x			x		
Oenothera rhombipetala	sand evening primrose			x	x	x		x								
Onoclea sensibilis	sensitive fern	x	x						x	x	x					
Opuntia macrorhiza	plains prickly-pear			x				x								
Orobanche ludoviciana	southern broom rape				x											
Osmorhiza claytonii	hairy sweet cicely	x	x													x
Osmorhiza longistylis	anise root	x	x										x			
Ostrya virginiana	hop hornbeam	x														
Oxalis dillenii	common wood sorrel															
Oxalis stricta	tall wood sorrel	x							x	x	x		x			
Oxpolis rigidior	cowbane						x									

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Panicum depauperatum	starved panic grass			x	x			x								
Panicum dichotomiflorum	fall panicum									x		x				
Panicum linearifolium	panic grass			x				x								
Panicum perlongum	long-stalked panic grass					x										
Panicum oligosanthes scribnerianum	panic grass				x	x		x								
Panicum villosissimum	white-haired panic grass			x				x								x
Panicum virgatum	prairie switch grass			x	x	x	x							x		
Parthenocissus quinquefolia	Virginia creeper	x	x	x	x	x		x		x			x			
Paspalum bushii	hairy bead grass			x				x								
Pastinaca sativa	wild parsnip						x			x						x
Penstemon grandiflorus	large-flowered beard tongue			x				x								x
Penstemon pallidus	pale beard tongue			x	x	x		x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Penthorum sedoides	ditch stonecrop								x		x					
Phalaris arundinacea	reed canary grass						x		x	x	x		x	x	x	x
Phleum pratense	timothy									x	x		x	x	x	x
Phlox bifida	cleft phlox			x				x								
Phlox divaricata	blue phlox	x	x										x			
Phryma leptostachya	lopseed	x	x													
Phyla lanceolata	fog-fruit								x	x	x		x			
Physalis heterophylla	clammy ground cherry			x				x								x
Physalis subglabrata	smoth ground cherry			x				x								
Phytolacca americana	pokeweed	x		x				x		x			x			x
Pilea pumila	Canada clearweed		x							x		x	x			
Pinus strobus	white pine	x		x				x						x		
Plantago lanceolata	English plantain												x			

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Plantago patagonica brevicarpa	plantain			x				x								
Plantago rugelii	red-stalked plantain								x	x			x			x
Poa compressa	Canadian blue grass					x										
Poa pratensis	Kentucky blue grass			x	x	x		x	x	x						
Podophyllum peltatum	may apple	x	x													
Poinsetta dentata	wild poinsetta			x				x								
Polygala polygama obtusata	purple milkwort			x				x								x
Polygonatum commutatum	Solomon's seal	x					x						x			
Polygonella articulata	jointweed			x		x										
Polygonum amphibium	water knotweed								x	x	x	x	x			
Polygonum pensylvanicum	pinkweed								x	x	x		x			
Polygonum persicaria	lady's thumb												x			

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		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Polygonum sagittatum	arrow-leaved tearthumb								x	x	x	x				
Polygonum scandens	climbing false buckwheat								x	x	x		x			
Polygonum tenue	slender knotweed															x
Polygonum virginianum	Virginia knotweed	x	x							x						x
Populus deltoides	eastern cottonwood								x	x			x			
Populus grandidentata	big-tooth aspen			x				x								
Portulaca oleracea	common purslane															x
Potentilla arguta	prairie cinquefoil				x											
Potentilla norvegica	rough cinquefoil								x	x						
Potentilla recta	sulfur cinquefoil															x
Potentilla simplex	common cinquefoil								x	x	x		x			x
Prunella vulgaris	lawn prunella	x	x								x			x	x	x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
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Prunus americana	American plum			x	x			x								
Prunus nigra	Canada plum			x				x								
Prunus serotina	wild black cherry	x	x	x				x					x			
Prunus virginiana	common choke cherry	x	x	x				x								x
Ptelea trifoliata	wafer ash			x		x		x					x			x
Pteridium aquilinum	bracken fern			x				x								
Pycnanthemum virginianum	mountain mint						x		x	x	x					
Quercus alba	white oak	x	x											x		
Quercus macrocarpa	burr oak	x	x											x		
Quercus palustris	pin oak												x	x		
Quercus rubra	northern red oak	x	x										x	x		
Quercus velutina	black oak	x	x	x	x			x						x		
Ranunculus abortivus	little-leaf buttercup	x	x									x				
Ranunculus fascicularis	early buttercup			x	x	x		x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Ranunculus recurvatus	buttercup	x														
Ranunculus septenrionalis	swamp buttercup	x	x													
Ratibida pinnata	yellow coneflower					x	x							x		
Rhus aromatica	aromatic sumac			x	x	x		x								x
Rhus glabra	smooth sumac			x	x			x	x				x			x
Ribes americanum	wild black current									x	x		x			
Ribes missouriense	Missouri gooseberry	x	x	x				x					x			
Robinia pseudoacacia	black locust	x	x		x					x		x	x			
Rorippa palustris	marsh yellow cress								x	x	x	x				
Rosa carolina	pasture rose			x	x		x	x								
Rosa multiflora	multiflora rose	x		x				x	x	x			x			
Rubus allegheniensis	common blackberry	x			x									x		
Rubus flagellaris	common dewberry		x	x				x								

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Ruellia humilis	hairy ruellia					x										
Rubus occidentalis	common raspberry			x	x			x								
Rudbeckia hirta	black-eyed Susan		x				x							x		x
Rudbeckia laciniata	wild golden glow												x			
Rudbeckia triloba	brown-eyed Susan									x	x		x			
Rumex acetosella	field sorrel			x	x			x								
Rumex altissimus	pale dock								x	x						x
Rumex crispus	curly dock								x	x	x		x			
Sagittaria latifolia	common arrowhead								x	x		x	x			x
Salix exigua	sandbar willow						x		x		x		x			
Salix humilis	prairie willow						x									
Salix nigra	black willow								x	x	x	x	x			x
Sambucus canadensis	common elder	x	x						x	x	x	x	x			

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Sanguinaria canadensis	bloodroot	x	x													x
Sanicula odorata	common snakeroot	x	x										x			
Saponaria officinalis	bouncing bet															
Saxifraga pensylvanica	swamp saxifrage									x						
Schizachyrium scoparium	little bluestem			x	x	x		x								
Scirpus acutus	heard-stemmed bulrush								x	x	x	x				
Scirpus atrovirens	dark green rush								x	x	x	x				
Scripus fluviatilis	river bulrush								x	x	x	x				
Scripus validus	soft-stemmed rush									x	x	x				
Scrophularia lanceotata				x				x								
Scrophularia marilandica	late figwort	x											x			x
Scutellaria leonardii	small skullcap					x										
Selaginella rupestris				x				x								

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		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Senecio pauperculus	balsam ragwort	x			x	x				x						x
Senecio plattensis	prairie ragwort															
Setaria faberii	giant foxtail								x	x			x			x
Sicyos angulatus	bur cucumber								x	x		x	x			
Silene antirrhina	sleepy catchfly			x				x								
Silene stellata					x											
Silphium laciniatum	compass plant						x							x		
Silphium perfoliatum	cup plant						x			x				x		
Sisyrinchium campestre	prairie blue-eyed grass			x		x		x								
Sium suave	water parsnip								x	x	x	x				
Smilacina racemosa	feathery false Solomon seal	x	x	x				x								
Smilacina stellata	starry false Solomon seal	x	x				x									
Smilax hispida	bristly green brier	x	x	x				x					x			

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Smilax lasioneuron	common carrion flower															
Solanum carolinense	horse nettle								x	x	x					
Solanum dulcamara	bittersweet nightshade												x			
Solidago canadensis	Canada goldenrod					x	x			x			x	x	x	x
Solidago missouriensis	Missouri goldenrod						x									
Solidago nemoralis	old field goldenrod			x		x		x								
Solidago rigida	rigid goldenrod						x							x		
Solidago ulmifolia	elm-leaved goldenrod															
Sorghastrum nutans	Indian grass			x	x	x	x	x						x		
Sparganium eurycarpum	common bur reed									x		x				
Spartina pectinata	prairie cord grass						x		x	x						
Spermolepis inermis	smooth scaleseed			x				x								

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Sphenopholis obtusata	prairie wedge grass									x	x					
Spiranthes magnicamporum	ladies' tresses					x										
Sporobolus asper	rough dropseed							x								
Sporobolus cryptandrus	sand dropseed			x				x								
Sporobolus heterolepis	northern drop seed					x										
Stachys palustris	woundwort								x	x	x	x				
Stachys tenuifolia	smooth hedge nettle								x	x	x	x	x			
Staphylea trifolia	bladdernut	x														
Stellaria media	common chickweed		x						x		x		x			
Stipa spartea	porcupine grass			x		x		x								
Talinum rugospermum	fame flower			x				x								
Taraxacum officinale	common dandelion								x	x	x		x			

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Tephrosia virginiana	goat's rue			x	x			x								
Teucrium canadense	germander		x				x		x				x			
Thalictrum dasycarpum	purple meadow rue						x		x	x	x					x
Thelypteris palustris	marsh fern								x	x						
Thlaspi arvense	field penny cress									x						
Tilia americana	American linden	x	x										x			
Toxicodendron radicans	poison ivy	x	x	x	x	x	x	x	x	x	x		x			
Tradescantia ohiensis	common spiderwort				x		x	x						x		x
Tragopogon dubius	sand goat's beard					x										x
Trichostema brachiatum	false pennyroyal				x											x
Tridens flavus	purpletop							x								x
Trifolium arvense	rabbit-foot clover															x
Trifolium pratense	red clover									x	x		x	x		

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Trifolium repens	white clover	x								x			x			
Trilium recurvatum	red trillium	x	x													
Triodanis perfoliata	Venus's looking glass			x				x								
Triosteum aurantiacum	early horse gentian												x			x
Triosteum perfoliatum	late horse gentian				x											
Triplasis purpurea	purple sandgrass			x				x								x
Typha angustifolia	narrow-leaved cattail								x	x	x	x				
Typha latifolia	broad-leaved cattail						x		x	x	x	x				
Ulmus americana	American elm	x	x							x			x			
Ulmus pumila	Siberian elm					x										
Ulmus rubra	slippery elm	x	x													
Urtica dioica	tall nettle								x	x	x	x	x			x

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Uvularia grandiflora	bellwort	x														x
Vallisneria americana	eel grass								x	x		x				
Verbascum blattaria	moth mullein															x
Verbascum thapsus	woolly mullein			x		x		x	x	x		x				
Verbena hastata	blue vervain								x	x	x	x				x
Verbena stricta	hoary vervain			x	x	x		x								x
Verbena urticifolia	white vervain								x	x		x	x			
Veronicastrum virginicum	culver's root						x									
Viburnum opulus	highbush cranberry									x			x			
Viola pedata	bird's foot violet		x	x		x		x								
Viola pratincola	violet								x	x	x		x			
Viola priceana	violet	x														
Viola pubescens	downy yellow violet	x	x													

Community types/cover types		Forest	Forest	Prairie	Prairie	Prairie	Prairie	Savanna	Wetlands	Wetlands	Wetlands	Wetlands	Wetlands	Cultural	Cultural	Cultural
		Dry-mesic upland	Dry-mesic upland sand	Dry sand	Dry sand hill	Dry-mesic gravel hill	Dry-mesic to mesic (black soil)	Dry to dry-mesic sand	Marsh	Scrubshrub/Wet Meadow	sedge meadow	Lake/pond/river	Forested wetland	CRP Prairie/Tree planting	Hayfield/Crop	Non-native grasslands
Vitis aestivalis	summer grape	x														
Vitis riparia	riverbank grape	x	x							x			x			
Vitis vulpina	frost grape	x														
Vulpia octoflora	six weeks fescue			x	x	x		x								
Xanthium strumarium	cocklebur		x						x	x		x				
Zanthoxylum americanum	prickly ash	x	x	x				x								
Zea mays	corn															x

Appendix 2-2

Forest Overview US-30 Qualitative Summary

Appendix 2-2 Forest Overview US-30 Qualitative Summary

Forest Stand #	# Plots Sampled	Total Acres (ha)	Acres Within Corridor	# Tree Species	Forest Type INAI Classification	Estimated Stand Age	Ground Cover Integrity
1	16	40	40	14	Dry-mesic Upland	Old-second Growth	moderately degraded; heavy deer browsing
2	4	10	10	11	Dry-mesic Upland Sand	Mix-planted and mature second growth	highly degraded
3	8	20	20	13	Dry-mesic Upland Sand	Sub-mature to Mature-second growth	Currently being grazed by horses; highly to moderately degraded
4	4	10	10	10	Dry-mesic Upland	Mature second growth	moderately degraded
5	16	50	50	14	Dry-mesic Upland Sand	Mature second growth	highly degraded
6	8	20	20	15	Dry-mesic Upland Sand	Sub-mature to mature-second growth	highly to moderately disturbed, human disturbance with RV trails
Totals	**56**		**150**	**23**			

1 A former savanna grove, very open canopy with sparse sampling and shrub layers. It had the most diversity in the herbaceous layer of all forest sampled.
2 The area was marked as a tree farm. We sampled the areas that appeared natural, however there was still several introduced species in the plots
3 Degraded *Quercus velutina* (black oak) sand savanna it presently is being grazed by horses.
4 Forest was near sand dunes on level ground. It had the highest density of *Juglans nigra* (black walnut) of all the forests sampled.
5 Highly degraded *Quercus velutina* (black oak) sand savanna, large oaks occur in the overstory, however several introduced and shade tolerant species dominate the under story.
6 Highly degraded *Quercus velutina* (black oak) sand savanna, extensive RV trails, logging, and areas of dense shrubs.

Appendix 2-3

Forest Overview US-30 Quantitative Summary

Appendix 2-3 Forest Overview US-30 Quantitative Summary

Forest Unit	Species Richness	Trees/acre	Density Trees/ha	Basal Area ft^2/acre	Basal Area m^2/ha	Avg. Basal Area/Stem ft^2	Avg. Basal Area/Stem m^2
1	14	148.22	366.25	130.35	29.92	0.88	0.08
2	11	155.81	385.00	128.19	29.43	0.82	0.08
3	13	158.84	392.50	112.70	25.87	0.71	0.07
4	10	151.76	375.00	120.50	27.66	0.79	0.07
5	14	173.51	428.75	122.21	28.05	0.70	0.07
6	15	192.23	475.00	117.83	27.05	0.61	0.06
Avg. among Sites	**13**	**163.40**	**403.75**	**121.96**	**28.00**	**0.75**	**0.07**
Pooled Data (56 Plots)	**23**	**163.40**	**403.75**	**121.96**	**28.00**	**0.73**	**0.07**

Appendix 2-3 US-30 Individual Forest Quantitative Data

Forest 1

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Celtis occidentalis	197.50	9.55	100.00	106.63	79.93	41.62
Tilia americana	42.50	4.16	75.00	41.08	17.20	18.11
Carya cordiformis	37.50	1.40	75.00	30.51	15.18	6.11
Ulmus rubra	20.00	3.03	50.00	25.98	8.09	13.20
Carya ovata	17.50	2.15	62.50	24.96	7.08	9.37
Ulmus americana	15.00	0.99	31.25	13.89	6.07	4.30
Quercus alba	12.50	2.41	18.75	15.37	5.06	10.51
Quercus rubra	8.75	3.09	12.50	15.31	3.54	13.46
Robinia pseudoacacia	6.25	1.32	12.50	8.72	2.53	5.76
Fraxinus americana	2.50	0.11	12.50	3.64	1.01	0.46
Quercus macrocarpa	2.50	0.79	12.50	5.93	1.01	3.45
Acer negundo	1.25	0.11	6.25	2.00	0.51	0.47
Juglans nigra	1.25	0.18	6.25	2.25	0.51	0.79
Quercus velutina	1.25	0.63	6.25	3.74	0.51	2.74
Total	**366.25**	**29.92**		**300.00**	**148.22**	**130.35**

Forest 2

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Morus alba	125.00	9.51	100.00	77.85	50.59	41.42
Celtis occidentalis	85.00	2.73	100.00	45.62	34.40	11.89
Ulmus americana	60.00	1.93	100.00	37.78	24.28	8.42
Juglans nigra	45.00	5.00	75.00	35.22	18.21	21.77
Carya cordiformis	15.00	0.21	25.00	7.60	6.07	0.93
Gleditsia triacanthos	15.00	6.27	75.00	40.82	6.07	27.31
Catalpa speciosa	10.00	2.51	50.00	20.36	4.05	10.95
Prunus serotina	10.00	0.33	50.00	11.35	4.05	1.42
Ulmus rubra	10.00	0.83	50.00	13.41	4.05	3.60
Quercus velutina	5.00	0.05	25.00	5.00	2.02	0.21
Tilia americana	5.00	0.06	25.00	5.00	2.02	0.28
Total	**385.00**	**29.43**		**300.00**	**155.81**	**128.19**

Appendix 2-3 US-30 Individual Forest Quantitative Data

Forest 3

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Quercus velutina	152.50	14.34	100.00	116.48	61.72	62.45
Morus alba	92.50	3.63	87.50	55.56	37.43	15.82
Prunus serotina	35.00	1.27	75.00	28.56	14.16	5.53
Carya cordiformis	25.00	1.29	50.00	19.25	10.12	5.60
Quercus rubra	20.00	1.28	37.50	16.85	8.09	5.56
Maclura pomifera	17.50	0.62	37.50	13.18	7.08	2.69
Celtis occidentalis	15.00	0.32	25.00	9.94	6.07	1.40
Ulmus americana	10.00	0.38	12.50	4.93	4.05	1.68
Fraxinus americana	7.50	1.07	25.00	9.58	3.04	4.66
Ailanthus altissimus	5.00	0.04	12.50	3.65	2.02	0.18
Juniperus virginiana	5.00	0.08	25.00	6.37	2.02	0.34
Quercus macrocarpa	5.00	1.42	25.00	12.01	2.02	6.17
Catalpa speciosa	2.50	0.15	12.50	3.63	1.01	0.63
Total	**392.50**	**25.87**		**300.00**	**158.84**	**112.70**

Forest 4

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Juglans nigra	120.00	9.12	100.00	76.11	48.56	39.71
Quercus velutina	50.00	10.09	50.00	64.60	20.23	43.94
Carya cordiformis	70.00	1.83	100.00	36.08	28.33	7.98
Quercus macrocarpa	30.00	2.88	100.00	35.58	12.14	12.53
Celtis occidentalis	45.00	0.69	100.00	29.82	18.21	2.99
Prunus serotina	40.00	0.96	100.00	28.25	16.19	4.17
Quercus alba	5.00	1.82	25.00	13.02	2.02	7.91
Morus alba	5.00	0.17	25.00	5.93	2.02	0.76
Ulmus rubra	5.00	0.06	25.00	5.42	2.02	0.24
Acer negundo	5.00	0.06	25.00	5.18	2.02	0.27
Total	**375.00**	**27.66**		**300.00**	**151.76**	**120.50**

Appendix 2-3 US-30 Individual Forest Quantitative Data

Forest Site 5

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Prunus serotina	62.50	4.80	93.75	48.60	25.29	20.91
Celtis occidentalis	107.50	2.07	87.50	47.41	43.50	9.02
Quercus velutina	57.50	6.38	56.25	38.43	23.27	27.77
Morus alba	56.25	3.44	56.25	36.02	22.76	14.99
Quercus macrocarpa	18.75	2.91	62.50	26.25	7.59	12.70
Ulmus americana	33.75	1.26	62.50	23.25	13.66	5.50
Ulmus rubra	17.50	3.18	37.50	22.81	7.08	13.83
Robinia pseudoacacia	31.25	2.11	25.00	19.75	12.65	9.20
Carya cordiformis	22.50	1.04	50.00	17.68	9.11	4.54
Acer negundo	8.75	0.34	31.25	8.59	3.54	1.49
Quercus alba	2.50	0.17	12.50	3.32	1.01	0.73
Tilia americana	5.00	0.24	6.25	3.17	2.02	1.07
Carya ovata	2.50	0.05	12.50	2.87	1.01	0.22
Quercus rubra	2.50	0.06	6.25	1.85	1.01	0.25
Total	**428.75**	**28.05**		**300.00**	**173.51**	**122.21**

Forest Site 6

Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Quercus velutina	160.00	10.87	87.50	94.47	64.75	47.37
Juglans nigra	90.00	6.67	50.00	55.38	36.42	29.07
Carya cordiformis	87.50	2.59	75.00	45.63	35.41	11.26
Celtis occidentalis	50.00	1.30	37.50	24.17	20.23	5.67
Prunus serotina	27.50	1.24	37.50	19.20	11.13	5.41
Tilia americana	35.00	1.55	12.50	16.02	14.16	6.73
Ulmus rubra	2.50	1.00	12.50	7.15	1.01	4.34
Ulmus americana	5.00	0.05	25.00	7.14	2.02	0.24
Acer saccharinum	2.50	0.69	12.50	6.01	1.01	3.00
Quercus alba	2.50	0.58	12.50	5.62	1.01	2.54
Quercus rubra	2.50	0.19	12.50	4.19	1.01	0.85
Acer negundo	2.50	0.14	12.50	3.97	1.01	0.60
Ostrya virginiana	2.50	0.09	12.50	3.80	1.01	0.39

Forest Site 6 cont.

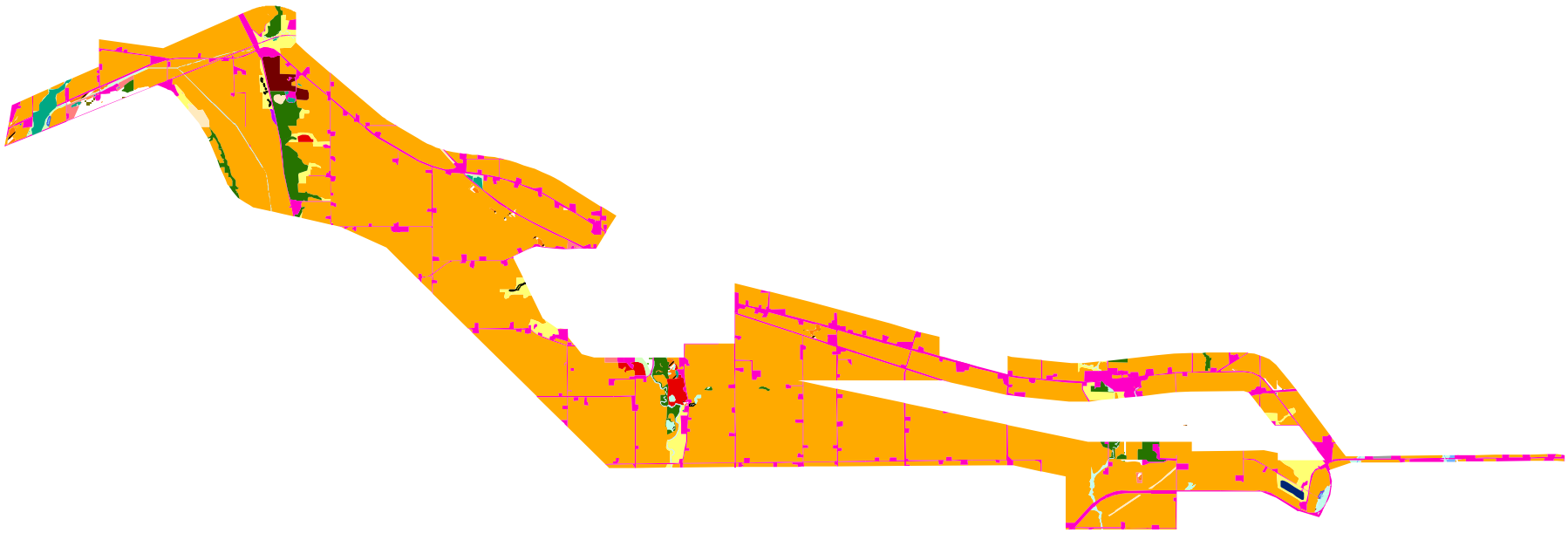
Species	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Maclura pomifera	2.50	0.05	12.50	3.66	1.01	0.23
Catalpa speciosa	2.50	0.03	12.50	3.58	1.01	0.14
Total	**475.00**	**27.05**		**300.00**	**192.23**	**117.83**

Appendix 2-3 US-30 All Forest Data Combined

Forest Averages	Den/ha	BA m2/ha	FREQ	IV 300	DEN/acre	BA Ft2/acre
Species	**Avg**	**Avg**	**Avg**	**Avg**	**Avg**	**Avg**
Quercus velutina	71.04	7.06	54.17	53.79	28.75	30.75
Celtis occidentalis	83.33	2.78	75.00	43.93	33.72	12.10
Morus alba	46.46	2.79	44.79	29.23	18.80	12.17
Juglans nigra	42.71	3.49	38.54	28.16	17.28	15.22
Carya cordiformis	42.92	1.39	62.50	26.12	17.37	6.07
Prunus serotina	29.17	1.43	59.38	22.66	11.80	6.24
Ulmus americana	20.63	0.77	38.54	14.50	8.35	3.36
Quercus macrocarpa	9.38	1.33	33.33	13.29	3.79	5.81
Ulmus rubra	9.17	1.35	29.17	12.46	3.71	5.87
Tilia americana	14.58	1.00	19.79	10.88	5.90	4.36
Gleditsia triacanthos	2.50	1.04	12.50	6.80	1.01	4.55
Quercus rubra	5.63	0.77	11.46	6.37	2.28	3.35
Quercus alba	3.75	0.83	11.46	6.22	1.52	3.62
Robinia pseudoacacia	6.25	0.57	6.25	4.75	2.53	2.49
Carya ovata	3.33	0.37	12.50	4.64	1.35	1.60
Catalpa speciosa	2.50	0.45	12.50	4.60	1.01	1.95
Acer negundo	2.92	0.11	12.50	3.29	1.18	0.47
Maclura pomifera	3.33	0.11	8.33	2.81	1.35	0.49
Fraxinus americana	1.67	0.20	6.25	2.20	0.67	0.85
Juniperus virginiana	0.83	0.01	4.17	1.06	0.34	0.06
Acer saccharinum	0.42	0.11	2.08	1.00	0.17	0.50
Ostrya virginiana	0.42	0.01	2.08	0.63	0.17	0.07
Ailanthus altissimus	0.83	0.01	2.08	0.61	0.34	0.03
Total	**403.75**	**28.00**		**300.00**	**163.40**	**121.96**

Appendix 2-4

Cover types in the US 30 Corridor



Cropland
Urban and Built-up land
CRP grassland
CRP tree planting
Mining area
Forbland (old field)
Tree Farm
Pasture and Hayland
Non-native grassland
Grassland (Prairie)
Forest
Shrubland
Tree Savanna
Sedge meadow
Forested wetland
Shrub-scrub werland
Marsh
Wet meadow
Stream
Pond
Lacustrine (Lake)
Riverine (River)

Appendix 2-4 Cover Types in the US 30 Corridor

INHS

0 1 177 2
Miles

N

Hutto

Appendix 3-1
Bird Species Known from the US 30 Project Corridor and Surrounding Area and Bird Species Encountered During the 2007 Censuses (Whiteside County)

Appendix 3-1: Table 1. Bird Species Known from the US 30 Project Corridor and Surrounding Area . ***Source***: 1 = Clinton, Iowa annual National Audubon Christmas Count (2004-2006); 2 = White Pines State Forest annual National Audubon Christmas Count; 3 = annual Breeding Bird Survey (Route 34008); 4 = annual spring bird count for Whiteside County (2003-2007); 5 = Illinois Natural Heritage Database (IDNR). ***Breeding Status***: B = breeding in area, R = hypothetical breeder in the area, N= non-breeding. ***Migratory/Residency Status:*** NM = North American migrant, NTM = neotropical migrant, N = non-migratory, R = resident, V = vagrant (highly unusual). ***Habitat Associations***: W = wetland, R = rivers and streams, L = lakes and ponds, FF = farm fields, S = shrub, G = grassland, SV = savanna, F = forest/woodlot, F-Int. = forest interior, P = parks, U = urban / suburban / human structures. ***Special conservation designations***: IL T = Illinois threatened, IL E = Illinois endangered, ILCP = *The Illinois Comprehensive Wildlife Action Plan* http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp conservation priority species, WL = *The American Bird Conservancy* http://www.abcbirds.org/abcprograms/science/watchlist/index.html Watch List species, PF = *The Partners in Flight* species of special concern http://www.rmbo.org/pif/downloads/downloads.html. G = game species.

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Anatidae					
Snow Goose[G]	2	N	NM	W, FF, L	-
Canada Goose[G]	1,2,3,4	B	NM / R	W, FF, L	-
Trumpeter Swan	1	N	NM	W, L	ILCP
Tundra Swan	1,2	N	NM	W, L, R	-
Mute Swan	4	B	R	W, L, R	-
Wood Duck[G]	4	B	NM	W, L, R	-
Gadwall[G]	1,3,4	R	NM	W, L, R	-
American Black Duck[G]	1,2	N	NM	W, L, R	-
Mallard[G]	1,2,3,4	B	NM / R	W, L, R, G	-
American Widgeon[G]	1	N	NM	W, L, R	-
Blue-winged Teal[G]	4	B	NM	W, L, R	-
Northern Shoveler[G]	4	R	NM	W, L, R	-
Green-winged Teal[G]	1	R	NM	W, L, R	-
Redhead[G]	3	R	NM	W, L, R	-
Canvasback[G]	1	R	NM	W, L, R	ILCP
Ring-necked Duck[G]	1,3	N	NM	W, L, R	-
Lesser Scaup[G]	1,4	N	NM	R, L	ILCP
Long-tailed Duck[G]	1	N	NM / V	L	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Anatidae					
Bufflehead[G]	1,2	N	NM	W, L, R	-
Common Goldeneye[G]	1,3,4	N	NM	L, R	-
Hooded Merganser[G]	4	B	NM	W, L, R	ILCP
Common Merganser[G]	1,2	N	NM	W, L, R	-
Red-breasted Mergnaser[G]	4	N	NM	W, L, R	-
Rudy Duck[G]	1	B	NM	W, L, R, M	-
Phasianidae					
Gray Partridge[G]	3,4	B	R	S, G	-
Ring-necked Pheasant[G]	1,2,3,4	B	R	S, G	-
Wild Turkey[G]	1,2,3,4	B	R	F, S	-
Northern Bobwhite[G]	1,2,3,4	B	R	S, G	ILCP, PF
Gaviidae					
Common Loon	4	N	NM	L, R	-
Podicipedidae					
Pied-billed Grebe	1,3,4	B	NM	W, L, R	ILCP, PF
Western Grebe	4	N	V	L, R	-
Phalacorcoracidae					
Double-crested Cormorant	1,3,4	B	NM	W, L, R	-
Pelecanidae					
American White Pelican	4	N	NM	W, L, R	-
Ardeidae					
Least Bittern	4,5	B	NM	W	IL T, ILCP
Great Blue Heron	1,2,3,4	B	NM	W, L, R	-
Great Egret	3,4	B	NM	W, L, R	ILCP
Cattle Egret	4	N	NM	W, G	-
Green Heron	3,4	B	NM	W, L, R	-
Blk-crowned Night-Heron	3,4	B	NM	W, L, R	IL E, ILCP

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Cathartidae					
Turkey Vulture	3,4	B	NM	F, U, FF	-
Black Vulture	4	N	V	-	-
Accipitridae					
Mississippi Kite	4	N	V	-	IL E, ILCP
Bald Eagle	1,2,4,5	B	NM / WR	W, L, R	IL T, ILCP
Northern Harrier	1,4	B	NM	G	IL E, ILCP
Sharp-shinned Hawk	1,2,3,4	B	NM / WR	F	-
Cooper's Hawk	1,2,3,4	B	R	F, S, U	-
Broad-winged Hawk	4	B	NM	F-Int	ILCP
Red-shouldered Hawk	2	B	NTM	F	ILCP
Red-tailed Hawk	1,2,4	B	R	S, G	-
Rough-legged Hawk	1,2	N	NM / WR	G	-
Swainson's Hawk	4	B	NTM	S, G	IL E, ILCP
Falconidae					
American Kestrel	1,2,3,4	B	NM / R	S, G	-
Rallidae					
Virginal Rail[G]	4	B	NTM	W	-
Sora[G]	4	B	NTM	W	-
American Coot[G]	1,3,4	B	NM	W	-
Gruidae					
Sandhill Crane	4,5	B	NM	W, G	IL T, ILCP
Charadriidae					
Piping Plover	4	N	NTM	W	US Endangered Species, IL E, ILCP
Semipalmated Plover	4	N	NTM	W	-
Killdeer	1,3,4	N	NM	W, G	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Scolopacidae					
American Avocet	4	N	V	W	-
Greater Yellowlegs	3,4	N	NTM	W	ILCP
Lesser Yellowlegs	3,4	N	NTM	W	-
Spotted Sandpiper	3,4	B	NM	W	-
Willet	4	N	NTM	W	-
Upland Sandpiper	3	B	NTM	G	IL E, ILCP
Solitary Sandpiper	3,4	N	NTM	W	-
Western Sandpiper	4	N	NTM	W	-
Least Sandpiper	4	N	NTM	W	-
White-rumped Sandpiper	4	N	NTM	W	-
Baird's Sandpiper	4	N	NTM	W	-
Pectoral Sandpiper	1	N	NTM	W	-
Long-billed Dowitcher	4	N	NTM	W	-
Short-billed Dowithcher	4	N	NTM	W	ILCP
Dunlin	4	N	NM	W	-
Wilson's Snipe[G]	4	B	NM	W	ILCP
Woodcock[G]	4	B	NM	F	ILCP
Wilson's Phalarope	4	R	NTM	W	IL E, ILCP
Laridae					
Bonaparte's Gull	4	N	NM	W	-
Ring-billed Gull	4	N	NM	W, FF	-
Herring Gull	1,2,3,4	N	NM	W, FF	-
Caspian Tern	1,2	N	NM	L	-
Forester's Tern	4	B	NTM	W, R	IL E
Black Tern	4	B	NTM	W, L	IL E, ILCP

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Columbidae					
Rock Dove	1,2,3,4	B	R	S, U	-
Mourning Dove[G]	1,2,3,4	B	R	S, U	-
Cuculidae					
Black-billed Cuckoo	3,4	B	NTM	F-Int, F	PF
Yellow-billed Cuckoo	3	B	NTM	F-Int, F	ILCP, PF
Strigidae					
Great Horned Owl	1,2,3,4	B	R	F	-
Eastern Screech-owl	1,2,3	B	R	F, U	PF -
Barred Owl	1,2,3,4	B	R	F	-
Long-eared Owl	1	B	NM	F	-
Short-eared Owl	2		NM	G	IL E, ILCP, PF
Caprimulgidae					
Common Nighthawk	3	B	NTM	F	ILCP
Whip-poor-will	4	B	NTM	F	ILCP, PF
Apodidae					
Chimney Swift	3,4	B	NTM	W, F	ILCP, PF
Trochilidae					
Ruby-throated Hummingbird	3,4	B	NTM	F, S	-
Alcedinidae					
Belted Kingfisher	1,2,3,4	B	NM	W	-
Picidae					
Red-headed Woodpecker	1,2,3,4	B	NM / R	F, SV	ILCP, WL, PF
Red-bellied Woodpecker	1,2,3,4	B	R	F, S	-
Yellow-bellied Sapsucker	4	N	NM	F, S	-
Downy Woodpecker	1,4	B	R	F, S	-
Hairy Woodpecker	1,2,3,4	B	R	F, S	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status / Breeding Habitat	Migratory / Residency Status	Habitat Associations	Special Designations
Picidae					
Northern Flicker	1,2,3,4	B	NM	F, SV	ILCP, PF
Pileated Woodpecker	1,3,4	B	R	F-Int	-
Tyrannidae					
Eastern Wood-Pewee	3,4	B	NTM	F	-
Willow Flycatcher	3	B	NTM	S	ILCP
Least Flycatcher	3,4	N	NTM	F	-
Eastern Phoebe	3,4	B	NM	S	-
Great Crested Flycatcher	3,4	B	NTM	F, S	PF
Eastern Kingbird	3,4	B	NTM	S, G	PF
Vireonidae					
Bell's Vireo	3	B	NTM	S, G	ILCP
Yellow-throated Vireo	3,4	B	NTM	F-Int	-
Blue-headed Vireo	4	N	NTM	F	-
Warbling Vireo	3,4	B	NTM	S	-
White-eyed Vireo	4	B	NTM	S	-
Philadelphia Vireo	4	N	NTM	F	-
Red-eyed Vireo	3,4	B	NTM	F	-
Corvidae					
Blue Jay	1,3,4	B	NM / WR	F, S	-
Black-billed Magpie	4	N	V	S	-
American Crow[G]	1,2,3,4	B	NM / WR	F, S	-
Fish Crow[G]	4	R	NM / WR	F, W	-
Alaudidae					
Horned Lark	1,2,3,4	B	R	G	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status / Breeding Habitat	Migratory / Residency Status	Habitat Associations	Special Designations
Hirundinidae					
Purple Martin	3,4	B	NTM	W, G, U	-
Tree Swallow	3,4	B	NM	W, G	-
N. Rough-winged Swallow	3,4	B	NTM	W, R, G	-
Bank Swallow	4	B	NTM	W, R, G	-
Cliff Swallow	3,4	B	NTM	W, G	-
Barn Swallow	3,4	B	NTM	W, G,U	-
Paridae					
Black-capped Chickadee	1,2,3,4	B	R	F, S	-
Tufted Titmouse	1,2,3,4	B	R	F	-
Sittidae					
Red-breasted Nuthatch	1,2	B	NM	F	-
White-breasted Nuthatch	1,2,3,4	B	R	F-Int	-
Certhiidae					
Brown Creeper	1,2,3,4	B	NM / WR	F-Int, S, U	ILCP
Troglodytidae					
Carolina Wren	12,4	B	R	S, U	-
House Wren	4	B	NTM	F, S, U	-
Winter Wren	2	N	NM	F	-
Sedge Wren	3	B	NM	G, W	ILCP, PF
Reguidae					
Golden-crowned Kinglet	1,2,4	N	NM / WR	F, S	-
Ruby-crowned Kinglet	4	N	NTM	F, S	-
Sylviidae					
Blue-gray Gnatcatcher	3,4	B	NTM	F, SV	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Turdidae					
Eastern Bluebird	1,2,3,4	B	R	G, SV, S	-
Veery	4	B	NTM	F-Int	-
Swainson's Thrush	4	N	NTM	F, S	-
Hermit Thrush	1,4	N	NTM	F, S	-
Wood Thrush	3,4	B	NTM	F-Int	ILCP, WL, PF
American Robin	1,2,3,4	B	NM	F, S, U	-
Mimidae					
Gray Catbird	3,4	B	NTM	F, S	-
Northern Mockingbird	3,4	B	NM	S	-
Brown Thrasher	4	B	NM	F, S	ILCP, PF
Sturnidae					
European Starling	1,2,3,4	B	R	F, U	-
American Pipit	4	N	NTM	G	-
Bombycillidae					
Cedar Waxwing	1,2,3	B	NM	F, S	-
Parulidae					
Blue-winged Warbler	4	B	NTM	S	ILCP, PF
Tennessee Warbler	4	N	NTM	F, S	-
Orange-crowned Warbler	4	N	NTM	S	-
Nashville Warbler	4	N	NTM	F, S	-
Northern Parula	4	B	NTM	R, F-Int	-
Yellow Warbler	3,4	B	NTM	S	-
Chestnut-sided Warbler	4	R	NTM	S	-
Magnolia Warbler	4	N	NTM	F	-
Cape May Warbler	4	N	NTM	F	-
Blk-throated Blue Warbler	4	N	NTM	F	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Parulidae					
Yellow-rumped Warbler	1,2,4	N	NM	F, S	-
Blk-throated Green Warbler	4	R	NTM	F, S	-
Blackburnian Warbler	4	N	NTM	F, S	-
Palm Warbler	4	N	NM	S	-
Bay-breasted Warbler	4	N	NTM	F, S	-
Blackpoll Warbler	4	N	NTM	F, S	WL
Black-and-white Warbler	4	R	NTM	F-Int, E	-
American Redstart	3,4	B	NTM	F-Int	-
Prothonotary Warbler	3,4	B	NTM	R, F	ILCP, WL, PF
Worm-eating Warbler	4	B	NTM	F-int	-
Ovenbird	3,4	B	NTM	F-int	ILCP
Mourning Warbler	4	R	NTM	F-Int	-
Common Yellowthroat	3,4	B	NTM	W, G	-
Hooded Warbler	1,4	B	NTM	F-Int	-
Wilson's Warbler	4	N	NTM	S, F	-
Northern Waterthrush	4	N	NTM	W, F	-
Lousiana Waterthrush	4	B	NTM	B / F-int	PF
Tharaupidae					
Scarlet Tanager	1,4	B	NTM	F-Int , SV	-
Western Tanager	4	N	V	F	-
Emberizidae					
Eastern Towhee	1,4	B	NM	F	-
American Tree Sparrow	2,3	N	NM	G	-
Chipping Sparrow	1,4	B	NM	G, U, S	-
Field Sparrow	1,4	B	NM	G	ILCP, PF
Vesper Sparrow	4	B	NM	G	-
Lark Sparrow	4	B	NM	G	-

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status	Migratory / Residency Status	Habitat Associations	Special Designations
Emberizidae					
Savannah Sparrow	3,4	B	NM	G	ILCP
Grasshopper Sparrow	3,4	B	NM	G	ILCP, PF
Henslow's Sparrow	3,4	B	NM	G	**IL T**, ILCP, WL, PF
Le Conte's Sparrow	4	N	NM	G	ILCP, WL
Fox Sparrow	1,2	N	NM	F, S	-
Song Sparrow	1,2,3,4	B	NM	G, S	-
Lincoln's Sparrow	1,2	N	NM	G, S	-
Swamp Sparrow	1,2,4	B	NM	W	-
White-throated Sparrow	1,2,4	N	NM	F, S	-
Harris's Sparrow	4	N	V	F, S	-
White-crowned Sparrow	1,2,4	N	NM	G, S	-
Dark-eyed Junco	1,2	N	NM	F, S	-
Lapland Longspur	1,4	N	NM	G	-
Snow Bunting	1	N	NM	G	-
Cardinalidae					
Northern Cardinal	1,2,3,4	B	R	F, S, U	-
Rose-breasted Grosbeak	3,4	B	NTM	F	-
Blue Grosbeak	4	B	NTM	S	-
Indigo Bunting	3,4	B	NTM	F, S	-
Painted Bunting	4	N	V		-
Dickcissel	3,4	B	NTM	G	ILCP, PF
Icteridae					
Bobolink	3,4	B	NTM	G	ILCP, PF
Red-winged Blackbird	1,3,4	B	NM	W / G	-
Eastern Meadowlark	1,3,4	B	NM	G	PF
Western Meadowlark	3,4	B	NM	G	-
Yellow-headed Blackbird	4,5	B	NTM	W	IL E, ILCP

Appendix 3-1: Table 1 continued

Family / Species	Source	Regional Breeding Status / Breeding Habitat	Migratory / Residency Status	Habitat Associations	Special Designations
Icteridae					
Brewer's Blackbird	4	N	NM	W	-
Common Grackle	1,2,3,4	B	NM	W, F, S	-
Brown-headed Cowbird	1,2,3,4	B	NM	F, S	-
Orchard Oriole	3	B	NTM	F, S	PF
Baltimore Oriole	3,4	B	NTM	S / G	PF
Fringillidae					
Purple Finch	2,4	N	NM	F / S	-
House Finch	2,3,4	B	R	S / G	-
White-winged Crossbill	4	N	V	F / S	-
Pine Siskin	1,2	B	NM	F / S	-
American Goldfinch	1,2,3,4	B	R	S	-
Passeridae					
House Sparrow	1,2,3,4	B	R	S	-
Eurasian Tree Sparrow	1	B	V	S	-

Appendix 3-1: Table 2. Birds Encountered in the US 30 Project Corridor During the 2007 Censuses. ***Census***: P = point count, D = driving survey, B = both point count and driving survey, other = reported by another reliable source. ***Breeding Status***: if yes, 1 = young or nests encountered, 2 = territorial birds encountered, 3 = both males and females encountered in breeding season, 4 = birds seen that are likely to breed in the area. ***Migratory/Residency Status***: NM = North American migrant, NTM = Neotropical migrant, N = non-migratory, R = resident, BR = breeding season resident, V = vagrant (highly unusual). ***Habitat :*** C = crops, W = wetland, R = rivers and streams, L = lakes and ponds, FF = farm fields, S = shrub, G = grassland, F = forest/woodlot, F INT = forest interior, U = urban and suburban. ***Special conservation designations***: IL T = Illinois threatened, IL E = Illinois endangered, ILCP = *The Illinois Comprehensive Wildlife Action Plan* http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp conservation priority species, WL = *The American Bird Conservancy* http://www.abcbirds.org/abcprograms/science/watchlist/index.html Watch List species, PF = *The Partners in Flight* species of special concern http://www.rmbo.org/pif/downloads/downloads.html. G = game species.

Family/species	Census	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migratory / Residency Status	Special Designations
Anatidae						
Canada Goose[G]	B	Yes-1	R/W/L	R/W	NM/R	-
Wood Duck[G]	B	Yes-1	F/R/L	R/W	NM	-
Mallard[G]	B	Yes-1	R/W/L	R/W/L	NM	-
American Widgeon[G]	P	No	-	W	NM	-
Blue-winged Teal[G]	P	Yes-3	W	W/L	NM	-
Northern Shoveler[G]	P	No	-	W/R	NM	-
Lesser Scaup[G]	P	No	-	R	NM	ILCP
Hooded Merganser[G]	P	Yes-4	W	R/L	NM	ILCP
Pasianidae						
Wild Turkey[G]	P	Yes-2	F	F	R	-
Ring-necked Pheasant[G]	B	Yes-3	G	F/G/S	R	-
Pelecanidae						
American White Pelican	B	No	-	R	NM	-
Podicipedidae						
Pied-billed Grebe*	P, other	Yes-2	W	W	NM	ILCP

Appendix 3-1: Table 2 continued

Family/species	Census	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migratory / Residency Status	Special Designations
Phalacorcoracidae						
Double-crested Cormorant	B	No	-	R/W	NM	-
Ardeidae						
Least Bittern*	other	Yes	W	W	NM	IL E, ILCP
Great Blue Heron	B	Yes-4	R/W	R/W/G	NM	-
Great Egret	B	No	W/R	L	NM	ILCP
Green Heron	P	Yes-4	W/R	W	NM	-
Cathartidae						
Turkey Vulture	B	No	-	FF/F	NM	-
Accipitridae						
Bald Eagle	D	No	-	L/R	NM / WR	IL T, ILCP
Northern Harrier	other	No	-	G	NTM	IL E, ILCP
Cooper's Hawk	B	Yes-2	F/E	F/S	NM	-
Red-tailed Hawk	B	Yes-2	F/E/S	S/G	NM / WR	-
Broad-winged Hawk	D	No	-	F	NM	ILCP
Falconidae						
American Kestrel	B	Yes-2	S	S/G	NM / WR	-
Rallidae						
American Coot[G]	P	Yes-4	W	W	NM	-
Gruidae						
Sandhill Crane	D	Yes-4	W/G	W/G	NM	IL T, ILCP
Charadridae						
Semipalmated Plover	P	N	-	W	NTM	-
Killdeer	B	Yes-1	FF/G	W/G	NM	-
Scolopacidae						
Lesser Yellowlegs	P	No	-	W	NTM	-
Solitary Sandpiper	P	No	-	W	NTM	-

Appendix 3-1: Table 2 continued

Family/species	Source	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migratory / Residency Status	Special Designations
Scolopacidae						
Spotted Sandpiper	P	Yes-2	R	W	NM	-
Least Sandpiper	P	No	-	W	NTM	-
Pectoral Sandpiper	P	No	-	W	NTM	-
Wilson's Snipe[G]	P	Yes-4	W	W	NM	ILCP
Laridae						
Bonaparte's Gull	D	No	-	W/FF	NM	-
Ring-billed Gull	B	No	-	W/FF	NM	-
Herring Gull						
Columbidae						
Rock Pigeon	B	Yes-1	S/U	S/U/FF	R	-
Mourning Dove[G]	B	Yes-2	S/F/U	S/U/FF	R	-
Strigidae						
Great Horned Owl	P	Yes-3	F	F	R	-
Eastern Screech-Owl	P	Yes-3	F	F	R	PF
Caprimulgidae						
Common Nighthawk	B	Yes-2	S/U	G/U	NTM	ILCP
Apodidae						
Chimney Swift	B	Yes-2	F/U	W/S	NTM	ILCP, PF
Trochilidae						
R.-throated Hummingbird	P	Yes-3	F	F/S	NTM	-
Alcedinidae						
Belted Kingfisher	B	Yes-2	W	W	NTM	-
Picidae						
Red-headed Woodpecker	P	Yes-2	F/E	F/S	NM / WR	ILCP, WL, PF
Red-bellied Woodpecker	B	Yes-1	F/E	F/S	R	-
Hairy Woodpecker	P	Yes-4	F Int	F	R	-

Appendix 3-1: Table 2 continued

Family/species	Source	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migration Status	Special Designations
Picidae						
Yellow-bellied Sapsucker	P	No	-	F/S	NM	-
Downy Woodpecker	B	Yes-2	F/E	F/S	R	-
Northern Flicker	B	Yes-2	F/S	F/S	NM / WR	ILCP, PF
Tyrannidae						
Eastern Wood-Pewee	P	Yes-2	F/E	F	NTM	-
Willow Flycatcher	P	Yes-2	S	S	NTM	ILCP, PF
Empidonax species	P	Unknown	-	F	NTM	-
Eastern Phoebe	B	Yes-2	F/E/S	S	NM	-
Great Crested Flycatcher	B	Yes-2	F/E	F/S	NTM	PF
Eastern Kingbird	B	Yes-2	E/S	S/G	NTM	PF
Vireonidae						
Warbling Vireo	P	Yes-2	S/E	S	NTM	-
White-eyed Vireo	P	Yes-2	S/E	S	NTM	-
Yellow-throated Vireo	P	Yes-2	F/E	F	NTM	-
Red-eyed Vireo	P	Yes-2	F Int	F	NTM	-
Corvidae						
Blue Jay	B	Yes-2	F	F/S	NM / WR	-
American Crow[G]	B	Yes-2	F	F/S/G	NM / WR	-
Alaudidae						
Horned Lark	D	Yes-2	G	C/G	R	-
Hirundinidae						
Purple Martin	P	Yes-2	W/G	W/G	NTM	-
Tree Swallow	B	Yes-2	W/G	W/G	NM	-
N. Rough-winged Swallow	B	Yes-2	W/G	W/G	NTM	-
Cliff Swallow	P	Yes-4	W/G	W/G	NTM	-
Barn Swallow	B	Yes-2	W/G	W/G	NTM	-

Appendix 3-1: Table 2 continued

Family/species	Source	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migration Status	Special Designations
Paridae						
Black-capped Chickadee	P	Yes-1	F	F/S	R	-
Tufted Titmouse	P	Yes-1	F	F	R	-
Sittidae						
Red-breasted Nuthatch	P	No	-	F	NM	-
White-breasted Nuthatch	P	Yes-2	F Int	F	R	-
Certhiidae						
Brown Creeper	P	No	-	F / S	NM/WR	ILCP
Troglodytidae						
House Wren	P	Yes-1	F/S	F/S	NTM	-
Regulidae						
Golden-crowned Kinglet	P	No	-	F/S	NM / WR	-
Ruby-crowned Kinglet	P	No	-	F/S	NTM	-
Sylviidae						
Blue-gray Gnatcatcher	P	Yes-2	F	F	NTM	-
Turdidae						-
Swainson's Thrush	P	No	-	F/S	NTM	-
Hermit Thrush	P	No	-	F	NTM	-
Eastern Bluebird	B	Yes-2	S/E	S/G	R	-
Wood Thrush	P	Yes-4	F Int	F	NTM	ILCP, WL, PF
American Robin	B	Yes-2	F/S/U	F/S	NM / WR	-
Mimidae						
Gray Catbird	P	Yes-2	S/F/E	F/S	NTM	-
Brown Thrasher	B	Yes-2	S/E	F/S	NM	ILCP, PF
Sturnidae						
European Starling	B	Yes-2	F/S/U	F/S	NM	-
Bombycillidae		Yes-4				
Cedar Waxwing	B	Yes-4	F/E	F	NM	-

Appendix 3-1: Table 2 continued

Family/species	Source	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migration Status	Special Designations
Parulidae						
Tennessee Warbler	P	No	-	S/F	NTM	-
Northern Parula	P	Yes-4	F/R	F/R	NTM	-
Yellow Warbler	P	Yes-4	S	S	NTM	-
Chestnut-sided Warbler	P	No	-	S	NTM	-
Magnolia Warbler	P	No	-	F	NTM	-
Yellow-rumped Warbler	P	No	-	F/S	NM	-
B.-throated Green Warbler	P	No	-	F/S	NTM	-
Palm Warbler	P	No	-	S	NTM	-
Blackpoll Warbler	P	No	-	F/S	NTM	-
American Redstart	P	Yes-4	F Int /R	F	NTM	-
Black and White Warbler	P	No	-	F	NTM	-
Ovenbird	P	No	-	F	NTM	ILCP
Northern Waterthrush	P	No	-	R	NTM	-
Common Yellowthroat	B	Yes-2	W/G	W	NTM	
Thraupidae						
Scarlet Tanager	P	Yes-4	F Int	F	NTM	-
Emberizidae						
Eastern Towhee	P	Yes-2	F/S	F/S	NM	-
Chipping Sparrow	B	Yes-2	S/U	S/U	NM	-
Field Sparrow	P	Yes-2	G	G/S	NM	ILCP, PF
Vesper Sparrow	B	Yes-2	G/FF	S	NTM	-
Savannah Sparrow	P	Yes-4	G/FF	S/G	NTM	ILCP
Song Sparrow	B	Yes-2	G/S	S	NM	-
White-throated Sparrow	B	N	-	F/S	NM	-
White-crowned Sparrow	P	N	-	S/G	NM	-
Dark-eyed Junco	P	N	-	F/S/G	NM / WR	-

Appendix 3-1: Table 2 continued

Family/species	Source	Breeds in Study Area?	Preferred Breeding Habitat	Habitat of Encounter(s)	Migration Status	Special Designations
Cardinalidae						
Northern Cardinal	B	Yes-2	F/S	F/S/U	R	-
Rose-breasted Grosbeak	P	Yes-4	F	F	NTM	-
Indigo Bunting	B	Yes-2	F	F S	NTM	
Icteridae						
Yellow-headed Blackbird	other	Yes-2	W	W	NTM	IL E
Red-winged Blackbird	B	Yes-2	W/S/G	W/G	NM	-
Eastern Meadowlark	B	Yes-2	G/S	G/C	NM	PF
Common Grackle	B	Yes-2	F/S/U	W/F	NM	-
Brown-headed Cowbird	P	Yes-2	F/E/S	F/G	NM	-
Baltimore Oriole	P	Yes-2	F/E	F/S	NTM	PF
Orchard Oriole	B	Yes-2	E/S	S/G	NTM	PF
Fringillidae						
House Finch	P	Yes-2	E/S/U	S	R	-
American Goldfinch	B	Yes-2	E/S	S/G	R	-
Passeridae						
House Sparrow	B	Yes-2	E/S/U	S	R	-

Appendix 3-2

Mammal habitat associations and mammal species known from the US 30 Corridor

Habitat associations of mammal species potentially occurring in the US 30 project corridor, Whiteside County, Illinois. Primary source for ranges and habitat: Hoffmeister 1989. Habitat: F = forest, G = grassland (native prairie, non-native grassland, forbland, pasture, hayfield), W = wetland (forested, emergent) and aquatic (riverine, lacustrine, pond), S = shrubland.

Common Name	Species Name	Habitat
Virginia opossum	*Didelphis virginiana*	F, W, G, S
masked shrew	*Sorex cinereus*	G, F, W
northern short-tailed shrew	*Blarina brevicauda*	F, G, W, S
North American least shrew	*Cryptotis parva*	G
eastern mole	*Scalopus aquaticus*	F, G, S
little brown bat	*Myotis lucifugus*	F, W, buildings
northern bat	*Myotis septentrionalis*	F, W, buildings
Indiana bat	*Myotis sodalis*	F, W
silver-haired bat	*Lasionycteris noctivagans*	F, W
eastern pipistrelle	*Pipistrellus subflavus*	F, W, buildings
big brown bat	*Eptesicus fuscus*	F, W, buildings
eastern red bat	*Lasiurus borealis*	F, W, S
hoary bat	*Lasiurus cinereus*	F, W
evening bat	*Nycticeius humeralis*	F, W, buildings
eastern cottontail	*Sylvilagus floridanus*	G, F (edges), S
eastern chipmunk	*Tamias striatus*	F
woodchuck	*Marmota monax*	G, F (edges), S
thirteen-lined ground squirrel	*Spermophilus tridecemlineatus*	G
Franklin's ground squirrel	*Spermophilus franklinii*	G
eastern gray squirrel	*Sciurus carolinensis*	F, urban
eastern fox squirrel	*Sciurus niger*	F, urban
southern flying squirrel	*Glaucomys volans*	F
American beaver	*Castor canadensis*	W
western harvest mouse	*Reithrodontomys megalotis*	G
deer mouse	*Peromyscus maniculatus*	G
white-footed mouse	*Peromyscus leucopus*	F, S, W
meadow vole	*Microtus pennsylvanicus*	G, W
prairie vole	*Microtus ochrogaster*	G
woodland vole	*Microtus pinetorum*	F
muskrat	*Ondatra zibethicus*	W
southern bog lemming	*Synaptomys cooperi*	G, W
brown rat	*Rattus norvegicus*	buildings, G, W
house mouse	*Mus musculus*	buildings, G, W, F

Table 3-2 concluded on following page

Habitat associations of mammal species potentially occurring in the US 30 project corridor, Whiteside County, Illinois. Primary source: Hoffmeister 1989. Habitat: F = forest, G = grassland (native prairie, non-native grassland, forbland, pasture, hayfield), W = wetland (forested, emergent) and aquatic (riverine, lacustrine, pond), S = shrubland.

Common Name	Species Name	Habitat
meadow jumping mouse	*Zapus hudsonius*	G, F, W
coyote	*Canis latrans*	F, G, W, S
red fox	*Vulpes vulpes*	G, F, W, S
gray fox	*Urocyon cinereoargenteus*	F
raccoon	*Procyon lotor*	F, W, G, S
least weasel	*Mustela nivalis*	G
long-tailed weasel	*Mustela frenata*	F, W, G, S
American mink	*Neovison vison*	W, F
American badger	*Taxidea taxus*	G
North American river otter	*Lontra canadensis*	W
striped skunk	*Mephitis mephitis*	F, G, W, S
bobcat	*Lynx rufus*	F, G, S, W
white-tailed deer	*Odocoileus virginianus*	F, W, G, S

Appendix 3-2. Mammal species known to occur or potentially occurring in the US 30 corridor, Whiteside County, Illinois. X = documented in the county or corridor. Sources for documentation: 1 = museum specimen (Hoffmeister 1989, WIU and INHS mammal collections), 2 = INHS capture, 3 = INHS observational record, 4 = IDPH/IDA rabies specimen, 5 = IDNR furbearer sign surveys (Bluett 2002), 6 = INHD, 7 = Ver Steeg and Warner 2000, 8 = Mohr 1943, 9 = Nixon et al. 1978, 10 = Anderson 1995, 11 = Woolf et al. 2000, 12 = IDNR deer harvest data.

Order/Species	Scientific Name	County	Corridor
Didelphimorphia			
Virginia opossum (F)	*Didelphis virginiana*	X (3)	X (3)
Soricomorpha			
masked shrew	*Sorex cinereus*	X (1)	
northern short-tailed shrew	*Blarina brevicauda*	X (1)	
North American least shrew	*Cryptotis parva*		
eastern mole	*Scalopus aquaticus*	X (1, 3)	X (3)
Chiroptera			
little brown bat	*Myotis lucifugus*	X (1, 2, 4)	X (2)
northern bat	*Myotis septentrionalis*	X (2, 4)	X (2)
Indiana bat (FE)	*Myotis sodalis*		
silver-haired bat	*Lasionycteris noctivagans*		
eastern pipistrelle	*Pipistrellus subflavus*	X (3)	X (3)
big brown bat	*Eptesicus fuscus*	X (1, 2, 4)	X (2)
eastern red bat	*Lasiurus borealis*	X (1, 2, 4)	X (2)
hoary bat	*Lasiurus cinereus*		
evening bat	*Nycticeius humeralis*		
Lagomorpha			
eastern cottontail (G)	*Sylvilagus floridanus*	X (1, 3)	X (3)
Rodentia			
eastern chipmunk	*Tamias striatus*	X (3)	X (3)
woodchuck (G)	*Marmota monax*	X (3, 8)	X (3)
Franklin's ground squirrel (ST)	*Spermophilus franklinii*	X (8)	
thirteen-lined ground squirrel	*Spermophilus tridecemlineatus*	X (1, 2, 3, 8)	X (2, 3)
eastern gray squirrel (G)	*Sciurus carolinensis*	X (3, 9)	X (3)
eastern fox squirrel (G)	*Sciurus niger*	X (1, 3, 9)	X (3)
southern flying squirrel	*Glaucomys volans*		
American beaver (F)	*Castor canadensis*	X (5)	
western harvest mouse	*Reithrodontomys megalotis*	X (1)	
deer mouse	*Peromyscus maniculatus*		

Appendix 3-2 concluded on following page

Appendix 3-2 (concluded) Mammal species known to occur or potentially occurring in the US 30 corridor, Whiteside County, Illinois. X = documented in the county or corridor. Sources for documentation: 1 = museum specimen (Hoffmeister 1989, WIU and INHS mammal collections), 2 = INHS capture, 3 = INHS observational record, 4 = IDPH/IDA rabies specimen, 5 = IDNR furbearer sign surveys (Bluett 2002), 6 = INHD, 7 = Ver Steeg and Warner 2000, 8 = Mohr 1943, 9 = Nixon et al. 1978, 10 = Anderson 1995, 11 = Woolf et al. 2000, 12 = IDNR deer harvest data.

Order/Species	Scientific Name	County	Corridor
white-footed mouse	*Peromyscus leucopus*	X (1)	
meadow vole	*Microtus pennsylvanicus*	X (1)	
prairie vole	*Microtus ochrogaster*		
woodland vole	*Microtus pinetorum*		
muskrat (F)	*Ondatra zibethicus*	X (3)	X (3)
southern bog lemming	*Synaptomys cooperi*		
house mouse (E)	*Mus musculus*	X (1)	
brown rat (E)	*Rattus norvegicus*		
meadow jumping mouse	*Zapus hudsonius*	X (1)	
Carnivora			
coyote (F)	*Canis latrans*	X (3)	X (3)
red fox (F)	*Vulpes vulpes*		
gray fox (F)	*Urocyon cinereoargenteus*		
raccoon (F)	*Procyon lotor*	X (3)	X (3)
long-tailed weasel (F)	*Mustela frenata*		
least weasel (F)	*Mustela nivalis*		
American mink (F)	*Neovison vison*	X (1, 5)	X (3)
American badger (F)	*Taxidea taxus*	X (7)	
North American river otter (F)	*Lontra canadensis*	X (1, 3, 5, 6, 10)	X (3, 10)
eastern striped skunk (F)	*Mephitis mephitis*	X (3)	X (3)
bobcat (F)	*Lynx rufus*	X (1, 11)	
Artiodactyla			
white-tailed deer (G)	*Odocoileus virginianus*	X (3, 12)	X (3)

FE = federal endangered, ST = state threatened, F = fur-bearing mammal, G = game mammal, E = exotic (non-native)

Appendix 3-3

Reptile and amphibian species habitat associations and species known from the US 30 corridor

APPENDIX 3-3

Habitat associations of amphibian and reptile species known to occur in Whiteside County, Illinois, based on museum specimens or literature records. Habitat: F = forest (upland, bottomland), G = grassland (native prairie, non-native grassland, forbland, pasture, hayfield), W = wetland (forested, shrub-scrub, emergent) and aquatic (riverine, lacustrine, pond), S = shrubland.

Common Name	Species Name	Habitat
American toad	*Bufo americanus*	F, G, W, S
northern cricket frog	*Acris crepitans*	W
gray treefrog complex	*Hyla versicolor/chrysoscelis*	F, G, W, S
western chorus frog	*Pseudacris triseriata*	F, G, W, S
American bullfrog	*Rana catesbeiana*	W
green frog	*Rana clamitans*	F, W
northern leopard frog	*Rana pipiens*	F, W
snapping turtle	*Chelydra serpentina*	W
painted turtle	*Chrysemys picta*	W
Blanding's turtle	*Emydoidea blandingii*	W
Ouachita map turtle	*Graptemys ouachitensis*	W
ornate box turtle	*Terrapene ornata*	F, G
yellow mud turtle	*Kinosternon flavescens*	G, W
stinkpot	*Sternotherus odoratus*	W
smooth softshell	*Apalone mutica*	W
six-lined racerunner	*Cnemidophorus sexlineatus*	G
eastern racer	*Coluber constrictor*	F, G, S
western foxsnake	*Elaphe vulpina*	G
western hog-nosed snake	*Heterodon nasicus*	G
northern watersnake	*Nerodia sipedon*	W
gophersnake	*Pituophis catenifer*	G
DeKay's brownsnake	*Storeria dekayi*	F, G, S
plains gartersnake	*Thamnophis radix*	G, W
eastern gartersnake	*Thamnophis sirtalis sirtalis*	F, G, W, S

Amphibian and reptile species known to occur or that could potentially occur in Whiteside County, Illinois. Species documented in Whiteside County based on museum records or literature records are denoted with an *. Amphibian and reptile species documented during surveys in 2007 are denoted with **bold** type. Amphibian and reptile species not documented from Whiteside County, but could potentially occur there based on distribution and habitat associations are denoted with **. Common and scientific names for amphibian and reptile species follows Crother et al (2000).

FAMILY/COMMON NAME	FAMILY/SCIENTIFIC NAME
MOLE SALAMANDERS	**AMBYSTOMATIDAE**
Small-mouthed Salamander	*Ambystoma texanum***
Tiger Salamander	*Ambystoma tigrinum***
LUNGLESS SALAMANDERS	**PLETHODONTIDAE**
Four-toed Salamander	*Hemidactylium scutatum***
MUDPUPPIES & WATERDOGS	**PROTEIDAE**
Mudpuppy	*Necturus maculosus***
TRUE TOADS	**BUFONIDAE**
American Toad	***Bufo americanus****
Fowler's Toad	*Bufo fowleri***
TREEFROGS	**HYLIDAE**
Northern Cricket Frog	***Acris crepitans****
Gray Treefrog Complex	***Hyla chrysoscelis/Hyla versicolor****
Spring Peeper	*Pseudacris crucifer***
Western Chorus Frog	***Pseudacris triseriata****
TRUE FROGS	**RANIDAE**
Plains Leopard Frog	*Rana blairi***
American Bullfrog	***Rana catesbeiana****
Green Frog	***Rana clamitans****
Pickerel Frog	*Rana palustris***
Northern Leopard Frog	***Rana pipiens****
SNAPPING TURTLES	**CHELYDRIDAE**
Snapping Turtle	***Chelydra serpentina***

POND TURTLES/BOX & WATER TURTLES	**EMYDIDAE**
Painted Turtle	***Chrysemys picta****
Blanding's Turtle	*Emydoidea blandingii**
Northern Map Turtle	*Graptemys geographica***
Ouachita Map Turtle	*Graptemys ouachitensis**
Ornate Box Turtle	*Terrapene ornata**
Pond Slider	*Trachemys scripta***
MUD & MUSK TURTLES	**KINOSTERNIDAE**
Yellow Mud Turtle	*Kinosternon flavescens**
Stinkpot	*Sternotherus odoratus* *
SOFTSHELLS	**TRIONYCHIDAE**
Smooth Softshell	*Apalone mutica**
Spiny Softshell	*Apalone spinifera***
GLASS LIZARDS	**ANGUIDAE**
Slender Glass Lizard	*Ophisaurus attenuatus***
RACERUNNERS & WHIPTAIL LIZARDS	**TEIIDAE**
Six-lined Racerunner	***Cnemidophorus sexlineatus****
COLUBRID SNAKES	**COLUBRIDAE**
Eastern Racer	***Coluber constrictor****
Ring-necked Snake	*Diadophis punctatus***
Eastern Ratsnake	*Elaphe obsoleta***
Western Foxsnake	***Elaphe vulpina****
Western Hog-nosed Snake	*Heterodon nasicus**
Eastern Hog-nosed Snake	*Heterodon platirhinos***
Milksnake	*Lampropeltis triangulum***
Diamond-backed Watersnake	*Nerodia rhombifer***
Northern Watersnake	***Nerodia sipedon****
Smooth Greensnake	*Opheodrys vernalis***
Gophersnake	*Pituophis catenifer**
Graham's Crayfish Snake	*Regina grahamii***
DeKay's Brownsnake	***Storeria dekayi***
Red-bellied Snake	*Storeria occipitomaculata***
Western Ribbonsnake	*Thamnophis proximus***
Plains Gartersnake	***Thamnophis radix****
Common Gartersnake	***Thamnophis sirtalis****
Lined Snake	*Tropidoclonion lineatum***

APPENDIX 3-4
Bird census areas of US 30 project corridor
Whiteside County

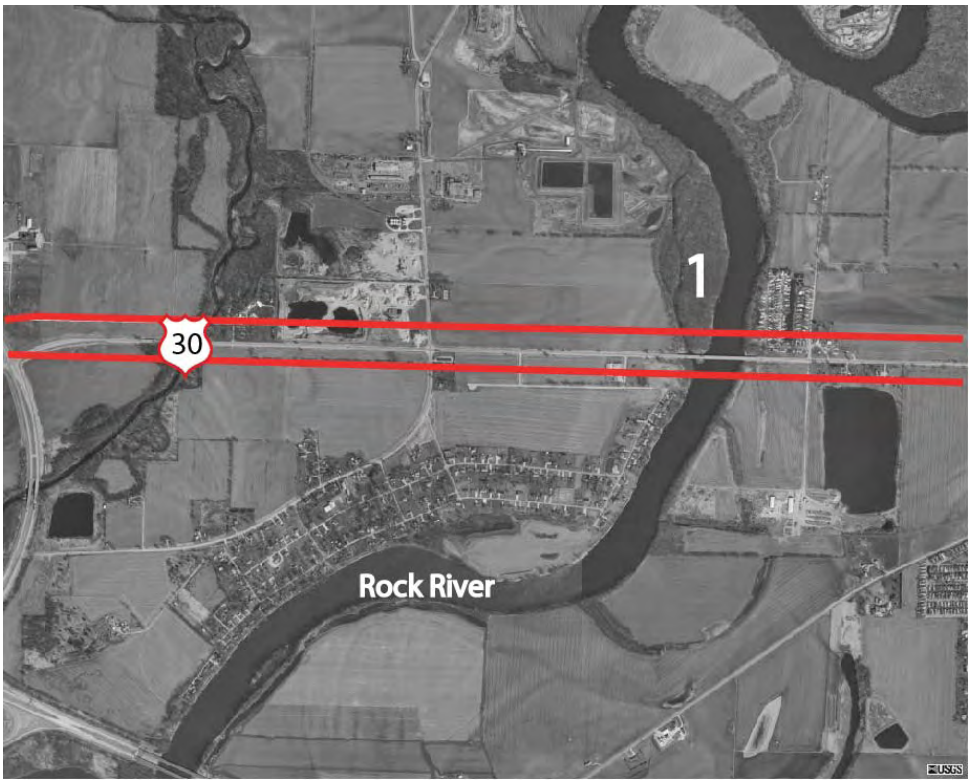


Figure 1. Census point 1 (forest).

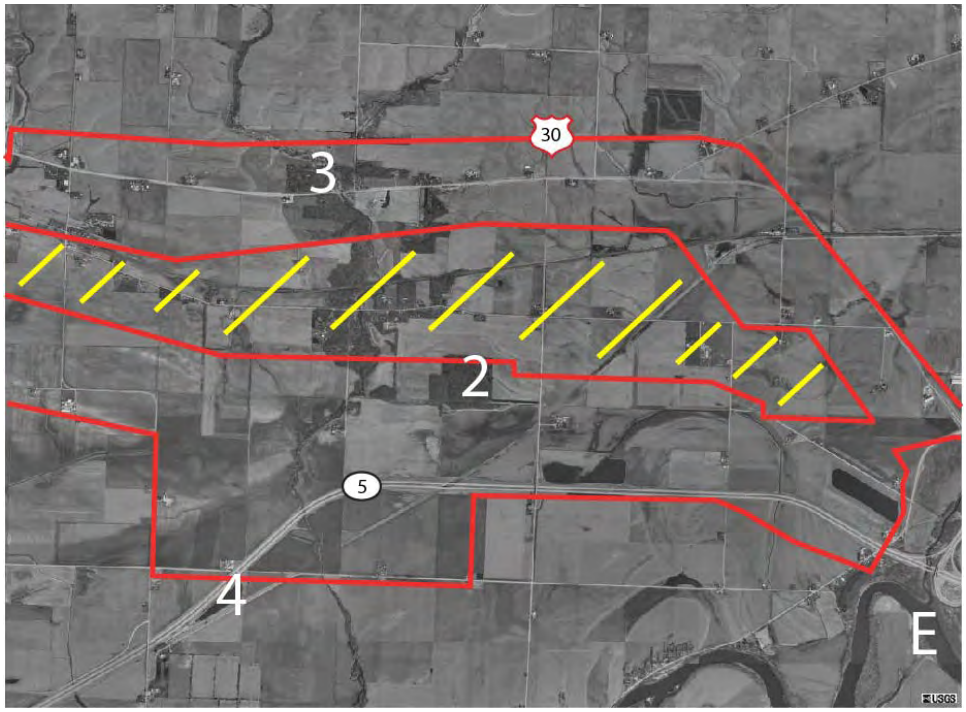


Figure 2. Census points 2 (forest), 3 (forest), and 4 (shrub) and former Bald Eagle nest location “E” (riparian forest).

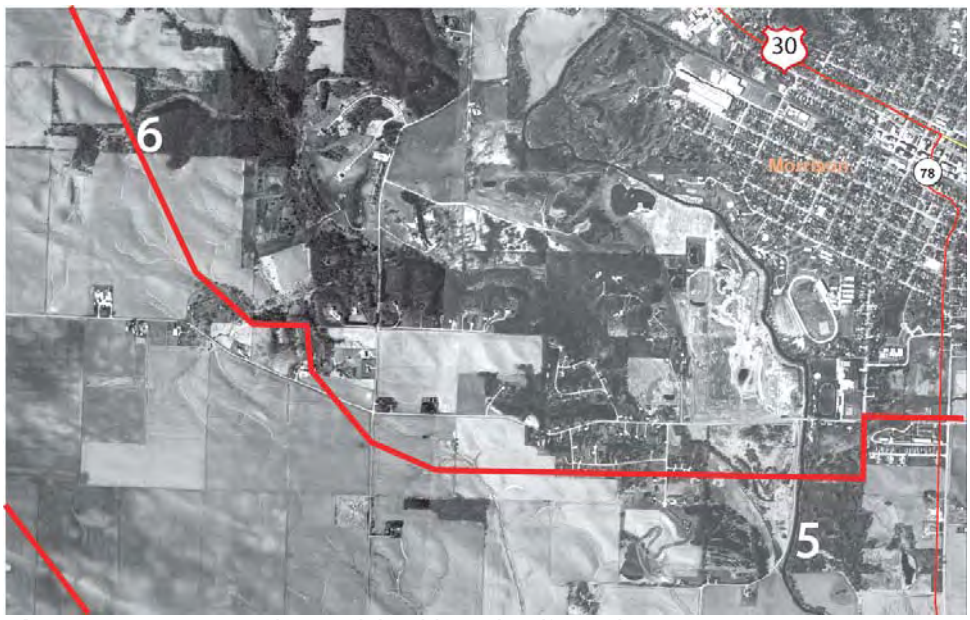


Figure 3. Census points 5 (shrub) and 6 (forest).

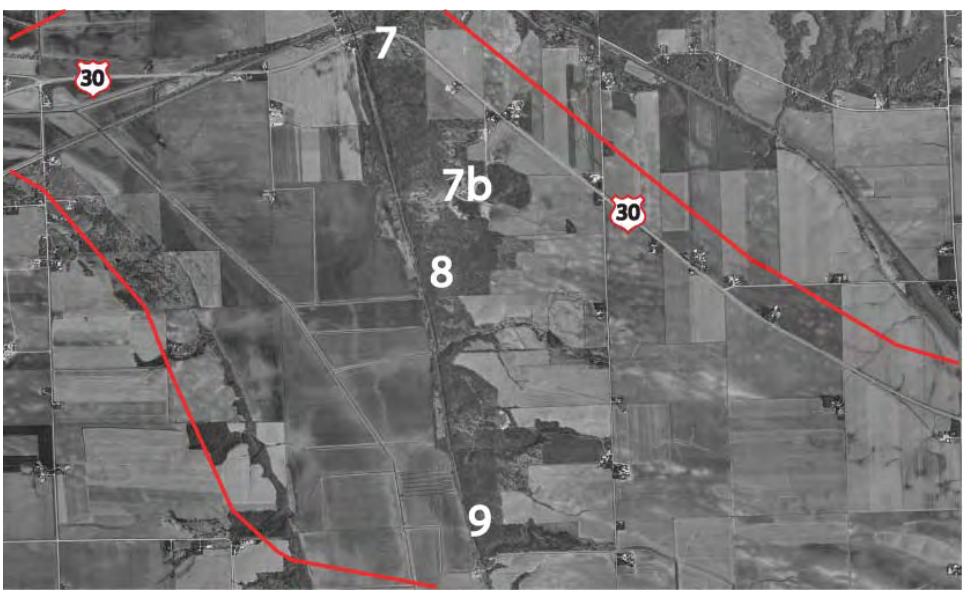


Figure 4. Census points 7 (forest/shrub), 7b (forest), 8 (forest) and 9 (forest).

Figure 5. Census points 11 (river front) and 12 (marsh).

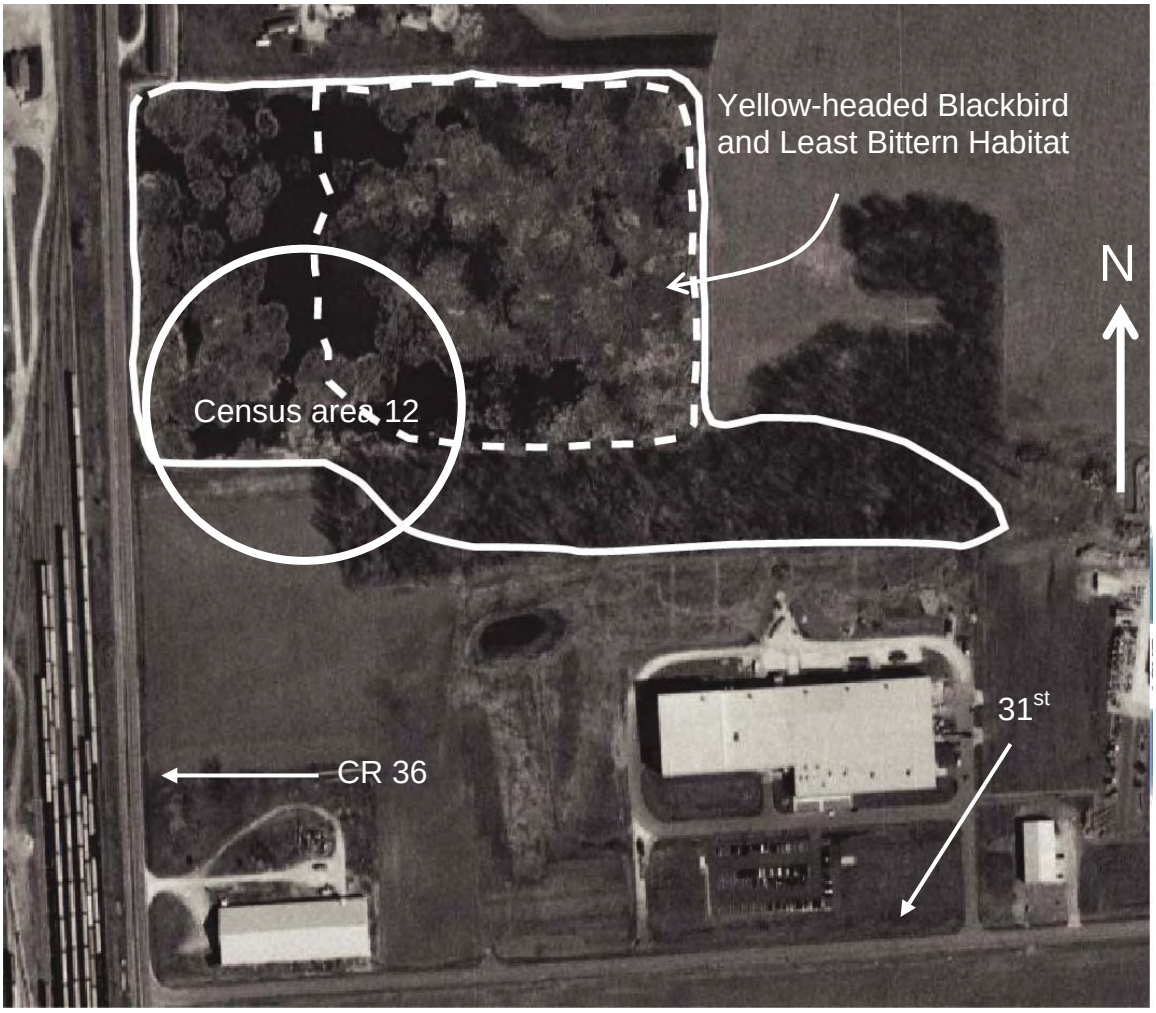


Figure 6. Fulton Marsh. Marsh is delineated by the solid white line. Location of Yellow-headed Blackbird and Least Bittern habitat is indicated by the dashed white line.

Figure 7. Northern Harrier and Sandhill Crane sightings.

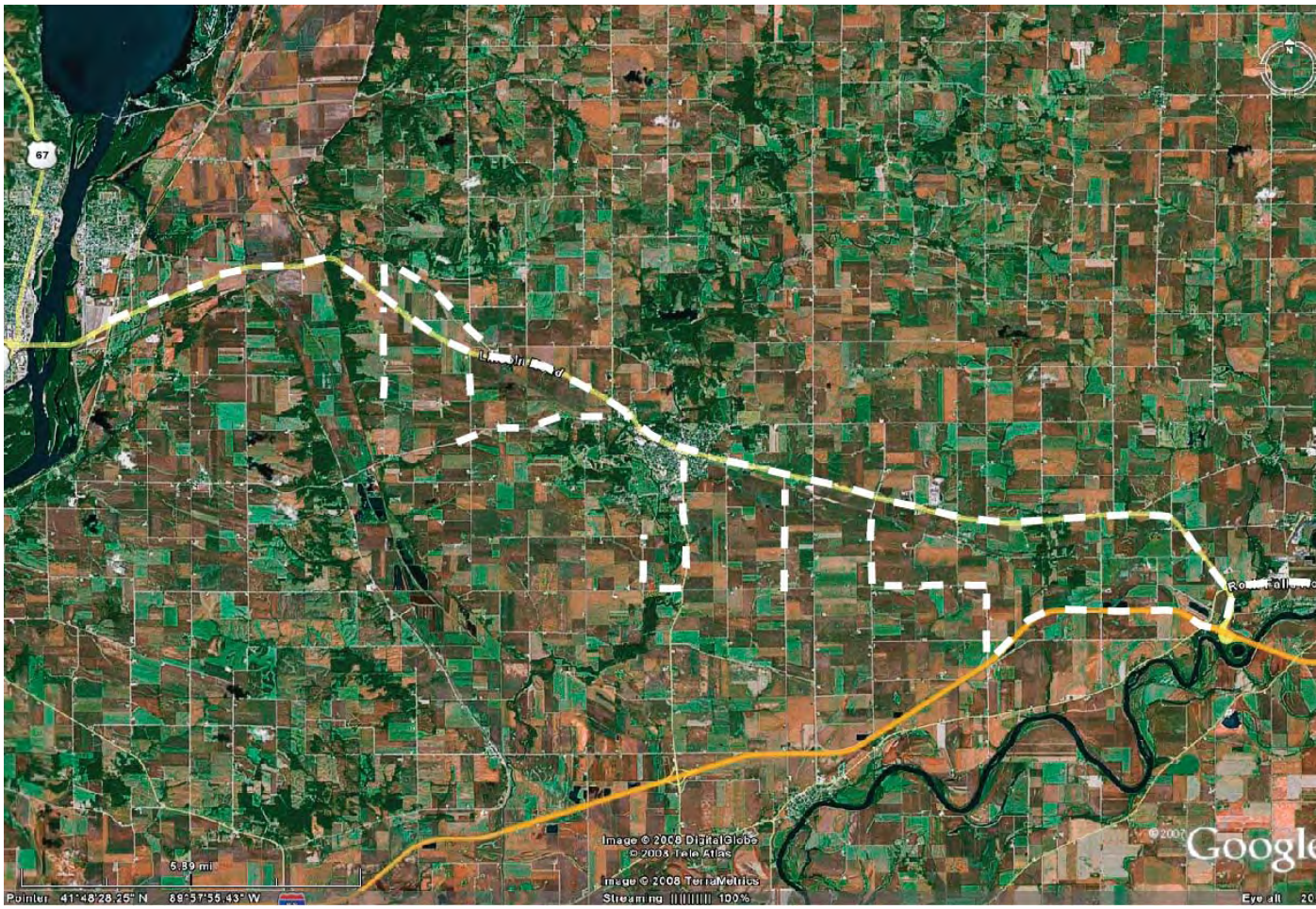


Figure 8. Driving census route for the US 30 project area. White dashed lines show route.

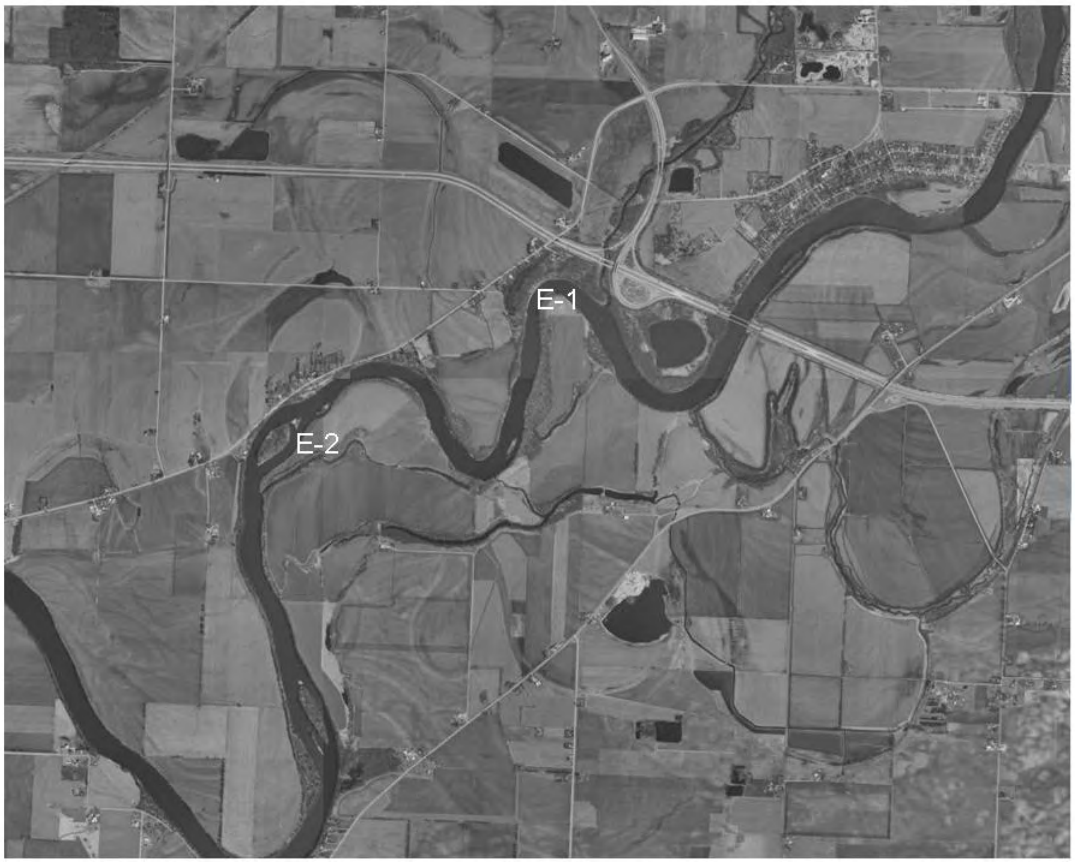


Figure 9. Former Bald Eagle nests along the Rock River. Bald eagles were recorded nesting at E-1 (41°45'12"N; 89°94'06"W) in 2001. Two eaglets were observed in May of 2001. Bald eagles were recorded nesting at E-2 (41°44'00"N; 89°48'33"W) in 2002. An incubating adult was observed on April 15 2002.

APPENDIX 3-5

Point Count Results and Driving Census Results US 30 Project Corridor; Spring Migration 2007

Appendix 3-5: Table 1. Point Census. *Special Designations*: IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *American Bird Conservancy* watch list species, PF = *Partners in Flight* species *of special concern*. ***Migration and Breeding Status:*** B = breeds in the area R = year round resident, M = temperate zone migrant; NT = neotropical migrant; * = flying over the area, passing through.

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Anatidae																
Canada Goose	-	B-M	12*	0	0	5	0	0	0	15	0	0	0	35	12	**79**
Wood Duck	-	B-M	7*	0	0	0	0	0	0	4	0	0	0	13	7	**31**
Mallard	-	B-M	13*	0	2	0	0	0	0	7	0	0	4	15	10	**51**
Blue-winged Teal	-	B-M	14	0	0	0	0	0	0	2	0	0	0	12	2	**30**
Northern Shoveler	-	M	0	0	0	0	0	0	0	3	0	0	0	0	13	**16**
Lesser Scaup	ILCP	M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Hooded Merganser	ILCP	B-M	2	0	0	0	0	0	0	1	0	0	0	3	0	**6**
Phasianidae																
Ring-necked Pheasant	-	B	0	0	0	0	1	1	0	0	0	0	1	0	0	**3**
Podicipedidae																
Pied-billed Grebe	ILCP	B-M	0	0	0	0	0	0	0	0	0	0	0	0	2	**2**
Phalacrocoracidae																
Double-crested Cormorant	-	B-M	6*	0	0	0	0	0	0	0	0	0	0	0	30	**36**
Ardeidae																
Great Blue Heron	-	B-M	7	0	0	0	0	1	1*	3	0	0	2	17	7	**38**
Great Egret	ILCP	B-M	0	0	0	0	0	0	0	3*	0	0	0	0	0	**3**
Green Heron	-	B-M	1	0	0	1	0	0	0	2	0	0	0	0	1	**5**
Cathartidae																
Turkey Vulture	-	B-M	2	0	0	0	7*	0	0	0	0	0	0	15	0	**24**
Accipitridae																
Cooper's Hawk	-	B-R	0	1	1	0	1	2	0	0	1	0	0	0	0	**6**
Red-tailed Hawk	-	B-M	0	2	1	1	0	0	0	0	2*	0	1	2	1	**10**

Appendix 3-5: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Falconidae																
American Kestrel	-	B-M	0	0	2	0	1	0	0	0	0	0	0	1	0	**4**
Rallidae																
American Coot	-	B-M	0	0	0	0	0	0	0	0	0	0	0	30	4	**34**
Charadridae																
Semipalmated Plover	-	M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Killdeer		B-M	2	0	0	0	5	0	0	3	0	0	0	0	10	**20**
Scolopacidae																
Lesser Yellowlegs	-	M	0	0	0	0	0	0	0	0	0	0	0	6	0	**6**
Pectoral Sandpiper	-	M	0	0	0	0	0	0	0	4	0	0	0	2	0	**6**
Wilson's Snipe	ILCP	B-M	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Laridae																
Ring-billed Gull	-	M	0	0	0	0	6	0	0	0	0	0	0	32	2	**40**
Columbidae																
Rock Pigeon	-	B-R	0	0	0	0	0	0	0	0	0	0	0	0	6	**6**
Mourning Dove	-	B-R	2	0	0	0	7	0	0	5	2	0	8	1	6	**31**
Strigidae																
Eastern Screech-Owl	PF	B-R	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Apodidae																
Chimney Swift	ILCP, PF	B-NT	4	0	0	0	0	0	0	0	0	0	0	13	27	**44**
Alcedinidae																
Belted Kingfisher	-	B-M	0	0	0	0	0	0	0	0	0	0	0	1	1	**2**
Picidae																
Red-bellied Woodpecker	-	B-R	1	2	1	3	0	0	2	0	0	1	0	2	0	**12**
Downy Woodpecker	-	B-R	2	0	1	2	3	0	1	0	2	3	0	1	1	**16**
Hairy Woodpecker	-	B-R	0	0	0	0	0	0	0	0	1	1	0	0	0	**2**

Appendix 3-5: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Picidae																
Northern Flicker	ILCP, PF	B-M	2	0	0	1	5	1	3	2	0	1	3	0	4	**22**
Tyrannidae																
Eastern Wood-Pewee	-	B-NT	1	2	3	2	0	3	1	0	3	2	0	2	0	**19**
Eastern Phoebe	-	B-M	1	0	0	0	2	0	0	1	0	0	0	0	1	**5**
Great Crested Flycatcher	PF	B-NT	2	0	0	1	0	0	0	0	2	1	0	0	0	**6**
Eastern Kingbird	PF	B-NT	0	0	0	0	2	0	3	0	0	0	0	1	0	**6**
Vireonidae																
Warbling Vireo	-	B-NT	0	0	0	2	1	0	0	0	0	0	0	0	0	**3**
Red-eyed Vireo	-	B-NT	1	0	3	0	0	0	1	2	1	2	0	1	0	**11**
Corvidae																
Blue Jay	-	B-M	1	3	2	0	7	0	0	0	1	1	0	7	0	**22**
American Crow	-	B-M	5	2	5	4	0	0	0	4	0	0	4	0	7	**31**
Hirundinidae																
Tree Swallow	-	B-M	0	0	0	0	0	0	0	0	0	0	0	32	10	**42**
N. Rough-winged Swallow	-	B-NT	4	0	0	0	0	0	0	0	0	0	0	9	21	**34**
Cliff Swallow	-	B-NT	0	0	0	0	0	0	0	0	0	0	0	11	0	**11**
Barn Swallow	-	B-NT	0	0	0	0	16	0	0	9	0	0	0	11	4	**40**
Paridae																
Black-capped Chickadee	-	B-R	0	0	0	4	0	3	3	0	0	0	0	2	0	**12**
Tufted Titmouse	-	B-R	4	0	0	0	0	0	0	0	3	0	0	0	0	**7**
Sittidae																
Red-breasted Nuthatch	-	M	0	1	0	0	0	0	0	0	0	0	0	0	0	**1**
White-breasted Nuthatch	-	B-R	1	0	0	2	0	2	0	1	2	2	0	0	0	**10**
Certhidae																
Brown Creeper	ILCP	B-M	0	2	0	0	0	0	0	0	0	0	0	0	0	**2**
Trogoldytidae																
House Wren	-	B-NT	1	0	3	0	0	0	0	0	0	0	0	0	0	**4**

Appendix 3-5: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Regulidae																
Golden-crowned Kinglet	-	M	0	0	0	0	0	0	4	0	0	0	0	0	0	**4**
Ruby-crowned Kinglet	-	NT	0	0	2	3	1	0	0	0	0	0	0	0	0	**6**
Sylviidae																
Blue-gray Gnatcatcher	-	B-NT	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Turdidae																
Swainson's Thrush	-	NT	0	2	3	0	0	0	0	0	2	0	0	0	0	**7**
Hermit Thrush	-	NT	1	0	0	0	0	0	0	0	1	0	0	0	0	**2**
American Robin	-	B-M	7	8	4	1	0	3	4	2	1	1	6	4	1	**42**
Mimidae																
Gray Catbird	-	B-NT	0	0	0	0	3	0	1	0	0	0	0	1	0	**5**
Brown Thrasher	ILCP, PF	B-M	0	0	2	1	1	0	3	1	0	0	0	0	1	**9**
Sturnidae																
European Starling	-	B-M	0	0	0	0	35	0	2	0	0	0	0	19	0	**56**
Bombycillidae																
Cedar Waxwing	-	B-M	0	10	0	0	0	0	0	14	0	0	0	0	0	**24**
Parulidae																
Tennessee Warbler	-	NT	0	0	2	3	0	0	2	0	1	0	0	0	0	**8**
Northern Parula	-	B-NT	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Yellow Warbler	-	B-NT	0	0	4	0	0	0	0	0	0	0	0	0	0	**4**
Chestnut-sided Warbler	-	B-NT	0	0	0	0	0	0	0	0	2	0	0	0	0	**2**
Magnolia Warbler	-	NT	0	0	0	0	0	0	0	0	1	1	0	0	0	**2**
Black-throated Gr. Warbler	-	NT	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Palm Warbler	-	NT	0	1	2	0	0	1	0	0	0	1	0	6	0	**11**
Blackpoll Warbler	-	NT	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
Black-and-white Warbler	-	B-NT	1	0	0	0	0	1	0	0	1	0	0	0	0	**3**
American Redstart	-	B-NT	0	2	0	0	0	0	0	0	0	1	0	0	0	**3**

Appendix 3-5: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Parulidae																
Ovenbird	ILCP	B-NT	0	0	0	0	0	0	0	0	2	1	0	0	0	**3**
Northern Waterthrush	-	NT	1	1	0	0	0	0	0	0	0	3	0	0	2	**7**
Common Yellowthroat	-	B-NT	0	0	1	0	0	0	0	1	0	0	0	0	4	**6**
Thraupidae																
Scarlet Tanager	-	B-NT	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Emberizidae																
Eastern Towhee	-	B-M	3	0	0	0	0	1	0	0	0	2	0	0	0	**6**
Chipping Sparrow	-	B-M	0	0	0	1	10	0	2	0	0	0	7	0	0	**20**
Field Sparrow	ILCP, PF	B-M	0	0	0	2	0	0	10	0	0	0	4	0	1	**17**
Song Sparrow	-	B-M	0	0	0	3	0	0	10	3	0	7	3	2	3	**31**
White-throated Sparrow	-	M	5	0	0	0	6	0	24	0	0	0	14	0	0	**49**
White-crowned Sparrow	-	M	0	0	0	0	2	0	2	0	0	0	0	2	0	**6**
Dark-eyed Junco	-	M	0	0	0	0	0	0	0	3	0	0	0	0	0	3
Cardinalidae																
Northern Cardinal		B-R	2	1	3	1	7	0	2	4	0	1	0	2	0	**23**
Rose-breasted Grosbeak	-	B-NT	0	0	1	0	0	0	0	0	0	0	0	0	0	**1**
Indigo Bunting	-	B-NT	0	0	2	1	4	0	1	0	0	0	0	0	1	**9**
Icteridae																
Red-winged Blackbird	-	B-M	0	0	0	50	10	0	0	12	0	0	0	32	22	**126**
Eastern Meadowlark	PF	B-M	0	0	0	0	5	0	0	0		0	3	4	0	**12**
Icteridae																
Common Grackle	-	B-M	11	0	17	0	0	35	29	0	0	1	32	100	15	**240**
Brown-headed Cowbird	-	B-M	0	0	0	2	0	0	0	0	1	3	12	0	0	**18**
Baltimore Oriole	PF	B-NT	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**

Appendix 3-5: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Fringillidae																
House Finch	-	B-R	0	0	0	0	0	0	0	0	0	0	0	0	2	**2**
American Goldfinch	-	B-R	0	0	0	2	3	1	0	0	0	0	4	0	0	**10**
Passeridae																
House Sparrow	-	B-R	0	0	0	0	0	0	0	0	0	0	0	10	3	**13**
Total Individuals			**130**	**40**	**68**	**100**	**151**	**55**	**111**	**111**	**34**	**36**	**108**	**463**	**244**	**1651**
Total Species			**35**	**15**	**23**	**25**	**26**	**13**	**22**	**26**	**22**	**20**	**16**	**42**	**35**	**93**

Appendix 3-5: Table 2. Driving Census. ***Special Designations*:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *American Bird Conservancy* watch list species, PF = *Partners in Flight* species of special concern. ***Status***: B = breeds in the area R = year round resident, M = temperate zone migrant; NT = Neotropical migrant; * = flying over the area, passing through. ***Habitat Type***: UF = Upland forest, RF = Riparian forest, S = Shrub, P = Pasture or hay fields, C = Cropland, M = Marsh, R = Riverine, St = Stream, U = Urban.

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit Type									Total
			UF	RF	S	P	C	M	R	St	U	
Accipitridae												
Bald Eagle	ILT	B-M/R	0	0	0	0	1*	0	0	0	0	**1**
Gruidae												
Sandhill Crane	IL T, ILCP	B-M	0	0	0	0	3*	0	0	0	0	**3**
Charadridae												
Killdeer	-	B-M	0	0	4	6	0	10	12	0	0	**32**
Laridae												
Bonaparte's Gull	-	B-M	0	0	0	0	21	0	0	0	0	**21**
Ring-billed Gull	-	B-M	0	0	0	0	12	0	0	0	0	**12**
Columbidae												
Rock Pigeon	-	R	0	0	2	0	0	0	0	0	15	**17**
Mourning Dove	-	R	0	0	3	0	0	0	2	0	2	**7**
Apodidae												
Chimney Swift	-	B-NT	0	0	0	0	0	8	0	0	32	**40**
Alcedinidae												
Belted Kingfisher	-	B-M	0	0	0	0	0	0	0	1	0	**1**
Picidae												
Red-bellied Woodpecker	-	B-R	1	1	0	0	0	0	0	1	0	**3**
Northern Flicker	ILCP	B-M	1	0	2	0	0	0	0	1	1	**5**

Appendix 3-5: Table 2 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit type									Total
			UF	RF	S	P	C	M	R	S	U	
Tyarnnidae												
Eastern Phoebe	-	B-M	0	0	3	0	0	0	0	0	0	**3**
Great Crested Flycatcher	-	B-NT	0	2	0	0	0	0	0	0	0	**2**
Eastern Kingbird	-	B-NT	0	0	3	2	2	0	0	0	0	**7**
Corvidae												
American Crow	-	B-M	0	15	2	3*	0	0	0	0	0	**20**
Alaudidae												
Horned Lark		B-R	0	0	0	7	8	0	0	0	0	**15**
Hirundinidae												
Northern Rough-winged Swallow	-	B-NT	0	0	0	0	0	0	0	7	0	**7**
Barn Swallow	-	B-NT	0	0	6	3	0	17	7	0	9	**42**
Turdidae												
American Robin	-	B-M	0	0	0	4	0	0	0	0	9	**13**
Sturnidae												
European Starling	-	B-M	25	6	0	0	13	0	0	0	26	**70**
Parulidae												
Common Yellowthroat	-	B-NT	0	0	0	4	0	0	0	0	0	**4**
Emberizidae												
Vesper Sparrow	-	B-NT	0	0	0	2	0	0	0	0	0	**2**
White-throated Sparrow	-	B-M	4	0	1	0	0	0	0	0	1	**6**
Cardinalidae												
Northern Cardinal	-	B-R	1	1	0	0	0	0	0	1	2	**5**
Indigo Bunting	-	B-NT	0	1	0	0	0	0	0	0	0	**1**

Appendix 3-5: Table 2 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit type									Total
			UF	RF	S	P	C	M	R	S	U	
Icteridae												
Red-winged Blackbird	-	B-M	0	5	6	20	0	0	14	0	0	**45**
Eastern Meadowlark	-	B-M	0	0	5	11	1	0	0	0	0	**17**
Common Grackle	-	B-M	12	23	5	0	0	0	0	2	21	**63**
Passeridae												
House Sparrow	-	B-R	0	0	0	3	0	0	0	0	9	**12**
Total Individuals			**44**	**54**	**42**	**65**	**60**	**35**	**35**	**13**	**127**	**472**
Total Species			**6**	**8**	**12**	**11**	**7**	**3**	**4**	**6**	**10**	**27**
IL Threatened Species			**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**1**

APPENDIX 3-6

Point Count Results and Driving Census Results US 30 Project Corridor; Breeding Season 2007

Appendix 3-6: Table 1. Point Census. ***Special Designations:*** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *American Bird Conservancy* watch list species, PF = *Partners in Flight* species *of special concern*. ***Migration and Breeding Status:*** B = breeds in the area R = year round resident, M = temperate zone migrant; NT = Neotropical migrant. * = flying over the area, passing through.

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Anatidae																
Canada Goose	-	B-M	4	0	0	0	0	0	0	12	0	0	0	33	2	**51**
Wood Duck	-	B-M	0	0	0	0	0	0	0	6	0	0	0	12	0	**20**
Mallard	-	B-M	3	0	0	0	0	0	0	3	0	0	0	2	4	**12**
Blue-winged Teal	-	B-M	0	0	0	0	0	0	0	0	0	0	0	13	0	**13**
Hooded Merganser	ILCP	B-M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Phasianidae																
Ring-necked Pheasant	-	B-R	0	0	1	0	0	1	3	0	0	0	0	0	0	**5**
Wild Turkey	-	B-R	0	0	0	0	0	0	0	0	11	3	0	0	0	**14**
Pelecanidae																
American White Pelican	-	M	0	0	0	0	0	0	0	0	0	0	0	52	0	**52**
Phalacorcoracidae																
Double-crested Cormorant	-	B-M	0	0	0	0	0	0	0	0	0	0	0	8	0	**8**
Ardeidae																
Great Blue Heron	-	B-M	3	0	0	0	0	0	0	1	0	0	0	12	7	**23**
Great Egret	ILCP	B-M	0	0	0	0	0	0	0	3	0	0	0	6	0	**9**
Green Heron	-	B-M	1	0	0	0	0	0	0	1	0	0	0	0	2	**4**
Cathartidae																
Turkey Vulture	-	B-M	0	5	3	6	0	0	5*	0	0	0	0	3*	0	**22**
Accipitridae																
Cooper's Hawk	-	B-R	2	1	0	0	0	0	0	1	0	1	0	0	0	**5**
Red-tailed Hawk	-	B-R	1	2	0	2*	0	0	3*	0	0	0	2	1*	0	**11**

Appendix 3-6: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Falconidae																
American Kestrel	-	B-R	0	0	0	1	1	0	1	0	0	0	1	0	0	**4**
Rallidae																
American Coot	-	B-M	0	0	0	0	0	0	0	0	0	0	0	37	3	**40**
Charadridae																
Killdeer	-	B-M	5	0	0	5	1	0	0	4	0	0	6	2	0	**23**
Scolopacidae																
Solitary Sandpiper	-	M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Spotted Sandpiper	-	B-M	2	0	0	0	0	0	0	0	0	0	0	3	0	**5**
Wilson's Snipe	ILCP	B-M	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Laridae																
Ring-billed Gull	-	M	0	0	0	0	0	0	0	0	0	0	0	35	17	**52**
Herring Gull	-	M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Columbidae																
Rock Pigeon	-	B-R	0	0	0	0	0	12	4	0	0	0	0	17	0	**33**
Mourning Dove	-	B-R	3	5	1	7	3	4	2	6	1	5	0	1	5	**43**
Strigidae																
Great Horned Owl	-	B-R	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Caprimulgidae																
Common Nighthawk	ILCP	B-NT	0	0	0	0	0	0	0	0	0	0	2	0	0	**2**
Apodidae																
Chimney Swift	ILCP, PF	B-NT	0	0	0	0	25	0	4	0	0	0	0	35	15	**79**
Trochilidae																
Ruby-throated Hummingbird	-	B-NT	0	1	0	0	0	0	3	0	0	0	0	0	0	**4**
Alcedinidae																
Belted Kingfisher	-	B-M	0	0	0	0	0	0	0	0	0	0	0	0	2	**2**

Appendix 3-6: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Picidae																
Red-headed Woodpecker	ILCP, WL, PF	B-M	2	0	0	0	0	0	0	0	2	4	0	0	0	**8**
Red-bellied Woodpecker	-	B-R	3	2	1	0	0	2	4	0	1	3	0	1	0	**17**
Downy Woodpecker	-	B-R	1	1	3	3	0	1	0	1	1	0	2	0	0	**13**
Hairy Woodpecker	-	B-R	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Northern Flicker	ILCP, PF	B-M	2	0	1	1	2	3	1	3	0	0	5	2	0	**20**
Tyrannidae																
Eastern Wood-Pewee	-	B-NT	1	1	2	0	0	1	2	0	5	4	0	1	0	**17**
Willow Flycatcher	ILCD	B-NT	0	0	0	0	0	0	0	0	0	0	1	0	3	**4**
Eastern Phoebe	-	B-M	1	0	0	0	0	0	1	1	0	0	0	2	0	**5**
Great Crested Flycatcher	PF	B-NT	0	1	0	0	0	0	3	0	0	3	0	0	0	**7**
Eastern Kingbird	PF	B-NT	0	0	0	1	2	0	0	0	0	0	0	5	0	**8**
Vireonidae																
White-eyed Vireo	-	B-NT	0	1	0	1	0	0	0	0	0	0	0	1	1	**4**
Yellow-throated Vireo	-	B-NT	0	0	1	0	0	1	1	1	1	0	0	0	0	**5**
Warbling Vireo	-	B-NT	0	0	0	0	0	0	0	0	0	0	3	0	4	**7**
Red-eyed Vireo	-	B-NT	2	2	0	0	0	0	0	2	6	4	0	0	0	**16**
Corvidae																
Blue Jay	-	B-R	4	0	3	0	0	5	7	0	0	2	0	0	0	**21**
American Crow	-	B-R	0	0	0	0	5	2	0	0	0	0	0	19	0	**26**
Hirundinidae																
Purple Martin	-	B-NT	0	0	0	0	0	0	0	0	0	0	0	10	6	**16**
Tree Swallow	-	B-M	0	0	0	0	0	0	0	0	0	0	12	2	0	**14**
Northern Rough-winged Swallow	-	B-NT	0	0	0	0	0	0	0	5	0	0	0	75	25	**105**
Cliff Swallow	-	B-NT	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Barn Swallow	-	B-NT	6	1	0	0	6	0	0	2	0	0	0	4	0	**19**

Appendix 3-6: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Paridae																
Black-capped Chickadee	-	B-R	0	2	0	0	0	4	4	7	2	6	0	0	0	**25**
Tufted Titmouse	-	B-R	1	0	0	0	0	0	0	0	3	4	0	0	0	**8**
Sittidae																
White-breasted Nuthatch	-	B-R	2	0	2	0	0	2	1	0	1	1	0	0	0	**9**
Troglodytidae																
House Wren	-	B-NT	5	2	3	2	4	5	3	0	4	2	0	3	0	**33**
Silviidae																
Blue-gray Gnatcatcher	-	B-NT	0	0	1	0	0	1	2	0	0	1	0	0	0	**5**
Turdidae																
Eastern Bluebird	-	B-R	0	0	1	0	0	0	3	0	0	0	0	2	0	**6**
Wood Thrush	ILCP, WL, PF	B-NT	0	0	0	0	0	0	1	0	3	1	0	0	0	**5**
American Robin	-	B-M	7	5	9	2	3	0	4	2	0	0	0	15	1	**48**
Mimidae																
Gray Catbird	-	B-NT	1	1	2	0	0	1	1	0	0	0	0	0	0	**6**
Brown Thrasher	ILCP, PF	B-M	0	2	0	1	0	0	0	0	0	0	1	0	5	**9**
STURNIDAE																
European Starling	-	B-M	7	5	1	0	15	12	0	0	0	0	0	0	0	**40**
Bombycillidae																
Cedar Waxwing		B-M	0	0	0	0	0	10	2	0	0	0	0	2	0	**14**
Parulidae																
Yellow Warbler	-	B-NT	0	1	0	2	0	0	0	0	0	0	0	0	2	**5**
American Redstart	-	B-NT	1	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Common Yellowthroat	-	B-NT	0	0	0	0	0	0	0	4	0	0	0	0	7	**11**
Thraupidae																
Scarlet Tanager	-	B-NT	0	0	0	0	0	0	0	0	3	1	0	0	0	**4**

Appendix 3-6: Table 1 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Emberizidae																
Eastern Towhee	-	B-M	0	0	1	0	0	1	0	0	0	1	0	0	0	**3**
Chipping Sparrow	-		0	0	0	1	0	0	0	3	0	0	0	0	0	**4**
Field Sparrow	ILCP, PF	B-NT	0	0	2	2	7	0	0	0	0	0	0	0	0	**11**
Vesper Sparrow	-	B-NT	0	1	0	0	0	0	0	0	0	0	2	0	0	**3**
Savannah Sparrow	ILCP	B-NT	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
Song Sparrow	-	B-M	4	2	1	5	5	0	2	5	0	0	3	4	3	**34**
Cardinalidae																
Northern Cardinal	-	B-R	5	1	4	2	2	3	0	0	1	0	0	0	0	**18**
Rose-breasted Grosbeak	-	B-NT	3	0	0	0	0	2	1	0	0	3	0	0	0	**9**
Indigo Bunting	-	B-NT	4	3	2	0	3	0	3	0	0	1	4	3	0	**23**
Icteridae																
Red-winged Blackbird	-	B-M	12	4	0	10	0	0	0	17	0	0	12	0	35	**90**
Eastern Meadowlark	PF	B-M	0	0	1	3	0	0	0	0	0	0	7	0	0	**11**
Common Grackle	-	B-M	9	0	0	7	0	13	0	0	6	9	0	13	0	**57**
Brown-headed Cowbird	-	B-M	6	2	3	0	0	6	3	0	2	4	0	0	0	**26**
Orchard Oriole	PF	B-NT	0	0	1	0	0	0	0	0	0	0	1	2	0	**4**
Baltimore Oriole	PF	B-NT	1	0	1	1	0	0	1	1	1	0	0	1	0	**7**
Fringillidae																
House Finch	-	B-R	0	0	0	0	3	0	0	0	0	0	0	0	0	**3**
American Goldfinch	-	B-R	3	0	1	10	1	2	0	3	0	1	10	3	7	**41**
Passeridae																
House Sparrow	-	B-R	0	0	1	0	16	6	0	0	0	0	0	0	0	**23**
Total Individuals			**98**	**54**	**52**	**76**	**106**	**98**	**75**	**94**	**56**	**64**	**75**	**446**	**156**	**1472**
Total Species			**34**	**26**	**26**	**23**	**19**	**23**	**29**	**23**	**20**	**23**	**18**	**44**	**20**	**86**

Appendix 3-6: Table 2. Driving Census. ***Special status*****:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *The American Bird Conservancy* watch list species, PF = *Partners in Flight* species *of special concern*. ***Status:*** B = breeds in the area R = year round resident, M = temperate zone migrant; NT = Neotropical migrant. ***Habitat Type:*** UF = Upland forest, RF = Riparian forest, S = Shrub, P = Pasture or hay fields, C = Cropland, M = Marsh, R = Riverine, St = Stream, U = Urban. * = flying over the area, passing through.

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit Type									Total
			UF	RF	S	P	C	M	R	St	U	
Anatidae												
Canada Goose	-	B-M	0	0	0	8*	0	28	47	20	0	**103**
Pelecanidae												
American White Pelican	-	M	0	0	0	0	0	0	43*	0	67*	**100**
Phalacorcoracidae												
Double-crested Cormorant	-	B-M	0	0	0	0	0	0	15*	0	0	**15**
Ardeidae												
Great-blue Heron	-	B-M	0	0	0	1*	0	6	2	3	0	**10**
Great Egret	ILCP	B-M	0	0	7*	0	0	5	0	0	0	**12**
Cathartidae												
Turkey Vulture	-	B-M	0	0	3*	9*	14*	0	0	1	0	**27**
Accipitridae												
Cooper's Hawk	-	B-R	1	0	0	2*	0	0	1*	0	0	**4**
Red-tailed Hawk	-	B-R	2	1	1	2*	8*	4	0	1*	0	**19**
Falconidae												
American Kestrel	-	B-R	0	0	2	4	0	0	0	0	0	**6**
Charadridae												
Killdeer	-	B-M	0	0	5	0	0	8	17	0	0	**30**
Laridae												
Ring-billed Gull	-	B-M	0	0	0	7*	0	0	13	0	0	**20**

Appendix 3-6: Table 2 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit type									Total
			UF	RF	S	P	C	M	R	St	U	
Columbidae												
Rock Pigeon	-	R	5*	0	0	4*	4*	0	0	0	15	**28**
Caprimulgidae												
Common Nighthawk	ILCP	B-NT	0	0	0	0	3*	0	0	0	1*	**4**
Alcedinidae												
Belted Kingfisher	-	B-M	0	0	0	0	0	0	1	2	0	**3**
Picidae												
Red-bellied Woodpecker	-	B-R	0	2	1	0	0	0	1	0	0	**4**
Northern Flicker	ILCP, PF	B-M	1*	0	0	0	0	0	0	0	0	**1**
Tyrannidae												
Eastern Kingbird	PF	B-NT	0	0	0	2	2	0	0	0	0	**4**
Corvidae												
Blue Jay	-	B-R	0	3	2	0	0	0	3	0	1	**10**
American Crow	-	B-R	2	10*	0	0	14*	0	0	6*	3	**35**
Alaudidae												
Horned Lark		B-R	0	0	2	15	10	0	0	0	0	**27**
Hirundinidae												
Barn Swallow	-	B-NT	0	0	0	4	0	0	0	45	4	**53**
Turdidae												
Eastern Bluebird	-	B-R	0	0	10	0	0	0	0	0	0	**10**
American Robin	-	B-M	3	4	17	0	0	0	0	0	11	**35**
Mimidae												
Brown Thrasher	ILCD, PF	B-M	0	0	1	0	0	0	0	0	0	**1**

Appendix 3-6: Table 2 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit type									Total
			UF	RF	S	P	C	M	R	St	U	
Sturnidae												
European Starling	-	B-M	10	27	0	0	0	0	3	0	32	**72**
Parulidae												
Common Yellowthroat	-	B-NT	0	0	0	2	0	0	0	0	0	**2**
Emberizidae												
Chipping Sparrow	-	B-NT	0	0	0	0	0	0	0	0	3	**3**
Vesper Sparrow	-	B-NT	0	0	0	1	1	0	0	0	0	**2**
Song Sparrow	-	B-M	0	0	2	0	0	0	0	0	1	**3**
Cardinalidae												
Northern Cardinal	-	B-R	1	1	0	0	0	0	0	0	3	**5**
Indigo Bunting	-	B-NT	4	1	3	1	2	0	0	0	0	**11**
Icteridae												
Red-winged Blackbird	-	B-M	0	0	32	21	53	0	0	0	0	**106**
Eastern Meadowlark	-	B-M	0	0	7	100	20	0	0	0	0	**127**
Common Grackle	-	B-M	20	0	0	0	0	0	0	0	0	**20**
Orchard Oriole	PF	B-NT	0	0	0	1	0	0	0	0	0	**1**
Fringillidae												
American Goldfinch	-	B-R	0	0	3	3	0	0	0	0	0	**6**
Total Individuals			**48**	**47**	**97**	**187**	**131**	**51**	**144**	**76**	**141**	**922**
Total Species			**10**	**8**	**15**	**18**	**11**	**5**	**11**	**6**	**11**	
IL Threatened Species			**0**	**0**	**1**	**0**	**0**	**1**	**0**	**0**	**0**	**1**

APPENDIX 3-7

Point count results and driving census results for US 30 project corridor; fall migration 2007

Table 1

Point count results US 30 project corridor; fall migration 2007. ***Special Designations:*** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *American Bird Conservancy* watch list species, PF = *Partners in Flight* species *of special concern*. ***Migration and Breeding Status:*** B = breeds in the area R = year round resident, M = temperate zone migrant; NT = Neotropical migrant. * = flying over the area, passing through.

FAMILY/ Common Name	Special Status	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Anatidae																
Canada Goose	-	B-M	13	0	0	45	0	0	0	10	0	0	0	47	5	**120**
Wood Duck	-	B-M	0	0	0	0	0	0	0	5	0	0	0	25	3	**33**
American Widgeon	-	M	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Mallard	-	B-M	7	0	0	0	0	0	0	3	0	0	0	11	6	**27**
Blue-winged Teal	-	B-M	0	0	0	0	0	0	0	4	0	0	0	0	17	**21**
Hooded Merganser	ILCP	B-M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Northern Shoveler	-	M	0	0	0	0	0	0	0	0	0	0	0	20	10	**30**
Phasianidae																
Ring-necked Pheasant	-	B-R	0	1	0	2	0	0	1	0	0	0	2	0	0	**6**
Wild Turkey	-	B-R	0	0	0	0	0	0	0	0	1	15	0	0	0	**16**
Ardeidae																
Great Blue Heron	-	B-M	3	0	0	0	0	0	0	2	0	0	0	10	5	**20**
Great Egret	ILCP	B-M	0	0	0	0	0	0	0	0	0	0	0	3	10	**13**
Green Heron	-	B-M	0	0	0	0	0	0	0	0	0	0	0	1	0	**1**
Cathartidae																
Turkey Vulture	-	B-M	0	3	4	0	0	6	0	0	0	0	3	6	0	**22**
Accipitridae																
Cooper's Hawk	-	B-R	0	0	1	1	0	1	0	0	1	0	0	0	0	**4**
Red-tailed Hawk	-	B-R	0	0	0	3	1	3	0	0	0	0	0	2	0	**9**
Falconidae																
American Kestrel	-	B-R	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
Rallidae																

American Coot	-	B-M	0	0	0	0	0	0	0	0	0	0	0	30	0	**30**

Appendix 3-7 continued

FAMILY/ Common Name	Special Status	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Charadridae																
Killdeer	-	B-M	0	2	0	5	12	0	0	0	0	0	1	0	3	**23**
Scolopacidae																
Pectoral Sandpiper	-	B-NT	0	0	0	0	0	0	0	6	0	0	0	12	0	**18**
Spotted Sandpiper	-	B-NT	2	0	0	0	0	0	0	0	0	0	0	1	0	**3**
Wilson's Snipe	ILCP	B-M	0	0	0	0	0	0	0	0	0	0	0	0	1	**1**
Least Sandpiper		B-NT	0	0	0	0	0	0	0	0	0	0	0	14	0	**14**
Laridae																
Ring-billed Gull	-	B-M	0	0	0	0	0	0	0	0	0	0	0	35	0	**35**
Columbidae																
Rock Pigeon	-	B-R	0	0	0	0	0	10	0	0	0	0	0	0	0	**10**
Mourning Dove	-	B-R	5	7	12	9	12	7	5	1	0	0	3	15	0	**76**
Apodidae																
Chimney Swift	ILCP, PF	B-NT	0	0	0	0	15	0	0	0	0	0	0	0	15	**30**
Alcedinidae																
Belted Kingfisher	-	B-NT	1	0	0	0	0	0	0	0	0	0	0	2	3	**6**
Piciformes																
Red-bellied Woodpecker	-	B-R	4	3	5	3	0	3	1	0	0	1	1	0	0	**21**
Yellow-bellied Sapsucker	-	B-M	2	1	0	0	0	0	1	1	0	0	1	0	0	**6**
Downy Woodpecker	-	B-R	3	1	2	1	0	4	1	1	2	4	2	0	0	**21**
Northern Flicker	ILCP, PF	B-M	0	2	0	6	3	5	1	1	1	0	0	5	0	**24**
Tyrannidae																
Eastern Wood-Pewee	-	B-NT	1	1	0	0	0	2	0	0	0	1	0	0	0	**5**
Empidonax species	-	B-NT	0	1	0	1	0	0	0	0	1	0	0	1	0	**4**
Great Crested Flycatcher	PF	B-NT	2	0	0	0	0	1	0	0	0	0	0	0	0	**3**

Appendix 3-7 continued

FAMILY/ Common Name	Special Status	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Vireonidae																
Red-eyed Vireo	-	B-NT	0	0	1	0	0	1	0	0	0	1	0	0	0	**3**
Corvidae																
American Crow	-	B-R	0	4	0	0	0	2	0	3	0	1	0	2	0	**12**
Blue Jay	-	B-M	1	2	0	3	0	0	1	0	4	3	0	7	0	**21**
Hirundinidae																
Barn Swallow	-	B-NT	0	0	0	10	0	0	0	0	0	0	0	28	1	**39**
Tree Swallow	-	B-M	0	0	0	13	0	0	0	0	0	0	0	0	20	**33**
Paridae																
Black-capped Chickadee	-	B-R	5	3	2	0	0	4	0	0	4	0	0	0	0	**18**
Troglodytidae																
House Wren	-	B-NT	1	0	0	1	2	1	0	0	0	0	0	0	0	**5**
Regulidae																
Golden-crowned Kinglet	-	M	5	0	0	0	0	2	0	0	0	0	0	0	0	**7**
Turdidae																
Eastern Bluebird	-	B-R	0	0	0	6	0	1	0	0	0	0	0	1	0	**8**
Swainson's Thrush	-	B-NT	0	1	0	0	0	2	2	0	0	0	0	0	0	**5**
Hermit Thrush	-	B-NT	0	0	0	0	0	0	1	0	0	0	0	0	0	**1**
American Robin	-	B-M	5	13	7	4	9	0	2	0	0	2	6	9	2	**59**
Mimidae																
Gray Catbird	-	B-NT	1	0	0	2	0	0	0	0	0	0	0	0	1	**4**
Sturnidae																
European Starling	-	B-M	17	7	5	0	12	15	0	0	7	0	15	27	0	**105**
Bombycillidae																
Cedar Waxwing	-	B-M	0	0	0	16	0	2	0	0	0	0	0	0	13	**31**

Appendix 3-7 continued

FAMILY/ Common Name	Special Status	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Parulidae																
Magnolia Warbler	-	NT	0	0	1	0	0	1	0	0	0	1	0	0	0	**3**
Yellow-rumped Warbler	-	M	5	0	13	0	3	2	6	2	6	2	0	0	3	**42**
Black-throated Green	-	NT	0	0	0	0	0	0	0	0	1	0	0	0	0	**1**
Blackpoll Warbler	-	NT	0	0	1	0	0	0	0	0	0	1	0	0	0	**2**
American Redstart	-	B-NT	3	0	2	0	1	3	2	0	0	3	0	0	0	**14**
Common Yellowthroat	-	B-NT	0	0	0	1	0	0	0	1	0	0	0	1	3	**6**
Emberizidae																
Eastern Towhee	-	B-M	0	2	0	0	0	1	0	0	1	0	0	0	0	**4**
Chipping Sparrow	-	B-M	0	0	0	0	2	0	0	0	0	0	1	14	0	**17**
Field Sparrow	ILCP, PF	B-M	0	0	1	5	0	0	0	0	0	0	1	1	0	**8**
White Throated Sparrow	-	M	0	0	0	0	0	14	0	0	0	6	0	0	1	**21**
Savannah Sparrow	ILCP	B-NT	0	0	0	0	0	0	0	0	0	0	1	1	0	**2**
Song Sparrow	-	B-M	2	0	1	5	0	0	0	0	0	2	7	0	2	**19**
Cardinalidae																
Northern Cardinal	-	B-R	2	0	4	3	1	0	3	0	4	6	0	1	0	**24**
Rose-breasted Grosbeak	-	B-NT	0	0	0	0	0	1	0	0	0	0	0	1	0	**2**
Icteridae																
Red-winged Blackbird	-	B-M	0	0	0	39	0	0	0	7	0	0	0	2	35	**83**
Common Grackle	-	B-M	50	0	0	15	0	6	13	0	0	0	0	10	35	**129**
Brown-headed Cowbird	-	B-M	12	0	0	9	0	0	0	0	0	0	1	0	0	**22**
Baltimore Oriole	PF	B-NT	0	0	1	0	0	0	2	0	0	0	0	0	0	**3**
Fringillidae																
American Goldfinch	-	B-R	3	1	2	10	1	0	0	0	0	0	4	1	3	**25**

Appendix 3-7 continued

FAMILY/ Common Name	Special Status	Migration and Breeding Status	Census Points													Total
			1	2	3	4	5	6	7	7b	8	9	10	11	12	
Passeridae																
House Sparrow	-	B-R	0	0	0	0	7	0	0	0	0	0	0	12	11	**30**
Number of Individuals			**155**	**55**	**65**	**219**	**81**	**100**	**42**	**47**	**33**	**49**	**49**	**361**	**211**	**1467**
Number of Species			**25**	**18**	**18**	**26**	**14**	**25**	**15**	**14**	**11**	**14**	**15**	**35**	**26**	**72**

Table 2

Driving census results US 30 project corridor; fall migration 2007. ***Special Designations*****:** IL T = Illinois threatened, IL E = Illinois endangered, ILCP = Illinois conservation priority, WL = *The American Bird Conservancy* watch list species, PF = *Partners in Flight* species *of special concern*. ***Status:*** B = breeds in the area R = year round resident, M = temperate zone migrant; NT = Neotropical migrant;; * = flying over the area, passing through. ***Habitat Type*****:** UF = Upland forest, RF = Riparian forest, S = Shrub, P = Pasture or hay fields, C = Cropland, M = Marsh, R = Riverine, St = Stream, U = Urban.

FAMILY/ Common Name	**Special Designations**	**Migration and Breeding Status**	**Habit Type**									**Total**
			UF	**RF**	**S**	**P**	**C**	**M**	**R**	**St**	**U**	
Anatidae												
Canada Goose	-	B-R	0	0	0	0	0	31	15	3	6	**55**
Phalacrocoracidae												
Double-crested Cormorant	-	B-M	0	0	0	0	0	0	25	0	0	**25**
Ardeidae												
Great Blue Heron	-	B-M	0	0	1	0	0	0	0	1	0	**2**
Cathartidae												
Turkey Vulture	-	B-M	0	0	8*	2*	0	1*	0	0	3*	**14**
Accipitridae												
Bald Eagle	IL T, ILCP	B-R	0	0	0	0	0	0	1*	0	0	**1**
Cooper's Hawk	-	B-R	0	1*	0	0	0	0	0	0	0	**1**
Broad-winged Hawk*	ILCP	B-NT	0	0	0	35	0	0	0	0	0	**35**
Red-tailed Hawk	-	B-R	4	0	1	1*	1*	0	0	0	1*	**8**
Falconidae												
American Kestrel	-	B-R	0	0	5	3*	0	1*	0	0	0	**9**

Appendix 3-7 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit Type									Total
			UF	RF	S	P	C	M	R	St	U	
Charadridae												
Killdeer	-	B-M	0	0	2	0	0	0	0	0	0	**2**
Laridae												
Ring-billed Gull	-	B-M	0	0	0	0	6*	0	0	0	0	**6**
Columbidae												
Rock Pigeon	-	R	0	0	0	0	0	0	0	0	3	**3**
Mourning Dove	-	R	0	0	1	0	0	0	0	0	0	**1**
Picidae												
Red-bellied Woodpecker	-	B-R	2	0	0	0	0	0	0	0	0	**2**
Corvidae												
American Crow	-	B-R	3*	0	6*	0	4	0	0	2*	0	**15**
Blue Jay	-	B-M	1	0	0	0	0	0	0	0	0	**1**
Alaudidae												
Horned Lark	-	B-R	0	0	0	0	13	0	0	0	0	**13**
Hirundinidae												
Tree Swallow	-	B-M	0	0	0	0	35	0	0	0	0	**35**
Turdidae												
Eastern Bluebird	-	B-R	0	0	1	5	0	0	0	0	0	**6**
American Robin	-	B-M	0	7*	0	0	0	0	0	0	0	**7**
STURNIDAE												
European Starling	-	B-M	0	0	0	0	0	0	0	0	9	**9**
Bombycillidae												
Cedar Waxwing	-	B-M	0	0	0	0	0	0	0	0	7	**7**
Cardinalidae												
Northern Cardinal	-	B-R	0	0	1	0	0	0	0	0	2	**3**

Appendix 3-7 continued

FAMILY/ Common Name	Special Designations	Migration and Breeding Status	Habit Type									Total
			UF	RF	S	P	C	M	R	St	U	
Icteridae												
Red-winged Blackbird	-	B-M	0	0	0	0	12	0	0	0	0	**12**
Eastern Meadowlark	-	B-M	0	0	0	6	0	0	0	0	0	**6**
Common Grackle	-	B-M										**2**
Fringillidae												
American Goldfinch	-	B-R	0	1*	9	0	0	0	0	0	0	**10**
Total Individuals			**10**	**9**	**35**	**52**	**81**	**33**	**31**	**6**	**31**	**292**
Total Species			**4**	**3**	**10**	**6**	**6**	**3**	**3**	**3**	**7**	**28**
IL Threatened Species			**0**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**1**

Appendix 3-8

Field Methods

Appendix 3-8 Field Methods

Methods for Vegetation Survey

The vegetation surveys include Cover Type Mapping, Quantitative Forest Sampling, and Qualitative Descriptions. In addition, the corridor was searched for Federally and State listed threatened and endangered species and for areas with high botanical diversity. Significant populations of plant species classified as Illinois Noxious Weeds and other potentially invasive species were noted. The known element occurrences, based on the Natural Heritage database (IDNR), were described along with the general character of the study area. Community classifications follow a modified U.S. Fish and Wildlife Cover Type Classification system used for Habitat Evaluation Procedures. When describing noteworthy natural areas, we made occasional references to the natural community classification typically used in Illinois (White and Madany 1978) to characterize those areas more specifically. Botanical nomenclature follows Mohlenbrock (1986) as presented in Taft et al. (1997).

Cover Type Mapping and selection of Terrestrial Reference Sites

Cover type mapping followed a modified U.S. Fish and Wildlife Cover Type Classification system and was established on 1:7200 (1" = 600') aerial photographs (**Appendix 2-4**) The cover typing was verified during the field season by both the Biotic Surveys botanist and Wetland scientists. Numerical codes for the represented cover types will be shown on the maps. The aerial extent for each cover type in the study area was calculated.

Bold faced = cover types found in the US Route 30 corridor

1 = Cropland

2 = Pasture and Hayland

3 = Urban and Built-up land

4 = Forest

5 = Non-native Grassland

6 = Grassland (Prairie)

7 = Shrubland

8 = Shrub Savanna

9 = Tree Savanna

10 = Forested Wetland

11 = Shrub-scrub Wetland

12 = Marsh

13 = Wet Meadow

14 = Sedge Meadow

15 = Shore and Bottom Wetland

16 = Pond

17 = Lacustrine (Lake)

18 = Riverine (River)

19 = Stream

20 = CRP Grassland

21 = CRP Tree Planting

22 = Farm Wetland

23 = Barren Land

24 = Mining Area

25 = Forbland

26 = Orchard/Vineyard

27 = Tree Farm

Quantitative and Qualitative Descriptions of Cover Types

Quantitative and qualitative approaches were used to characterize the vegetation in the US ROUTE 30 corridor. Quantitative approaches involved forest sampling and focused on the woody over-story of the forest cover types. Qualitative approaches incorporated floristic surveys. Each method is described below.

Quantitative Forest Sampling - Forests were sampled quantitatively to characterize stand structure and composition. All forest stands greater than 10 acres (4.0 ha), that occur at least in part within the US Route 30 project corridor, were sampled. Linear forest strips too narrow for sample plots were not included. Trees (stems > 4 inches (10 cm) were sampled in 0.05-ha circular plots (radius = 12.62 m) arranged along transects at 50m (164 ft) intervals; no plots were sampled within 33 ft (10 m) of forest edges. Data collected included tree density, frequency, basal area, and Importance Value (sum of relative density, frequency, and basal area [IV 300]), presented in the text of the report as percent IV. Sampling intensity was approximately 5% of total forest area up to 50 acres (20 ha) in size, with a minimum of 4 plots per stand. Stands between 10 and 20 acres (4 and 8 ha) in size, generally, were sampled with 4 to 8 plots, while stands greater than 50 acres (20 ha) were sampled with a maximum of 16 plots stratified throughout the site. Several stands had residential and other developments that limited the total potential sample space. There were 6 stands that met the sampling criteria **(Figure 2-1).** Large forest tracts were rare in the US Route 30 corridor and the majority of sampling occurred along the bluff east of Cattail Creek. Fifty-six plots were sampled throughout these forest stands in the study area.

Qualitative Descriptions - The major upland cover types were described according to the composition of the vascular flora. Details in some individual site descriptions include species composition with relative abundance values and application of Floristic Quality Assessment (FQA; Taft et al. 1997). In forest communities, the focus included characterizing the shrub/sapling and ground-layer vegetation. FQA data summarized for areas of high species diversity include the Floristic Quality Index (FQI), the mean Coefficient of Conservatism ($\overline{C}$), total species richness, the percent native and adventive species, physiognomic characteristics, and the average Wetness Coefficient. The FQI was used in upland sites to determine areas of botanical richness based on a concentration of species with a coefficient of conservatism (C) value of 7 or above (Scale of 0-10). A master list of all species observed in the study area and the cover type in which they occurred are listed in **Appendix 2-1.**

Mammals

Mist Netting for Bats

A summer bat survey included mist netting, which is the most effective method for capturing bats in flight (Kunz et al. 1996). Mist netting was performed during the period 15 May-15 August, in accordance with U.S. Fish and Wildlife Service guidelines for Indiana bat surveys (U.S. Fish and Wildlife Service 2007). Black nylon mist nets (1.5 in [38 mm] mesh) were used (Avinet, Inc., Dryden, NY). These nets were 29 and 39 ft (9 and 12 m) in length and could be spread to a width of 8.5 ft (2.6 m). Mist netting was conducted along a channel of the Rock River where branches of riparian trees created a partial canopy above the channel. The nets were suspended across the stream between a pair of metal poles 20 ft (6 m) tall. Two nets of equal length were stacked vertically and suspended by placing loops on the ends of the nets on a rope and pulley system attached to each pole. Using the pulley systems, the top of the uppermost net could be raised to a height of 20 ft and the nets could be lowered to remove bats. Nets were positioned perpendicular to the stream channel and as close as possible to branches of riparian trees. This mist-netting system was described by Gardner et al. (1989).

Two nets were erected at the netting site (spaced ≥ 98 ft [30 m] apart) and the site was netted for two consecutive nights. The nets were spread at dusk and checked at 10-min intervals for five hours. Netting was conducted on nights when environmental conditions are considered favorable for capturing bats, i.e. no precipitation, no strong winds, and temperatures above 50 F (10 C) (U.S. Fish and Wildlife Service 2007).

The following data were recorded for each bat captured: species, sex, age class (juvenile or adult), reproductive condition, and weight. Age class in bats is determined by the degree of closure of the phalangeal epiphyses; juveniles (i.e. young of the year)

are recognizable because of the incomplete ossification of the epiphyses (Anthony 1988). The reproductive condition of male bats is determined by the size of the epididymides, which are covered by pigmented sheaths and located lateral to the tail. Sexually mature males have enlarged or distended epididymides that can be seen through the interfemoral membrane (Racey 1988). Pregnant females can be recognized by gently palpating the fetus through the abdomen, and lactating and post-lactating females by examination of the teats. Weights were recorded to the nearest 0.5 g by placing bats in small mesh bags and suspending the bags from a Pesola scale. Bats were released at the capture site immediately after examination.

Franklin's ground squirrel surveys

The initial stage of the survey was the identification of potential habitat for Franklin's ground squirrel in the project area by examining U.S. Geological Survey topographic maps, soil maps, and aerial photographs, and by driving through the area. Live trapping was conducted in suitable habitat during summer, when the species is active. Adults generally are aboveground from mid-April through August, although young-of-the-year enter hibernation later (Ostroff and Finck 2003).

Collapsible, single-door Tomahawk live traps (Tomahawk Live Trap Co., Tomahawk, WI) measuring 19 x 6.5 x 6.5 in (48 x 16.5 x 16.5 cm) in size were used. Traps were placed on the ground at approximately 50-ft (15-m) intervals. The number and arrangement of traps varied with the size and shape of the site. Traps were baited with popcorn and covered with vegetation to protect captured animals from direct sunlight. Franklin’s ground squirrels are strictly diurnal and the traps were open only during the daytime to avoid captures of non-target species. Traps were set during the early morning (0730-0900 h) and checked at midday (1200-1400 h). They were checked and closed in the evening (1800-1900 h) on the first two days and late afternoon (1600-1800 h) on the third day. Trapping continued for three consecutive days at each site.

Direct and Indirect Observation

White-tailed deer and diurnal mammals such as tree squirrels, ground squirrels, chipmunks, and woodchucks often can be observed directly while driving or walking through the project area. Roads within the corridor were driven during the day to record roadkilled mammals and at night to detect medium-sized mammals and deer. Indirect observation involved searching habitat within the area for mammalian sign, e.g. tracks, scat, burrows, or nests (as described in field guides such as Murie and Elbroch 2005, Elbroch 2003, Rezendes 1998). Observations by other INHS personnel working in the project area also were recorded.

Amphibians and Reptiles

Field surveys for amphibians and reptiles are usually conducted in a single effort because of the similarities of the two groups. They are both secretive in their habits and being ectothermic, they are generally active under a narrower temperature range than birds and mammals. However, there are also a number of differences between amphibians and reptiles that make combined surveys very difficult. Amphibians are

restricted to moist conditions because they exchange gasses through their skin and lay eggs in water or other moist situations (rotting logs, etc.). Most amphibians have an aquatic larval stage that may last several months to a year. Reptiles, on the other hand, are less restricted by available moisture and may go weeks without direct contact with water. All these factors combine to make amphibians and reptiles one of the most difficult vertebrate groups to survey, especially in a single effort.

Visual encounter surveys (VES) were the main method used to survey amphibians and reptiles. Visual encounter surveys involve searching appropriate habitat (mainly turning cover items such as logs, rocks, and miscellaneous debris and also visually scanning open habitats) and recording all species encountered. A thorough explanation of this technique can be found in Heyer, et al (1994). The effort expended in visual encounter surveys is recorded as man-hours. If there were more than one visual encounter survey the man hours were totaled for that site. Incidental encounters accounted for some amphibian and reptile observations. An incidental encounter is an observation of an amphibian or reptile species when no structured survey is being conducted,.including times immediately prior to or after a structured survey. For example, if a frog is observed on the shoulder of the road as the surveyor is heading down to do a call survey at a wetland, the frog would be recorded as an incidental encounter.All incidental encounters were kept separate from the man hours. Geographic coordinates of amphibian and reptile localities were taken with a Garmin GPS unit or were taken from www.topozone.com. Voucher specimens were collected, cataloged, and deposited in the Illinois Natural History Survey amphibian and reptile collection.

Amphibian call surveys were conducted for five minutes per site at night. Chorus size (intensity) was estimated using a qualitative scale developed by the North American Amphibian Monitoring Program (NAAMP):

Amphibian Calling Index

0 – No individuals were heard calling
1 – Individuals can be counted; there is space between calls
2 – Calls of individuals can be distinguished but there is some overlapping of calls
3 – Full chorus, calls are constant, continuous, and overlapping

Turtle trapping was conducted with Legler-style hoop traps. Trap effort is expressed as the total number of hours that the traps were deployed.

Birds

Avian censuses were conducted in the project area twice during spring migration, breeding, and fall migration seasons (**Table 3-8-1**). These periods characterize the major annual changes in the diversity of bird populations in Illinois. Thirteen census points were established in representative bird habitat within the project area (**Appendix 3-4, Table 3-8-2**). The avian habitat in the US 30 project area is highly fragmented and no areas can be regarded as ‘unfragmented. For wooded areas, unfragmented or ‘forest interior’ bird habitat is defined as an area of at least 10 a located > 300 ft (92 m) from the edge of the woods (Herkert et al. 1993). Modified point-counts (Smith et al. 1993, Hunter et al.1992, Thompson et al. 1992) were used to determine the composition of the bird community in the area. All individuals seen or heard within 165 ft (50 m) of each census point (including birds seen flying over the area) were recorded during 10-min

count periods. During spring and summer, all censuses were conducted between one half hour before dawn (a half hour after the birds begin to sing) and 1100 h (when birds are entering the mid-day activity lull). Fall censuses were conducted throughout the day. Timed counts provide measures of the structure of bird communities (e.g., number of individuals and number of species) within the various habitat types.

Table 3-8-1 Seasons for Avian Life Cycles in Illinois.

Season	Dates
Spring migration	1 March to 30 April
Breeding	1 May to 31 August
Fall migration	1 September to 30 November

A driving census of the corridor also was conducted. During each visit an observer drove a circuit through the corridor (**Appendix 3-4**, Figure 8) noting all birds seen along the way. Frequent stops were made, either when previously unrecorded species were seen, or where roads intersected potential bird habitat (i.e. land that was not developed or farmed). These censuses provide an additional qualitative tool for assessing which species occur in the corridor. They are most useful for opencountry birds (e.g. hawks, falcons and large migratory species).

Other Assessments
Species formally classified as endangered or threatened may not be the only ones that are subject to significant threats or which should be considered when assessing the value of a parcel of land. Many species of songbirds that occur in the Midwest (passing through or breeding) are neotropical migrants (i.e. they spend most of the year in lower, subtropical or tropical, latitudes and breed in higher latitudes). These species are generally area-sensitive (i.e. there is some critical amount of habitat required for them to breed) and their preservation is a topic of concern for conservation groups and governmental entities. *Partners in Flight* (PF), http://www.partnersinflight.org/, a working group of North American avian ecologists (Thompson et al. 1992; Panjabi et al. 2005) has developed a list of species of concern for specific regions of the US. Species of concern for the upper Midwest, including Illinois, are indicated in **Appendices 3-1, and 3-5 thru 3-7.**

The American Bird Conservancy and the *National Audubon Society* have built on the PF ranking approach, which is limited to land birds, to generate *The US Watch List for Birds*. This list consists of 172 US bird species that the group calculates to be of greatest conservation concern (http://www.abcbirds.org/abcprograms/science/watchlist/index.html). Species with Watch List designation are also indicated in **Appendices 3-1 and 3-5 thru 3-7**. Finally, the IDNR has identified bird *Species in Greatest Need of Conservation for Illinois* (Illinois conservation priority species, ILCP) in *The Illinois Comprehensive Wildlife Action Plan*, http://www.dnr.state.il.us/ORC/WildlifeResources/theplan/birds.asp. These species are indicated in **Appendices 3-1, and 3-5 thru 3-7**.

Table 3-8-2. Location and habitat descriptions of bird census areas used during the avian censuses in the US 30 project corridor (Whiteside County, Illinois).

Census area	Location	Habitat Description
1	Long. 89 41' 49.487" Lat. 41 46' 27.44"	Riparian Forest along Rock River. Wetland Site 78 (Forested Wetland).
2	Long. 89 49' 53.898" Lat. 41 46' 26.841"	Forest. Dry-Mesic Upland Forest. Vegetation Forest Stand 1.
3	Long. 89 51' 40.512" Lat. 41 47' 16.064"	Forest.
E	Long. 89 47' 08.053" Lat. 41 47' 16.064"	Bald Eagle use area; riparian forest. Site is not a census point.
4	Long. 89 47' 08.053" Lat. 41 47' 16.064"	Shrubland around a borrow lake, between Interstate 88 and Lyndon-Agnew Railroad Nature Preserve. Lies outside the project corridor.
5	Long. 89 51' 34.037" Lat. 41 45' 10.286"	Shrubland on Rock Creek and including Forested Wetland (Wetland Sites 34 and 42) and Wet Meadows (Wetland Sites 35, 39, 40, and 45).
6	Long. 90 00' 34.561" W Lat. 41 48' 32.163" N	Forest. Adjacent to Wetland Site 81 (Wet Meadow).
7	Long. 90 51' 37.900" W Lat. 41 51' 31.101" N	Forest/Shrubland. Just south of Vegetation Forest Stand 3 (Dry-Mesic Sand Forest).
7b	Long. 90 40' 37.276" W Lat. 41 51' 00.560" N	Forest. Near Vegetation Forest Stand 5 and Wetland Site 20 (Marsh).
8	Long. 90 40' 43.825" W Lat. 41 51' 41.466" N	Forest. Vegetation Forest Stand 5 (Dry-Mesic Sand Forest).
9	Long. 90 40' 33.474" W Lat. 41 49' 45.392" N	Forest. Forest Stand 6 (Dry-Mesic Sand Forest).
10	Long. 90 84' 70.800" W Lat. 41 50' 53.808" N	Grassland/Shrubland. West of Vegetation Forest Stand 4 (Dry-Mesic Sand Forest) and adjacent to Marsh (Wetland Site 9) and Wet Meadows (Wetland Sites 10, 11, and 13).
11	Long. 90 10' 10.952" W Lat. 41 50' 44.659" N	River Front (Forest, Shrubland, Wetland). Site lies outside the project corridor.
12	Long. 90 90' 52.860" W Lat. 41 51' 50.5980" N	Marsh (Fulton). Site lies outside the project corridor.

Aquatic Resources

Methodologies used during this 2007 survey for aquatic resources in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, follow protocols outlined in the project tasking from IDOT to INHS, and as discussed in recent project reports compiled by INHS for IDOT (Edwards (ed.] et al. 2006, Feist [ed.] et al. 2006, Feist and Trester [eds.] et al. 2005; Wetzel and Hofmann [eds.] et al. 2003, Wetzel and Hofmann [eds.] et al. 2005). These methodologies are summarized below.

Habitat Assessments

During their 13-14 March 2007 visit to the IDOT U.S. Route 30 project corridor, Taylor and Wetzel completed habitat assessments at 21 stream sites using forms with protocols modified from Plafkin et al. (1989) and Barbour et al. (1999); the habitat assessment for site US30-22 was completed on 5 July. See Plafkin et al. (1989) and Barbour et al. (1999) for additional discussion of assessment parameters and the assessment process. Habitat assessments were completed at stream sites within and adjacent to the proposed project corridor to ascertain their status and possible consideration for further study to document aquatic resources (surveys for fishes, freshwater mussels, other aquatic macroinvertebrates, and water quality monitoring). Mean habitat scores for these 22 sites ranged from 30.5 to 95.5 (**Figure 4-1B**); 19 sites (2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21) received 'poor' average habitat quality ratings; the remaining three sites (1, 6, 7) received ‘fair’ average habitat quality ratings. No sites were ranked as ’good’ or 'excellent', and the average of all habitat assessment scores was 63.6.

Based upon the habitat assessment scores and proximity of the 22 sites to the proposed corridor alignments, 16 sites were chosen for further study; surveys for fishes, unionid mussels, and other aquatic macroinvertebrates, and water quality monitoring were conducted at these 16 sites during the Spring, Summer, and Autumn seasons of 2007.

Fishes

With minor exception, fishes were collected at sites twice during 2007. Sites US30-1, -3, -6, -7, -9, -10, -12, -14, -15, -16, -18, -20, and -21 were sampled in May (9-10, or 31) and again in September (10-11). Site US30-2 was sampled on 31 May and again on 10 July. Sites US30-13 and -22 were sampled only during September. All sites were sampled by INHS personnel J.M. Tiemann and C.A. Taylor, or by Tiemann, Taylor, and D. Ellington. Fishes at most sites were sampled using a standard 10' minnow seine; sites US30-2 and US30-3 were sampled with a 230V AC boat mounted electro-shocker given the large size of these two streams. Specimens were identified in the field then returned live to their habitats. Selected specimens from several sites were vouchered in the field, and retained for deposition into the INHS Fish collection.

The current status of threatened and endangered species of fishes discussed in this memorandum are taken from Illinois Endangered Species Protection Board (IESPB) (2005, 2006), or U.S. Department of Interior, Fish and Wildlife Service (USDI, FWS) (1996, 1997).

Mussels

Surveys for freshwater mussels were conducted at the 16 aquatic resource sampling sites within the U.S. Route 30 project corridor (**Table 4-1)** by INHS biologists during 2007. Sampling for freshwater mussels was conducted using the methodologies and

protocols outlined in the 2007 project tasking from IDOT to INHS, and as discussed in recent project reports compiled by INHS for IDOT (Edwards (ed.] et al. 2006, Feist [ed.] et al. 2006, Feist and Trester [eds.] et al. 2005; Wetzel and Hofmann [eds.] et al. 2003, Wetzel and Hofmann [eds.] et al. 2005).

Survey collectors and dates for the sites included three sites by J.S. Tiemann, A.R. Kuhns, and J.D. Griesbaum on 24 July 2007, and thirteen sites by J.S. Tiemann, A.R. Kuhns, and S.Y. Hampson on 31 July 2007. Sites were shallow, allowing surveys to be completed by hand-searching all available habitats. Both banks and dried areas of the streambed also were visually searched for the presence of fresh dead and relict shells. Voucher specimens of each species collected were returned for deposition in the INHS Mollusk Collection. Nomenclature used for freshwater mussels discussed in this report follows Cummings and Mayer (1997), and also includes recent changes in date of publication, original spelling, or priority of names. The current status of threatened and endangered species of freshwater mussels discussed in this report are taken from Illinois Endangered Species Protection Board [IESPB] (2005, 2006), or U.S. Department of Interior, Fish and Wildlife Service (USDI, FWS) (1996, 1997).

Aquatic Macroinvertebrates (other than Mussels)

Field Sampling Procedures. During our 2007 surveys, aquatic macroinvertebrates were sampled following a standardized, qualitative, multi-habitat approach modified from Plafkin et al. (1989) and Barbour et al. (1999). Habitats sampled included sloping and undercut banks, riffles, riffle/run areas, and woody debris (when present). A single set of replicate samples (n=3) was collected when only one dominant habitat was present; when two or more dominant habitat types were observed at a site, a replicate set of samples was collected from each if the two most dominant habitat types. Samples were collected using a heavy-duty dipnet (13.4 x 17.7 in x 0.019 in mesh [34 x 45 cm x 0.5 mm mesh]). The generally large number of specimens obtained in each replicate sample ensured a representative sample of the community and an overview of taxonomic diversity.

Riffle and riffle/run samples were collected by placing the dipnet downstream of the fast flowing riffles or in the middle of the riffle/run habitats; the area immediately in front of the net, corresponding to the dimensions of the dipnet bag, was then cleared of large mineral substrates. Each rock was inspected individually and macroinvertebrates washed into the net. Progressively finer substrates were inspected (by working the toe and heel deeply into the substrate upstream of the net) until the finest material had been dislodged. Bank samples were collected by thrusting the dipnet upward, in a vigorous fashion, from bank bottom to the water line. Samples from woody debris were obtained by carefully hand-rinsing chunks of wood, denuded sticks and branches, and other small woody debris in buckets, then filtering the rinse water through dip nets. Pool samples were collected by pushing or pulling the dip net through substrates present in the pools.

Large fauna were hand-picked from the debris to minimize damage. All macroinvertebrates and associated sample debris retained in the dip nets after rinsing were transferred from the net into containers with 10% formalin, then taken to the INHS laboratory in Champaign for processing, identification, and analysis.

Laboratory Procedures. Formalin was drained from each sample in the laboratory and replaced with 70-80% ethanol after a water rinse. Individual replicate samples were randomized and each replicate was subsampled in the laboratory to obtain a quantitative

and representative picture of the macroinvertebrate community. Each sample was spread evenly in a shallow white pan. A random subsample was chosen, then sorted until 100 organisms had been picked from this subsample. Field-collected material not examined by subsampling was retained should more detailed studies prove to be warranted.

All aquatic macroinvertebrate specimens were identified to family or the lowest reasonable taxonomic level. Identifications of and nomenclature for insects followed Merritt and Cummins (1996). Identifications of and nomenclature for noninsectan macroinvertebrates (annelids, crustaceans, mollusks, and other minor groups) discussed in this report follow Page (1985), Thorp and Covich (2001), Wetzel (1992), Kathman and Brinkhurst (1998), Wetzel et al. (2006), and when pertinent, literature cited within these references. Vouchers of macroinvertebrate specimens collected and identified during this study are deposited in the INHS Annelida, Crustacea, Insect, and Mollusk Collections in Champaign.

Water Quality Monitoring

The monitoring of water quality in aquatic habitats consists of 1) measurement of physical and chemical water quality parameters in the field, 2) collection of raw water samples in the field, then transport (on ice) to laboratory facilities in Champaign, then 3) completion of laboratory analyses of those samples.

Measurement of Field Water Quality Parameters and Initial Sample Processing

A YSI model 556 multimeter, calibrated prior to each sampling period, was used to measure the following field water quality parameters: water temperature (°Celsius), dissolved oxygen (in mg/L, and also as % saturation), hydrogen ion concentration (as *p*H), specific conductivity (in mSiemens), total dissolved solids (TDS) (mg/L), and salinity (ppt). Ambient temperature (°Celsius) was measured using a red liquid thermometer. Turbidity (FTU) was measured using a Hanna Instruments Model HI 93703 Microprocessor Turbidity Meter.

Water samples in the field are collected in Nalgene bottles; each sample bottle is rinsed three times with habitat water before being filled. Two water samples ~~of~~ are collected at each site – one for immediate analyses upon return to the INHS and ISGS laboratories, and the second frozen upon return to the laboratories as a backup sample. All field water samples are stored on ice immediately after collection for transport back to the laboratory, and then stored in a refrigerator at 5°C until analyses are performed.

Analytical Techniques – Laboratory analyses for water samples collected in the field

Upon return to the laboratory a 125ml aliquot of the sample is filtered through a Millipore Type HA 0.45 micron membrane filter for use with the HPLC and the carbon analysis, as well as for laboratory determination of total dissolved solids and for the preparation of the dissolved metal samples, and for completion of analyses for other inorganic constituents.

Method for the determination of Ammonia in water

General Principle. Ammonia in the filtered sample reacts with phenol and hypochlorite in a basic environment to form a blue colored compound that is then measured in a colorimeter at 660 nm. An EDTA solution is then added to eliminate the precipitation of

calcium and magnesium. *Instrumentation used:* Bran+Luebbe TRAACS 2000 Analytical Console.

Method for the determination of Chloride, Nitrite, Nitrate, Sulfate and OrthoPhosphate

General Principle: The filtered sample is injected into the mobile phase (1.7 mM Sodium bicarbonate/1.8mM Sodium carbonate) and is pumped through the stationary phase (column). Depending on the attraction between the sample ions and the stationary phase, the ions are separated and elute at different times. In this case, chloride has the weakest attraction and is eluted first, sulfate has the strongest attraction and elutes last. *Instrumentation used*: Dionex DX-120 Chromatograph, Ion Pac AS4A-SC Anion Exchange Column.

Method for the determination of Total Phosphorus

General Principle: The unfiltered sample is digested with a potassium persulfate ($K_2S_2O_8$) solution. This procedure releases the bound phosphorus, which is then analyzed together with the inorganic phosphorus by an automated procedure. In this method the orthophosphate reacts with ammonium molybdate and antimony potassium tartrate in an acid environment, followed by a reduction with ascorbic acid. The resulting blue phosphomolybdenum complex is read at 660 nm in a colorimeter. *Instrumentation used*: Braan+Luebbe TRAACS 2000 Analytical Console.

Method for the determination of Mercury in water

General Principle: The sample is digested with sulfuric acid, nitric acid, potassium permanganate and potassium persulfate in a water bath at 95C for two hours. The resulting Hg (II) is reduced with stannous chloride to elemental mercury, which is then detected by atomic absorption with an automated instrument. *Instrumentation used:* Perkin Elmer Flow Injection Mercury system FIMS.

Method for the determination of Dissolved Organic Carbon and Dissolved Inorganic Carbon

General Principle: Dissolved Inorganic Carbon (IDC) and Dissolved Organic Carbon (DOC) determination are preformed by wet oxidation on the same sample. DIC is analyzed by measuring the carbon dioxide that is released when the filtered sample is acidified. Sodium persulfate is then added to that sample where it reacts with the remaining organic carbon at 100 °C to form carbon dioxide. Both inorganic and the organic carbon are detected by a non-dispersive infrared detector. *Instrumentation used*: OI Analytical Model 1010 Wet Oxidation Total Organic Carbon Analyzer with attached auto sampler and computer interface.

Method for the determination of metals and other inorganic constituents

General Principle: The sample is nebulized for transport into the radio frequency-inductively coupled plasma where each of the 30 elements emits a specific spectrum. Intensities are measured by the photosensitive CCD micro-chip and data is computed and stored with the ICP Expert Computer Software. Background corrections, multiple wavelengths, and Yttrium internal standard are used to improve precision and accuracy. *Instrumentation used*: Varian Vista Pro CCD Simultaneous ICP-OES Spectrometer with radial torch configuration.

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APPENDIX 3-9

Numbers of animal/vehicle collisions along US 30 in the project corridor, Whiteside County, Illinois, 2002-2006

Appendix 3-9 Numbers of animal/vehicle collisions along US 30 in the project corridor, Whiteside County, Illinois, 2002-2006

Numbers of animal/vehicle collisions along US 30 in the project corridor, Whiteside County, Illinois, 2002-2006 (summarized from data provided by the IDOT Division of Traffic Safety). Miles are numbered from west to east.

Mile	2002	2003	2004	2005	2006	Total
1*	1	3	1	0	2	7
2	2	1	1	2	2	8
3	0	0	1	2	0	3
4	0	1	1	1	2	5
5	0	1	1	3	3	8
6	0	1	0	0	1	2
7	0	0	0	1	0	1
8	0	0	0	0	2	2
9	0	1	0	0	0	1
10	0	0	0	0	1	1
11*	0	1	0	0	1	2
13*	0	1	1	2	1	5
14	1	1	0	2	1	5
15	0	0	2	0	0	2
16	1	0	1	1	1	4
17	3	0	1	0	0	4
18	1	1	0	1	0	3
19	1	3	2	2	3	11
20	2	0	1	0	0	3
21	0	1	0	1	0	2
22	1	0	0	1	2	4
23	0	0	2	1	0	3
24	3	1	1	1	1	7
25	0	1	0	0	2	3
26*	1	1	0	0	0	2
Totals	17	19	16	21	25	98

* only part of the mile is within the project corridor

Appendix 3-10
Index of reptile and amphibian observation sites

Table 1. Sites surveyed in 2007 for amphibians and reptiles
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Site #	Location	Site Description	Dates Surveyed
TS1	4.6 km W of Rock Falls	non-native grassland	10/4/2007
TS2	5.1 km W of Rock Falls	non-native grassland	10/4/2007
TS3	11.3 km W of Rock Falls	prairie	7/23/2007, 9/10/2007
TS4	11.4 km W of Rock Falls	forest	9/10/2007
TS5	Round Grove, Mathew Rd.	non-native grassland	10/4/2007
TS6	N of Round Grove, US 30	non-native grassland	9/27/2007, 10/4/2007
TS7	3.3 km WNW of Morrison, Garden Plain Rd.	prairie, sedge meadow	10/4/2007
TS8	7 km ESE Fulton	sand hill prairie, forest	5/2/2007, 6/19/2007, 7/24/2007
TS9	7.3 km ESE Fulton	RR right-of-way	6/15/2007, 10/5/2007
TS10	8 km ESE Fulton	sand prairie, forest	6/15/2007, 7/24/2007
TS11	5.3 km ESE of Fulton	gravel hill prairie	5/17/2007, 7/25/2007
TS12	3.3 SE Fulton	savanna	5/17/2007, 6/8/2007, 7/24/2007, 7/25/2007, 9/11/2007
TS13	3.1 km SE of Fulton	urban/developed	6/14/2007
TS14	2.5 km SE of Fulton, US 30	non-native grassland	6/15/2007
TS15	2.6 km SE of Fulton, Chase Road over Cattail Creek	non-native grassland	10/5/2007
TS16	3.4 km SSE Fulton, Chase Road	savanna	9/27/2007
TS17	3.1 km SSE Fulton, Chase Road	savanna	9/27/2007

AQ1	4.9 km W of Rock Falls, Rock River	river	9/11/2007, 10/5/2007
AQ2	7 km W of Rock Falls, Elkhorn Creek	stream	6/7/2007, 10/5/2007
AQ3	9.6 km W of Rock Falls	stream	6/14/2007, 9/11/2007
AQ4	11.7 km W of Rock Falls	pond	9/10/2007
AQ5	10.2 km ESE Morrison, Deer Creek at US 30	stream	9/27/2007
AQ6	N of Round Grove	stream	9/27/2007
AQ7	Morrison, French Creek at Sawyer Rd.	stream	9/27/2007
AQ8	3.7 km W of Morrison	sedge meadow	7/23/2007
AQ9	7.0 km ESE of Fulton	marsh	5/2/2007, 7/24/2007
AQ10	7.0 km ESE of Fulton	marsh	5/2/2007
AQ11	6.9 km ESE of Fulton	wet meadow	5/1/2007
AQ12	7.8 km ESE Fulton	stream	5/1/2007
AQ13	6 km E Fulton, Spring Brook at Acker Rd.	stream	9/27/2007, 10/5/2007
AQ14	3.8 km ESE Fulton	ditch	7/25/2007
AQ15	3.1 km SE of Fulton	pond	6/14/2007
AQ16	3.1 km SE of Fulton	ditch	6/19/2007
AQ17	2.7 km SE of Fulton	pond	5/2/2007
AQ18	2.6 km SE of Fulton, Cattail Creek at Chase Rd.	stream	10/5/2007
AQ19	2.9 km SSE of Fulton	stream	10/5/2007
AQ20	2.4 km SSE of Fulton	marsh	3/27/2007, 5/2/2007

AQ21	2.7 km S of Fulton	ephemeral pond	5/2/2007, 6/14/2007
CS1	7.2 km ESE Fulton	marsh	5/17/2007, 6/14/2007
CS2	6.3 km ESE Fulton	ditch	5/1/2007
CS3	4.3 km ESE Fulton	ditch	3/27/2007
CS4	3.2 km ESE Fulton	wet pond	6/18/2007
CS5	3.1 km SE Fulton	pond, ditch	6/18/2007
CS6	3 km SE Fulton	ditch	6/18/2007
CS7	2.8 km SE Fulton	wet meadow	3/27/2007
CS8	2.7 km SE Fulton	pond	6/14/2007
CS9	2.4 km SSE Fulton	ditch, marsh	6/14/2007
CS10	2.5 km SSE Fulton, Mill Road Marsh	marsh	3/27/2007
CS11	2.7 km S Fulton	ephemeral wetland	3/27/2007
TT1	4.9 km W of Rock Falls, Rock River	river	7/30/2007 - 8/2/2007
TT2	7.1 km ESE Fulton	marsh	7/30/2007 - 8/2/2007
TT3	7.2 km ESE Fulton	marsh	7/30/2007 - 8/2/2007
TT4	3.3 km ESE Fulton	wet pond	7/30/2007 - 8/2/2007
TT5	3.1 km SE Fulton	pond	7/30/2007 - 8/2/2007
TT6	3.1 km SE Fulton	ditch	7/30/2007 - 8/2/2007
TT7	2.7 km SE Fulton	pond	7/30/2007 - 8/2/2007
TT8	2.6 km SE of Fulton, Cattail Creek at Chase Rd.	stream	7/30/2007 - 8/2/2007
TT9	2.5 km SSE Fulton	ditch	7/30/2007 - 8/2/2007

TS = Terrestrial Site; AQ = Aquatic Site; CS = Call Survey Site; TT = Turtle Trapping Site; INC = Incidental Observation (see “Methods” section for definition)

Appendix 3-11
Amphibian and reptile survey results by observation site

Table 1 Amphibian and reptile species observed during surveys at terrestrial sites.

Site	man-hours	AT	NLF	ST	SLR	ER	WF	DB	PG	CG
TS1	INC	0	0	0	0	0	0	0	1	0
TS2	INC	0	1	0	0	0	0	0	0	0
TS3	0.98	0	1	0	0	0	0	0	0	0
TS4	1.18	0	0	0	0	0	0	0	0	0
TS5	INC	0	0	0	0	0	0	0	1	0
TS6	INC	0	0	0	0	0	1	0	1	2
TS7	INC	0	0	0	0	0	0	1	0	0
TS8	1.3	3	0	0	0	0	0	0	1	0
TS8	INC	1	0	0	0	0	0	0	0	0
TS9	1.08	1	0	0	0	0	0	1	0	0
TS10	1.63	3	0	0	0	0	0	0	0	0
TS11	1.92	0	0	0	0	0	0	0	0	0
TS12	9	0	0	0	49	0	0	0	0	1
TS13	INC	1	0	0	2	0	0	0	0	0
TS14	INC	0	0	1	0	0	0	0	0	0
TS15	INC	0	0	0	0	0	0	1	0	0
TS16	INC	0	0	0	0	0	0	0	0	1
TS17	INC	0	0	0	0	1	0	0	0	0

INC = Incidental Encounter; AT = American Toad; NLF = Northern Leopard Frog; ST = Snapping Turtle; SLR = Six-lined Racerunner; ER = Eastern Racer; WF = Western Foxsnake; DB = DeKay's Brownsnake; PG = Plains Gartersnake; CG = Common Gartersnake

Table 2 Amphibian and reptile species observed during surveys at aquatic sites.

Site	man-hours	AT	NCF	GTC	WCF	AB	GF	NLF	UIF	ST	UIT	PT	NW	DB	CG
AQ1	INC	0	11	0	0	0	0	1	0	0	0	0	0	0	0
AQ1	0.17	0	5	0	0	0	0	0	0	0	0	0	0	0	0
AQ2	0.43	0	0	0	0	2	0	0	0	0	0	0	0	0	0
AQ3	0.38	5	0	0	0	0	13	7	6 to 12	0	0	0	0	0	0
AQ3	INC	0	0	0	0	0	1	1	0	0	0	0	0	0	0
AQ4	0.1	0	0	0	0	0	3	0	17	0	0	0	0	0	0
AQ5	0.3	0	0	0	0	0	3	0	4	0	0	0	0	0	0
AQ6	0.27	0	1	0	0	0	0	1	3 to 4	0	0	0	0	0	0
AQ6	INC	0	1	0	0	0	0	0	0	0	0	0	0	0	0
AQ7	0.18	0	0	0	0	0	3	3	3	0	0	0	0	0	0
AQ7	INC	0	0	0	0	0	1	2	0	0	0	0	0	0	0
AQ8	0.85	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AQ9	0.23	0	0	0	3	0	4	0	0	0	0	0	0	0	0
AQ9	INC	0	0	0	0	0	0	3	1	0	0	0	0	0	0
AQ10	0.42	2	0	0	0	3	0	0	0	0	0	0	0	0	1
AQ11	0.33	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AQ12	0.93	0	0	0	0	0	1	2	0	0	0	0	0	0	0
AQ13	INC	0	0	0	0	0	0	1	0	0	0	0	0	0	0
AQ13	0.15	0	0	0	0	0	0	0	0	0	0	0	0	0	0
AQ14	INC	0	0	0	0	0	3	0	0	0	0	0	0	0	0
AQ15	INC	0	0	0	0	numerous	0	0	0	0	1	0	0	0	0
AQ16	INC	0	0	0	0	0	0	0	0	0	0	0	0	0	1
AQ17	0.32	0	0	0	0	0	0	2	5	0	0	1	1	0	0
AQ18	0.17	0	0	0	0	1	0	0	10	0	0	0	0	1	0
AQ19	INC	0	0	0	0	0	1	0	3 to 5	0	0	0	0	1	0
AQ20	INC	0	0	0	0	0	0	0	0	0	0	0	0	0	1
AQ20	0.6	0	0	0	3 to 6	12	0	0	0	0	0	0	0	0	0
AQ21	0.52	0	0	0	2	0	0	0	0	0	0	0	0	0	0

INC = Incidental Encounter; AT = American Toad; NCF = Northern Cricket Frog; GTC = Gray Treefrog Complex; WCF = Western Chorus Frog; AB = American Bullfrog; GF = Green Frog; NLF = Northern Leopard Frog; UIF = Unidentified Frog; ST = Snapping Turtle; PT = Painted Turtle; UIT = Unidentified Turtle; NW = Northern Watersnake; DB = DeKay's Brownsnake; CG = Common Gartersnake

Table 3 Anuran (frog and toad) species detected at call survey sites using a call index (see field methods appendix 3-8).

Site	man-hour	AT	GTC	WCF	AB	GF	NLF
CS1	0.16	CI 0	CI 1	CI 0	CI 0	CI 1	CI 0
CS2	INC	CI 2	CI 0	CI 0	CI 0	CI 0	CI 0
CS3	INC	CI 0	CI 0	CI 2	CI 0	CI 0	CI 0
CS4	0.08	CI 0	CI 2	CI 0	CI 1	CI 1	CI 0
CS5	0.08	CI 0	CI 2	CI 0	CI 1	CI 0	CI 0
CS6	0.08	CI 0	CI 2	CI 0	CI 1	CI 2	CI 0
CS7	INC	CI 0	CI 0	CI 2	CI 0	CI 0	CI 1
CS8	INC	CI 0	CI 1	CI 0	CI 0	CI 0	CI 0
CS9	INC	CI 0	CI 0	CI 2	CI 0	CI 0	CI 0
CS9	0.08	CI 0	CI 0	CI 0	CI 1	CI 1	CI 0
CS10	INC	CI 0	CI 0	CI 2/3	CI 0	CI 0	CI 1
CS11	INC	CI 0	CI 0	CI 1	CI 0	CI 0	CI 0

INC = Incidental Encounter; AT = American Toad; GTC = Gray Treefrog Complex; WCF = Western Chorus Frog; AB = American Bullfrog; GF = Green Frog; NLF = Northern Leopard Frog; CI 0 = no individuals were heard calling; CI 1 = individuals can be counted; CI 2 = calls of individuals can be distinguished but there is some overlapping of calls; CI 3 = full chorus, calls are constant, continuous, and overlapping.

Table 4 Amphibian and turtle species captured at turtle trap sites.

Site	trap hours	AB	ST	PT
TT1	210.25	0	0	0
TT2	207.65	0	2	0
TT3	207.75	0	0	0
TT4	212.4	0	1	1
TT5	140.67	7	0	0
TT6	212.85	0	4	3
TT7	205.75	0	1	2
TT8	206.15	0	1	0
TT9	204.7	0	0	0

AB = American Bullfrog; ST = Snapping Turtle; PT = Painted Turtle

Table 5 Amphibian and reptile species observed by Illinois Natural History Survey personnel other than J.E. Petzing.

Site	Date	Species	# observed
TS4	9/10/2007	AT	2
TS8	5/16/2007	SLR	1
AQ1		DB	1
AQ2		AB	1

AT = American Toad; AB = American Bullfrog; SLR = Six-lined Racerunner; DB = Dekay's Brownsnake

Appendix 4-1

Photographs (Figures 1-22 *in this appendix*) of stream sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, where surveys for aquatic resources (habitat assessments, fishes, unionid mussels, other aquatic macroinvertebrates, and water quality monitoring) were conducted by INHS personnel during 2007. Of these 22 sites, sixteen (sites 1, 2, 3, 6, 7, 9, 10, 12, 13, 14, 15, 16, 18, 20, 21, and 22) were chosen for additional study based upon the results of our habitat assessments and their relationship to the proposed alignments.

A.

B.

Figure 1. US30 site 1 - Union Drainage @ U.S. Route 30 culvert, NE edge of Allen (town), Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (S). **B**. Looking downstream (N). Photos by S.J. Taylor (INHS).

Figure 2. US30 site 2 - Rock River @ U.S. Route 30 bridge, 0.8 mi W of Allen (town), Whiteside County, Illinois; 14 March 2007. Looking upstream (NNE) towards the bridge. Photo (stitched from two images) by S.J. Taylor (INHS).

A.

B.

Figure 3. US30 site 3 - Elkhorn Creek @ U.S. Route 30 bridge, 0.4 mi NNW of Como (town), Whiteside County, Illinois; (**A**) before and (**B**) after addition of rip rap. **A**. Looking upstream (N) from bridge, 14 March 2007; photo by S.J. Taylor (INHS). **B.** Looking downstream (S) along west bank, from just upstream (N) of bridge, with new rip rap surrounding the western bridge support, 25 September 2007; photo by M.J. Wetzel (INHS).

A.

B.

Figure 4. US30 site 4 - Elkhorn Creek @ Como Road, 0.5 mi W of Como (town), Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (ENE). **B**. Looking downstream (WSW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 5. US 30 site 5 - Elkhorn Creek @ Interstate 88 (interchange 36) access ramp, 0.7 mi WSW of Como, Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 6. US 30 site 6 - Deer Creek @ U.S. Route 30 bridge, 1.4 mi ENE of Round Grove (town), Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 7. US 30 site 7 - Deer Creek @ Blue Goose Road bridge, 1.8 mi ESE of Round Grove (town), Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (NE). **B**. Looking downstream (SW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 8. US 30 site 8 - Deer Creek @ Interstate 88 bridges, 2.0 mi SSE of Round Grove (town), Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 9. US 30 site 9 - Unnamed tributary of Rock River @ U.S. Route 30 culvert, 0.5 mi NW of Round Grove (town, Whiteside County, Illinois; 14 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 10. US 30 site 10 - Unnamed tributary of Rock River @ Bunker Hill Road bridge, 0.9 mi SW of Round Grove, Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 11. US 30 site 11 - French Creek @ U.S. Route 30 bridge, 1.6 mi ESE of Morrison (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (NE). **B**. Looking downstream (SW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 12. US 30 site 12 - French Creek @ Sawyer Road bridge, 0.9 mi ESE of Morrison (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (E). **B**. Looking downstream (WSW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 13. US 30 site 13 - Rock Creek, downstream of Prairie Center Road bridge, adjacent to (east side of) Lister Road, 1.0 mi SSW of Morrison (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (N) from west bank. **B**. East bank detail (looking E). Photos by S.J. Taylor (INHS).

A.

B.

Figure 14. US 30 site 14 - Unnamed tributary of Rock Creek @ Lister Road bridge, ~60 yards upstream (NW) of its confluence with Rock Creek, 1.4 mi SSW of Morrison (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (NW). **B**. Looking downstream (SE) to where tributary joins with Rock Creek. Photos by S.J. Taylor (INHS).

A.

B.

Figure 15. US 30 site 15 - Unnamed tributary of Rock Creek @ Garden Plain Road culvert, at S edge of Unionville (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 16. US 30 site 16 - Unnamed tributary of Rock Creek @ Garden Plain Road culvert, 1.1 mi WSW of Unionville (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). Photos by S.J. Taylor (INHS).

A.

B.

Figure 17. US 30 site 17 - Spring Brook Creek @ Chicago & Northwestern RR trestle crossing, just SW of Hillside Road, 3.0 mi WNW of Unionville (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (NE). **B**. Looking downstream (SW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 18. US 30 site 18 - Spring Brook Creek @ Acker Road bridge just N of U.S. Route 30, 3.5 mi E of Fulton (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (ENE). **B**. Looking downstream (WSW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 19. US 30 site 19 - Cattail Creek, ~350 yds ENE Frog Pond Road (co. rd. 700E) @ Chicago & Northwestern RR trestle, 2.7 mi ESE Fulton (town), Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (SE). **B**. Looking downstream (NW). Photos by S.J. Taylor (INHS).

A.

B.

Figure 20. US 30 site 20 - Unnamed tributary of Cattail Creek, adjacent to (along W side of) Chase Road, ~50yds S of Chicago & Northwestern RR trestle crossing (over Chase Road), 1.8 mi SE Fulton (town) (0.3 mi S U.S. Route 30); Whiteside County, Illinois; 13 March 2007. **A**. Looking upstream (S) towards site (beyond RR trestle). **B**. Adjacent to stream at site, looking upstream (S). Photos by S.J. Taylor (INHS).

A.

B.

C.

Figure 21. US 30 site 21 - Cattail Slough drainage @ U.S. Route 30 culvert, along east side Millroad Marsh Waterfowl conservation area, 1.5 mi S Fulton (town) (and 0.4 mi E IL Route 84), Whiteside County, Illinois, 13 March 2007. **A**. Looking upstream (NNE). **B**. Looking downstream (SSW). **C**. bank detail. Photo by S.J. Taylor (INHS).

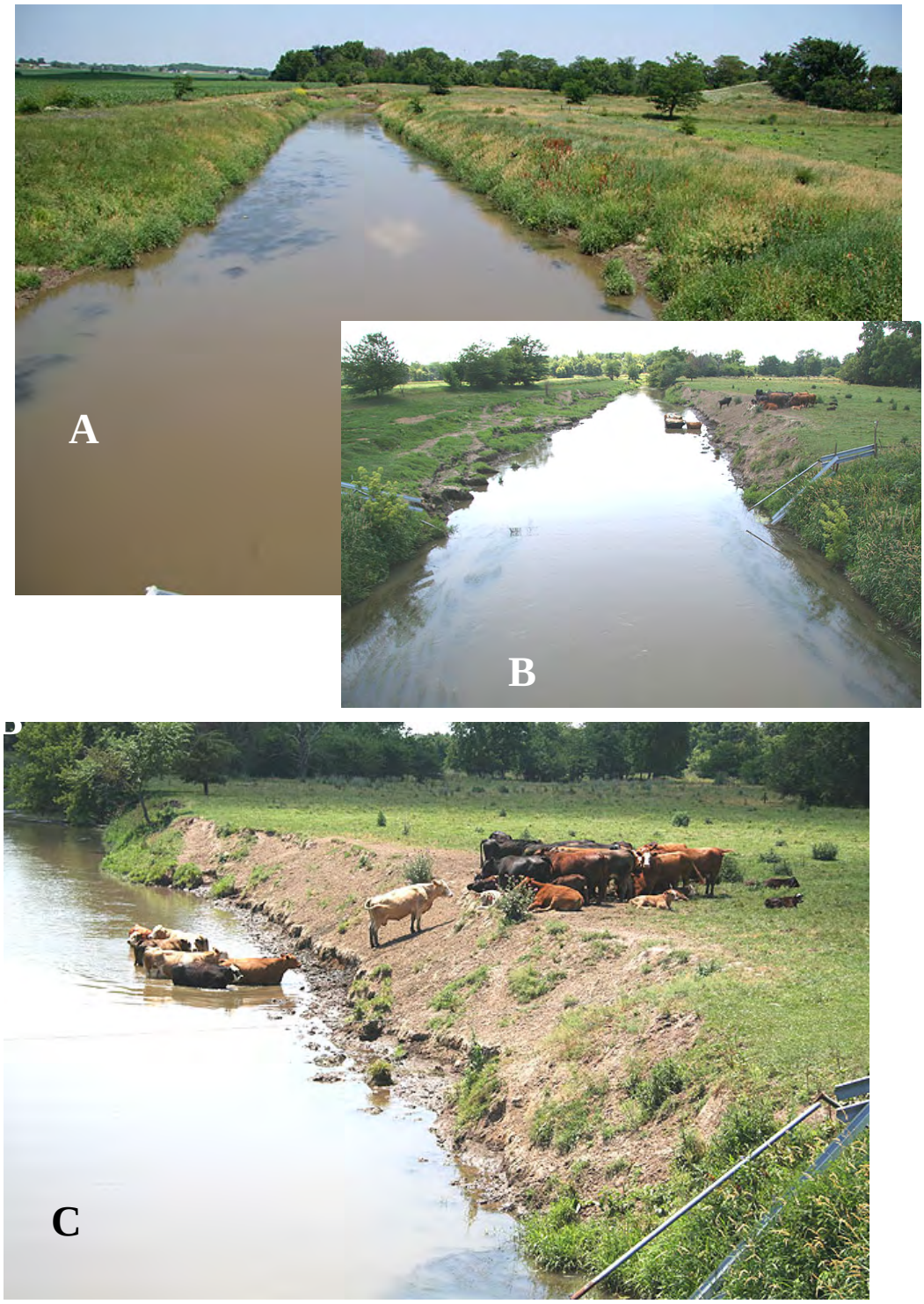


Figure 22. US 30 site 22 – Rock Creek at Bunker Hill Road bridge, 4.2 mi S Morrison (town), Whiteside County, Illinois; 20 June 2007. **A**. Looking upstream (N). **B**. Looking downstream (S). **C**. bank detail (west bank, downstream of bridge), with cattle. Photos by M.J. Wetzel (INHS).

Appendix 4-2

Average rating for each of 12 parameters contributing to overall habitat assessment scores for 22 stream sites within the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois

Appendix 4-2. Average rating for each of 12 parameters contributing to overall habitat assessment scores for 22 stream sites within the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois; assessments were completed by INHS personnel during 2007. Specific locality information for sites 1-22 is presented in **Table 4-1.**

1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	
9.5	3	4	5	2.5	7.5	9	6.5	7	4	6	7	2	5.5	7	5.5	7	10	0.5	2.5	0.5	2	**Bottom substrate / Instream cover (range 0-20)**
13.5	5.5	6	6	6.5	10	11	8.5	7.5	7.5	7	11.5	6	8.5	10.5	9	11	13.5	3	6.5	6	6	**Pool bottom substrate characterization (range 0-20)**
11	7	7	7.5	7	10.5	8.5	6.5	4.5	4	4.5	5	3	3	5.5	5.5	5	6	1	3.5	8	4.5	**Pool variability (range 0-20)**
12.5	2	11	11	6.5	12	10.5	12	7	0.5	5	8	8	11	11	4.5	1.5	4	0.5	11.5	0	0.5	**Canopy cover (shading) (range 0-20)**
6.5	4	7	4	4	5.5	5.5	4	4.5	3	4	5.5	3.5	2.5	4.5	5	3	6	1.5	4	0	1	**Channel Alteration (range 0-15)**
7.5	5.5	5.5	5.5	4	7	6	6	7	4.5	6	7	2.5	3	4.5	5	2	7	0.5	4	0.5	1.5	**Deposition (range 0-15)**
7	2.5	4	5	3	8	7.5	4.5	6	3.5	3.5	3.5	3.5	6.5	6	6.5	4	2.5	1	1	0	1.5	**Channel Sinuosity (range 0-15)**
6.5	8	6.5	7.5	6	8.5	8	8	8	6.5	7	8	8	9	7.5	6.5	6	5.5	4	4	4	3	**Lower bank channel capacity (range 0-15)**
5	4.5	3.5	3.5	4	5	3	4	5.5	3.5	3.5	4	3.5	4	3	5.5	3	4.5	5.5	2	4	2	**Bank stability (range 0-10)**
8	4.5	5	3.5	4.5	6	4.5	5.5	5	4.5	3	4	4	5	5.5	6	5.5	5.5	6	2.5	7	4	**Bank vegetative stability (range 0-10)**
5.5	4.5	4.5	3.5	4.5	5	5.5	5	5	4	4	5.5	4	5	6	4.5	4	4.5	3	4	3	3.5	**Streamside cover (range 0-10)**
3	4.5	5.5	5	3.5	6	4.5	3.5	3.5	1.5	2	2.5	2	2	1.5	5	2	2	4	3	5.5	2	**Riparian vegetation zone width (at least on buffer side) (range 0-10)**
95.5	**55.5**	**69.5**	**67.0**	**56.0**	**91.0**	**83.5**	**74.0**	**70.5**	**47.0**	**55.5**	**71.5**	**50.0**	**65.0**	**72.5**	**68.5**	**54.0**	**71.0**	**30.5**	**48.5**	**38.5**	**31.5**	**Habitat Score**

Appendix 4-3

Fishes recorded from the Rock River basin in Illinois

Appendix 4-3. Fishes recorded from the Rock River basin in Illinois. All data are from the Illinois Natural History Survey Fish Collection, Champaign. [SE] = Illinois State Endangered; [ST] = Illinois State Threatened; [I] = Introduced.

Family	Common name	Scientific name
PETROMYZONTIDAE	American brook lamprey	*Lampetra appendix*
POLYODONTIDAE	Paddlefish	*Polyodon spathula*
ACIPENSERIDAE	Lake sturgeon	*Acipenser fulvescens* [SE]
LEPISOSTEIDAE	Spotted gar	*Lepisosteus oculatus*
	Longnose gar	*Lepisosteus osseus*
ANGUILLIDAE	American eel	*Anguilla rostrata*
HIODONTIDAE	Goldeye	*Hiodon alosoides*
	Mooneye	*Hiodon tergisus*
CLUPEIDAE	Gizzard shad	*Dorosoma cepedianum*
SALMONIDAE	Rainbow trout	*Oncorhynchus mykiss*
	Brown trout	*Salmo trutta*
	Brook trout	*Salvelinus fontinalis*
UMBRIDAE	Central mudminnow	*Umbra limi*
ESOCIDAE	Grass pickerel	*Esox americanus*
	Northern pike	*Esox lucius*
CYPRINIDAE	Central stoneroller	*Campostoma anomalum*
	Largescale stoneroller	*Campostoma oligolepis*
	Goldfish	*Carassius auratus* [I]
	Red shiner	*Cyprinella lutrensis*
	Spotfin shiner	*Cyprinella spiloptera*
	Steelcolored shiner	*Cyprinella whipplei*
	Common carp	*Cyprinus carpio* [I]
	Gravel chub	*Erimystax x-punctatus* [ST]
	Speckled chub	*Extrarius aestivalis*
	Brassy minnow	*Hybognathus hankinsoni*
	Mississippi silvery minnow	*Hybognathus nuchalis*
	Pallid shiner	*Hybopsis amnis* [SE]
	Striped shiner	*Luxilus chrysocephalus*
	Common shiner	*Luxilus cornutus*
	Redfin shiner	*Lythrurus umbratilis*
	Silver chub	*Macrhybopsis storeriana*
	Hornyhead chub	*Nocomis biguttatus*
	Golden shiner	*Notemigonus crysoleucas*
	Emerald shiner	*Notropis atherinoides*
	River shiner	*Notropis blennius*
	Ghost shiner	*Notropis buchanani*
	Bigmouth shiner	*Notropis dorsalis*
	Blackchin shiner	*Notropis heterodon* [ST]
	Blacknose shiner	*Notropis heterolepis* [SE]
	Spottail shiner	*Notropis hudsonius*
	Sand shiner	*Notropis ludibundus*
	Ozark minnow	*Notropis nubilus*
	Rosyface shiner	*Notropis rubellus*
	Silverband shiner	*Notropis shumardi*
	Weed shiner	*Notropis texanus* [SE]
	Mimic shiner	*Notropis volucellus*

[Appendix 4-3 continued on following page]

Appendix 4-3 (continued).

CYPRINIDAE (concl.)	Suckermouth minnow	*Phenacobius mirabilis*
	Souther redbelly dace	*Phoxinus erythrogaster*
	Bluntnose minnow	*Pimephales notatus*
	Fathead minnow	*Pimephales promelas*
	Bullhead minnow	*Pimephales vigilax*
	Blacknose dace	*Rhinichthys atratulus*
	Creek chub	*Semotilus atromaculatus*
CATOSTOMIDAE	River carpsucker	*Carpiodes carpio*
	Quillback	*Carpiodes cyprinus*
	Highfin carpsucker	*Carpiodes velifer*
	White sucker	*Catostomus commersoni*
	Blue sucker	*Cycleptus elongatus*
	Lake chubsucker	*Erimyzon sucetta*
	Northern hogsucker	*Hypentelium nigricans*
	Smallmouth buffalo	*Ictiobus bubalus*
	Bigmouth buffalo	*Ictiobus cyprinellus*
	Spotted sucker	*Minytrema melanops*
	Silver redhorse	*Moxostoma anisurum*
	River redhorse	*Moxostoma carinatum* [ST]
	Black redhorse	*Moxostoma duquesnei*
	Golden redhorse	*Moxostoma erythrurum*
	Shorthead redhorse	*Moxostoma macrolepidotum*
ICTALURIDAE	Black bullhead	*Ameiurus melas*
	Yellow bullhead	*Ameiurus natalis*
	Brown bullhead	*Ameiurus nebulosus*
	Channel catfish	*Ictalurus punctatus*
	Slender madtom	*Noturus exilis*
	Stonecat	*Noturus flavus*
	Tadpole madtom	*Noturus gyrinus*
	Flathead catfish	*Pylodictis olivaris*
CYPRINODONTIDAE	Starhead topminnow	*Fundulus dispar* [SE]
	Blackstripe topminnow	*Fundulus notatus*
POECILIIDAE	Western mosquitofish	*Gambusia affinis*
ATHERINIDAE	Brook silverside	*Labidesthes sicculus*
GASTEROSTEIDAE	Brook stickleback	*Culaea inconstans*
MORONIDAE	White bass	*Morone chrysops*
	Yellowbass	*Morone mississippiensis*
CENTRARCHIDAE	Rock bass	*Ambloplites rupestris*
	Warmouth	*Chaenobryttus gulosus*
	Green sunfish	*Lepomis cyanellus*
	Pumpkinseed	*Lepomis gibbosus*
	Orangespotted sunfish	*Lepomis humilis*
	Bluegill	*Lepomis macrochirus*
	Smallmouth bass	*Micropterus dolomieu*
	Largemouth bass	*Micropterus salmoides*
	White crappie	*Pomoxis annularis*
	Black crappie	*Pomoxis nigromaculatus*

[Appendix 4-3 concluded on following page]

Appendix 4-3 (concluded).

PERCIDAE	Crystal darter	*Crystallaria asprella*
	Rainbow darter	*Etheostoma caeruleum*
	Western sand darter	*Etheostoma clarum* [SE]
	Iowa darter	*Etheostoma exile* [ST]
	Fantail darter	*Etheostoma flabellare*
	Least darter	*Etheostoma microperca*
	Johnny darter	*Etheostoma nigrum*
	Banded darter	*Etheostoma zonale*
	Yellow perch	*Perca flavescens*
	Logperch	*Percina caprodes*
	Blackside darter	*Percina maculata*
	Slenderhead darter	*Percina phoxocephala*
	Sauger	*Stizostedion canadense*
	Walleye	*Stizostedion vitreum*
SCIAENIDAE	Freshwater drum	*Aplodinotus grunniens*
COTTIDAE	Mottled sculpin	*Cottus bairdi*

Total number of species = 109 (107 native, 2 introduced).

Appendix 4-4

Results from the fish surveys of the Rock River basin and the Mississippi River basin in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois

Appendix 4-4. Results from the fish surveys of the Rock River basin and the Mississippi River basin in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, conducted by INHS personnel during 2007. Each site was collected on two occasions. Specific locality information for these sites is presented in Table 4-1. Numbers indicate number of specimens collected at each site. '-' = not present. 'T' = tolerant species, 'IM' = intermediate species, 'IT' = intolerant species.

	Site							
Species	**#1**	**#2**	**#3**	**#6**	**#7**	**#9**	**#10**	**#12**
Lepisosteidae								
longnose gar (*Lepisosteus osseus)* - IM	-	3	1	-	-	-	-	-
shortnose gar (*Lepisosteus platostomus)* - IM	-	7	-	-	-	-	-	-
Clupeidae								
gizzard shad *(Dorosoma cepedianum)* - IM	-	73	-	-	-	-	-	-
Cyprinidae								
central stoneroller (*Campostoma anomalum)* - IM	4	-	2	35	4	-	4	22
spotfin shiner (*Cyprinella spiloptera)* - IM	12	>99	>99	-	16	-	8	-
common carp (*Cyprinus carpio)* - T	-	28	-	-	-	-	-	-
common shiner *(Luxilus cornutus)* - IM	-	-	-	7	21	-	15	-
redfin shiner *(Lythrurus umbratilis)* - IM	-	-	1	-	38	-	-	-
hornyhead chub *(Nocomis biguttatus)* - IT	-	-	-	1	21	-	-	-
emerald shiner *(Notropis atherinoides)* - IM	-	35	34	-	-	-	-	-
bigmouth shiner *(Notropis dorsalis)* - T	-	-	-	-	-	-	28	17
sand shiner (*Notropis ludibundus)* - IM	-	8	>99	-	5	-	5	-
suckermouth minnow (*Phenacobius mirabilis)* - IM	-	-	1	-	-	-	-	-
southern redbelly dace *(Phoxinus erythrogaster)* - IT	-	-	-	33	44	1	7	25
bluntnose minnow (*Pimephales notatus)* - T	2	10	22	46	59	-	18	24
fathead minnow *(Pimephales promelas)* - T	-	-	3	6	1	81	1	6
bullhead minnow *(Pimephales vigilax)* - IT	-	17	-	-	-	-	-	-
blacknose dace *(Rhinichthys atratulus)* - IM	-	-	-	9	4	-	12	31
creek chub (*Semotilus atromaculatus)* - T	5	-	2	8	9	62	30	14
Catastomidae								
river carpsucker *(Carpiodes carpio)* - IM	-	8	5	-	-	-	-	-
quillback *(Carpiodes cyprinus)* - IM	-	27	43	-	-	-	-	-
highfin carpsucker (*Carpiodes velifer)* - IT	-	-	12	-	-	-	-	-
white sucker *(Catostomus commersoni)* - T	-		-	3	3	-	2	4
northern hogsucker *(Hypentelium nigricans)* - IT	-	-	5	-	-	-	-	-
silver redhorse *(Moxostoma anisurum)* - IM	-	8	13	-	-	-	-	-
shorthead redhorse (*Moxostoma macrolepidotum)* - IM	-	42	39	-	-	-	-	-
Ictaluridae								
channel catfish (*Ictalurus punctatus)* - IM	-	6	15	-	-	-	-	-
stonecat *(Noturus flavus)* - IM	-	7	-	-	1	-	-	-
fathead catfish (*Pylodictus olivaris)* - IM	-	1	2	-	-	-	-	-
Gasterosteidae								
brook stickleback (*Culaea inconstans)* - IM	9	-	2	3	-	-	2	8
Poeciliidae								
mosquitofish *(Gambusia affinis)* - IM	-	-	3	-	-	-	-	2
Atherinidae								
brook silverside (*Labidesthes sicculus)* - IM	-	1	-	-	-	-	-	-

[Appendix 4-4 continued on following page]

Appendix 4-4 (continued).

Species	Site #1	#2	#3	#6	#7	#9	#10	#12
Centrarchidae								
green sunfish (*Lepomis cyanellus)* - T	-	1	-	-	-	1	4	-
orangespotted sunfish *(Lepomis humilis)* - IM	-	5	-	-	-	-	-	-
bluegill *(Lepomis macrochirus)* - IM	-	18	9	-	-	-	1	-
smallmouth bass *(Micropterus dolomieu)* - IT	-	36	26	-	-	-	1	-
largemouth bass *(Micropterus salmoides)* - IM	2	-	1	-	-	-	-	-
black crappie *(Pomoxis nigromaculatus)* - IM	-	1	-	-	-	-	-	-
Moronidae								
white bass (*Morone chrysops)* - IM	-	4	-	-	-	-	-	-
Percidae								
fantail darter *(Etheostoma flabellare)* - IM	-	-	-	24	56	-	1	>99
johnny darter (*Etheostoma nigrum)* - IM	-	2	8	73	40	-	18	55
banded darter *(Etheostoma zonale)* - IT	-	12	16	2	-	-	-	-
slenderhead darter *(Percina phoxocephala)* - IT	-	2	1	-	-	-	-	-
walleye *(Stizostedion vitreum)* - IM	-	-	2	-	-	-	-	-
Sciaenidae								
freshwater drum *(Aplodinotus grunniens)* - IM	-	44	-	-	-	-	-	-
Total species	6	27	27	13	15	4	17	12
Total number of individuals	34	>500	>400	250	317	145	157	>300
% intolerant species	0	15	19	23	13	25	12	8
% intermediate species	66	74	70	46	53	0	53	50
% tolerant species	33	11	11	31	34	75	35	42

[Appendix 4-4 continued on following page]

Appendix 4-4 (continued).

Species	Site #13	#14	#15	#16	#18	#20	#21	#22
Clupeidae								
gizzard shad (*Dorosoma cepedianum)* - IM	-	-	-	-	-	-	25	-
Cyprinidae								
central stoneroller *(Campostoma anomalum)* - IM	-	-	-	3	20	26	-	-
spotfin shiner (*Cyprinella spiloptera)* - IM	-	5	-	-	-	1	2	26
common shiner *(Luxilus cornutus)* - IM	-	1	-	-	14	1	-	-
hornyhead chub *(Nocomis biguttatus)* - IT	-	-	-	-	27	1	-	-
emerald shiner (*Notropis atherinoides*) – IT	-	-	-	-	-	6	>99	-
bigmouth shiner (*Notropis dorsalis*) – T	-	20	-	-	47	-	-	-
sand shiner *(Notropis ludibundus)* - IM	-	14	-	-	-	-	3	31
southern redbelly dace (*Phoxinus erythrogaster)* - IT	-	-	-	-	16	9	-	-
bluntnose minnow *(Pimephales notatus)* - T	4	9	-	-	24	-	-	-
fathead minnow (*Pimephales promelas)* - T	-	1	-	2	-	-	-	-
blacknose dace (*Rhinichthys atratulus)* - IM	-	4	-	5	>99	16	-	-
creek chub (*Semotilus atromaculatus)* - T	-	7	65	18	23	-	-	-
Catastomidae								
white sucker (*Catostomus commersoni)* - T	-	1	1	-	2	-	-	-
Ictaluridae								
stonecat *(Noturus flavus)* - IM	3	-	-	-	-	-	-	-
tadpole madtom (*Noturus gyrinus)* - IM	-	-	-	-	-	-	1	2
Fundulidae								
blackstripe topminnow (*Fundulus notatus)* - IM	1	-	-	-	-	-	5	1
Gasterosteidae								
brook stickleback *(Culaea inconstans)* - IM	-	1	13	89	-	-	-	-
Poeciliidae								
mosquitofish *(Gambusia affinis)* - IM	1	-	-	-	-	19	-	-
Centrarchidae								
green sunfish *(Lepomis cyanellus)* - T	-	-	-	9	-	24	30	2
bluegill *(Lepomis macrochirus)* - IM	1	1	-	-	-	-	-	-

[Appendix 4-4 concluded on following page]

Appendix 4-4 (concluded).

Species	Site #13	#14	#15	#16	#18	#20	#21	#22
Centrarchidae								
largemouth bass (*Micropterus salmoides)* - IM	-	-	-	-	-	-	5	1
Percidae								
fantail darter (*Etheostoma flabellare)* - IM	3	-	-	-	-	1	-	-
johnny darter (*Etheostoma nigrum)* - IM	10	46	55	33	-	24	-	16
banded darter (*Etheostoma zonale)* - IT	8	-	-	-	-	-	-	5
Total species	8	12	4	7	9	11	8	8
Total number of individuals	31	110	134	159	>273	128	>171	84
% intolerant species	13	0	0	0	22	27	13	13
% intermediate species	74	58	50	57	34	64	74	74
% tolerant species	13	42	50	43	44	9	13	13

Appendix 4-5

List of freshwater mussels (Family Unionidae) known to occur within or adjacent the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois

Appendix 4-5. List of freshwater mussels (Family Unionidae) known to occur within or adjacent the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, and those collected during our surveys of streams in the corridor during 2007. Specific locality information for the four sites (1, 2, 3, and 7) from which mussels were collected is presented in **Table 4-1**. Historical data (e.g., those species not found during this survey) were taken from the database of the Illinois Natural History Survey Mollusk Collection in Champaign. Data from this 2007 survey are presented as follows: L = number of individuals found alive, D = dead, and R = relict. Special status includes [ST] = state-threatened, [SE] = state-endangered, and [FE] = federally-endangered. No evidence of freshwater mussels was found at the other 12 sites. No historical data were available for the Cattail Creek basin.

Freshwater mussels	Union Drainage ditch @ US Rt 30	Rock River @ US Rt 30	ElkhornCreek @ US Rt 30	Deer Cr @ Blue Goose Road
Sites from which mussels were collected during 2007:	**US30-1**	**US30-2**	**US30-3**	**US30-7**
Subfamily Anodontinae				
Cylindrical papershell – *Anodontoides ferussacianus*				R
Elktoe - *Alasmidonta marginata*				
White heelsplitter - *Lasmigona complanata*		2L		
Flutedshell - *Lasmigona costata*				
Giant floater - *Pyganodon grandis*	R	R		
Creeper - *Strophitus undulatus*			3L	
Paper pondshell - *Utterbackia imbecillis*				
Subfamily Ambleminae				
Threeridge - *Amblema plicata*		5L		
Purple wartyback - *Cyclonaias tuberculata* [ST]		R		
Spike - *Elliptio dilatata* [ST]		R		
Wabash pigtoe - *Fusconaia flava*		R		
Sheepnose - *Plethobasus cyphyus* [SE]				
Round pigtoe - *Pleurobema sintoxia*				
Monkeyface - *Quadrula metanevra*				
Pimpleback - *Quadrula pustulosa*		2L		
Mapleleaf - *Quadrula quadrula*		13L		
Pistolgrip - *Tritogonia verrucosa*		R		
Subfamily Lampsilinae				
Mucket - *Actinonaias ligamentina*		R		
Butterfly - *Ellipsaria lineolata* [ST]				
Plain pocketbook - *Lampsilis cardium*		3L	27L	
Higgins eye - *Lampsilis higginsii* [SE FE]				
Fat mucket - *Lampsilis siliquoidea*				
Fragile papershell - *Leptodea fragilis*		17L		
Black sandshell - *Ligumia recta* [ST]		5L	3L	
Threehorn wartyback - *Obliquaria reflexa*		13L		
Pink heelsplitter - *Potamilus alatus*		24L		
Pink papershell - *Potamilus ohiensis*		D		
Lilliput - *Toxolasma parvus*				
Fawnsfoot - *Truncilla donaciformis*		R		
Deertoe - *Truncilla truncata*		8L		
Ellipse - *Venustaconcha ellipsiformis*				

Appendix 4-6

List of aquatic macroinvertebrate taxa (exclusive of unionid mollusks) collected in 2007 by INHS personnel from each site in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois

Appendix 4-6. List of aquatic macroinvertebrate taxa (exclusive of unionid mollusks) collected in 2007 by INHS personnel from each site in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, with numbers of specimens identified. Complete site names and descriptions are presented in **Table 4.1.**

PHYLUM / **CLASS** / **Order** / **Family** / **Taxon**	**Collection Sites, Listed by Identification Number**																
	1	**2**	**3**	**6**	**7**	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**18**	**20**	**21**	**22**	**TOTAL**
PORIFERA	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	**1**
PLATYHELMINTHES																	
TURBELLARIA																	
Tricladida	1	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	**2**
NEMATODA	19	14	.	7	10	2	7	1	6	1	4	10	3	143	.	.	**227**
ACANTHOCEPHALA	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	**1**
MOLLUSCA																	
BIVALVIA																	
Veneroida																	
Sphaeriidae	18	14	5	20	16	28	38	12	2	7	81	17	14	19	10	.	**301**
GASTROPODA																	
Basommatophora																	
Ancylidae	.	.	2	4	.	.	.	.	.	.	.	.	.	.	.	4	**10**
Limnaeidae	.	.	2	.	.	6	.	.	1	.	.	.	.	.	1	1	**11**
Physidae	16	3	41	270	2	136	26	4	12	104	10	206	118	95	75	79	**1197**
Planorbidae	9	6	.	.	.	.	.	.	.	.	.	.	.	.	5	.	**20**
Stylommatophora (slug)	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	**1**
Undetermined	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	**4**
ANNELIDA																	
CLITELLATA																	
Branchiobdellida																	
Cambarincolidae	.	.	.	.	1	1	.	.	.	.	.	.	.	.	.	1	**3**

[**Appendix 4-6** continued on following page]

Appendix 4-6 (continued).

PHYLUM / CLASS / Order / Family / Taxon	Collection Sites, Listed by Identification Number																
	1	**2**	**3**	**6**	**7**	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**18**	**20**	**21**	**22**	**TOTAL**
Hirudinida																	
Erpobdellidae																	
Erpobdella punctata	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**4**
Undetermined	7	1	.	.	.	.	.	2	.	.	.	.	.	.	2	.	**12**
Glossiphoniidae																	
Helobdella stagnalis	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	**1**
Undetermined	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	**1**
Uundetermined	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	**1**
Oligochaeta																	
Enchytraeidae	16	48	1	6	6	5	18	8	13	17	4	1	9	28	3	26	**209**
Lumbricidae	.	.	.	.	.	.	.	1	.	.	.	.	.	.	.	.	**1**
Lumbriculidae	.	.	.	1	.	.	.	.	.	1	.	.	.	1	.	.	**3**
Naididae																	
Aulodrilus pigueti	.	2	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**2**
Branchiura sowerbyi	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**1**
Ilyodrilus templetoni	.	1	.	.	.	3	.	.	.	.	.	.	.	.	.	.	**4**
Limnodrilus cervix	.	4	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**4**
Limnodrilus hoffmeisteri	36	3	.	1	.	4	2	.	.	.	.	.	.	.	.	.	**46**
Limnodrilus sp.	.	.	.	.	.	.	.	.	.	3	.	.	.	.	.	.	**3**
Nais communis	.	.	.	1	.	.	.	.	.	.	.	.	.	1	.	.	**2**
Nais pardalis	.	.	.	1	.	.	1	.	.	.	.	.	.	.	.	.	**2**
Pristina sp.	.	.	.	.	.	3	1	.	.	.	.	.	.	.	.	.	**4**
Tubifex tubifex	.	.	.	.	.	.	.	.	.	.	2	.	.	.	.	.	**2**
UIW_OCC	40	141	7	28	12	27	90	11	33	77	39	7	15	12	35	76	**650**
UW_CC	4	2	.	1	.	58	1	.	.	3	1	.	.	.	.	.	**70**
Undetermined	.	1	.	1	.	.	5	.	1	.	.	.	.	1	6	.	**15**
Undetermined	1	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	**2**

[**Appendix 4-6** continued on following page]

Appendix 4-6 (continued).

PHYLUM / CLASS / Order / Family / Taxon	Collection Sites, Listed by Identification Number																
	1	**2**	**3**	**6**	**7**	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**18**	**20**	**21**	**22**	**TOTAL**
ARTHROPODA																	
CRUSTACEA																	
Isopoda																	
Asellidae	128	1	.	3	.	55	.	.	.	8	3	1	39	3	13	.	**254**
Decapoda																	
Cambaridae	2	.	1	.	.	.	.	.	6	2	.	.	23	.	.	3	**37**
Copepoda																	
Cyclopidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	**1**
Amphipoda																	
Gammaridae	28	11	.	23	3	423	134	3	14	220	467	238	216	2	447	16	**2,245**
Undetermined	.	1	.	.	.	.	1	.	.	.	.	.	1	.	.	.	**3**
ARACHNIDA																	
Acari	3	1	2	7	5	1	5	10	2	3	3	3	20	2	10	.	**77**
CHILOPODA	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	.	**1**
DIPLOPODA	.	4	.	2	.	.	.	.	.	2	1	1	.	.	.	.	**10**
HEXAPODA																	
Collembola																	
Entomobryidae	.	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	**1**
Odonata																	
Aeshnidae	.	.	.	.	.	.	.	1	.	1	.	.	.	.	.	.	**2**
Calopterygidae	.	.	15	3	1	1	5	.	2	24	1	3	19	1	.	2	**77**
Coenagrionidae	7	.	8	.	1	3	.	.	2	.	.	.	.	1	42	7	**71**
Corduliidae	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	**1**
Gomphidae	.	1	2	.	.	1	.	.	2	.	.	.	.	.	.	.	**6**
Libellulidae	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	**2**

[**Appendix 4-6** continued on following page]

Appendix 4-6 (continued).

PHYLUM / CLASS / Order / Family / Taxon	Collection Sites, Listed by Identification Number																
	1	**2**	**3**	**6**	**7**	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**18**	**20**	**21**	**22**	**TOTAL**
Ephemeroptera																	
Baetidae	15	.	12	14	39	12	68	32	15	22	29	45	194	.	6	33	**536**
Baetiscidae	.	.	1	.	.	.	.	.	.	.	.	.	.	.	.	.	**1**
Caenidae	24	29	11	.	1	1	.	.	1	.	.	.	.	.	18	.	**85**
Ephemeridae	.	10	29	.	.	.	.	.	.	.	.	.	1	13	.	.	**53**
Heptageniidae	.	.	3	1	1	.	.	.	1	2	.	1	16	1	.	10	**36**
Tricorythidae	.	.	6	.	.	.	.	.	.	.	.	.	.	.	1	.	**7**
Thysanoptera	.	.	.	.	.	.	.	.	.	.	.	.	.	.	2	.	**2**
Homoptera																	
Aphididae	.	.	2	4	.	2	.	.	.	.	.	.	4	.	.	1	**13**
Cicadellidae	.	.	.	1	.	.	.	.	1	.	.	.	1	.	1	2	**6**
Delphacidae	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	**2**
Undetermined	.	.	.	.	.	.	2	.	.	.	.	.	.	.	.	.	**2**
Hemiptera																	
Belostomatidae	.	.	.	.	.	.	3	.	.	.	.	.	6	.	1	2	**12**
Corixidae	.	205	146	22	.	44	.	.	93	.	1	2	95	3	5	7	**623**
Gerridae	.	.	1	.	.	.	.	.	.	.	2	1	2	.	.	3	**9**
Pleidae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	4	.	**4**
Veliidae	1	.	1	21	.	2	2	.	1	4	10	12	14	2	.	.	**70**
Coleoptera																	
Chrysomelidae	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	1	**2**
Curculionidae	.	.	1	.	.	.	.	.	.	.	.	.	.	.	1	.	**2**
Dytiscidae	.	.	1	1	.	.	.	.	1	.	1	.	.	.	5	.	**9**
Elmidae																	
Taxon1	39	.	.	10	46	.	61	110	12	10	.	.	25	53	.	7	**373**
Taxon2	8	.	.	2	43	.	14	16	2	21	.	.	7	8	.	5	**126**
Taxon3	.	.	.	.	.	.	1	1	.	2	.	.	.	.	.	.	**4**
Undetermined	.	.	33	60	159	5	53	37	14	33	15	4	100	6	13	7	**539**

[**Appendix 4-6** continued on following page]

Appendix 4-6 (continued).

PHYLUM / CLASS / Order / Family / Taxon	1	2	3	6	7	9	10	12	13	14	15	16	18	20	21	22	TOTAL
	Collection Sites, Listed by Identification Number																
Gyrinidae	.	.	1	1	.	.	.	.	.	.	.	.	.	.	1	.	**3**
Haliplidae	1	.	1	3	.	1	1	.	1	1	.	.	4	1	17	.	**31**
Hydrophilidae	.	.	1	.	.	.	.	.	.	.	.	1	2	.	2	1	**7**
Mordellidae	.	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	**1**
Noteridae	.	.	.	1	.	.	.	.	.	.	.	.	.	.	1	.	**2**
Phalacridae	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	.	**1**
Sciaridae	.	1	3	3	.	.	.	.	.	.	.	.	4	.	4	8	**23**
Staphylinidae	.	.	.	.	.	.	.	.	.	.	.	.	2	.	.	.	**2**
Undetermined	1	.	.	9	.	.	.	.	.	1	.	.	1	.	.	2	**14**
Diptera																	
Bibionidae	.	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	**1**
Ceratopogonidae	1	24	41	94	6	7	8	2	76	68	36	8	8	167	5	10	**561**
Chironomidae	332	80	447	223	227	62	254	192	298	190	159	179	633	288	144	264	**3,972**
Culicidae	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	**1**
Dixidae	.	.	.	5	.	.	.	.	.	.	.	.	1	.	3	.	**9**
Empididae	15	.	5	2	6	2	3	9	.	3	1	4	9	5	2	3	**69**
Muscidae	.	1	3	.	.	6	2	.	3	2	.	.	3	1	3	4	**28**
Psychodidae	.	.	.	.	.	1	.	.	.	2	.	2	1	13	.	.	**19**
Simuliidae	120	2	8	7	7	1	3	61	117	32	14	39	95	.	.	1	**507**
Tabanidae	.	.	1	1	.	.	.	.	9	.	1	3	.	1	.	2	**18**
Tipulidae	.	.	.	.	1	.	2	10	.	1	1	.	2	2	.	.	**19**
Undetermined	.	.	2	.	.	2	.	1	.	3	.	.	.	1	.	2	**11**
Lepidoptera																	
Geometridae	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	1	**1**
Noctuidae	.	.	.	1	.	.	.	.	.	.	.	.	1	.	.	.	**2**
Pieridae	.	.	.	.	.	1	.	.	.	.	.	.	.	.	.	.	**1**
Pyralidae	.	1	.	1	.	.	.	.	.	.	.	.	.	.	.	.	**2**

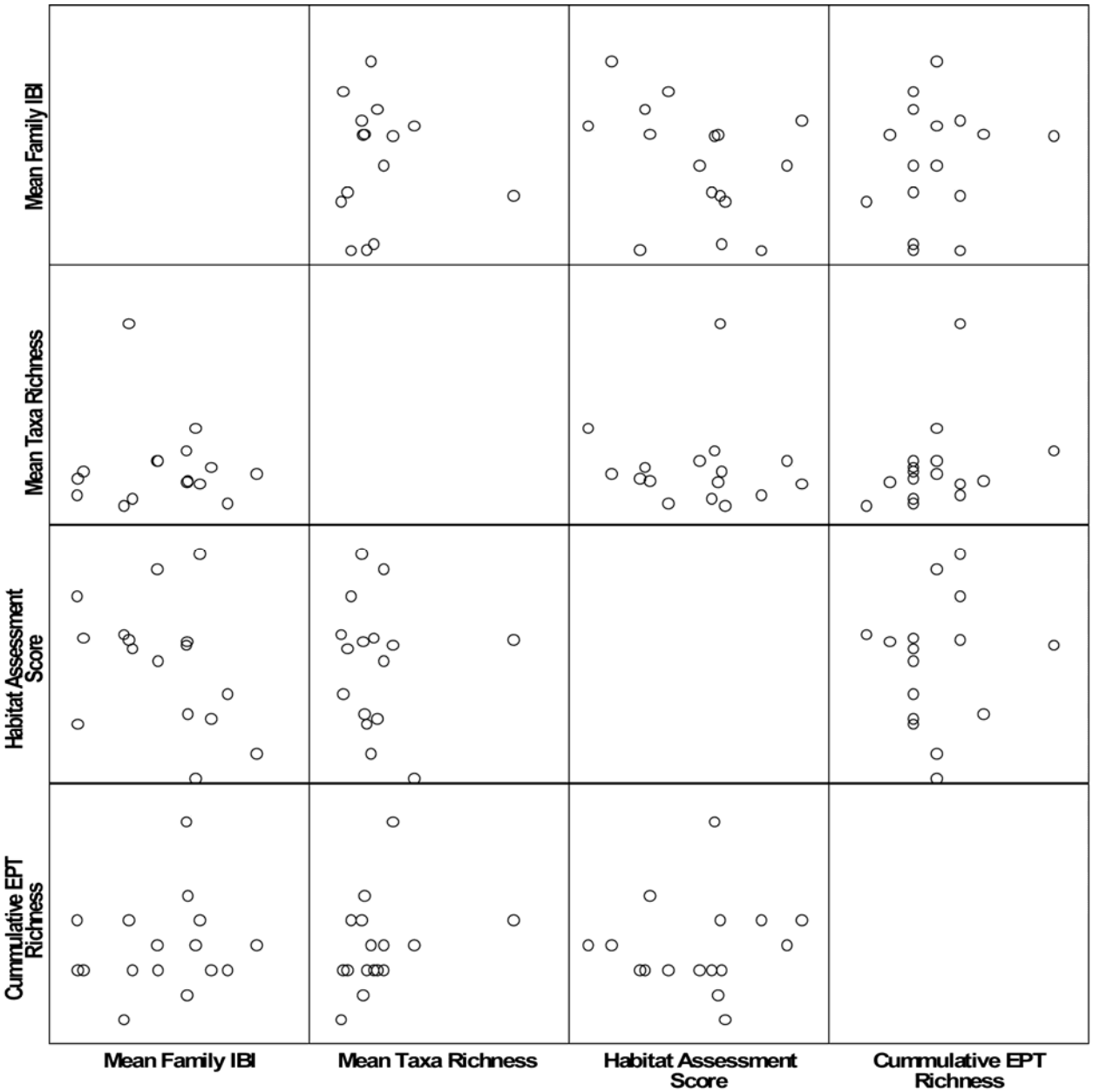
[**Appendix 4-6** concluded on following page]

Appendix 4-6 (concluded).

PHYLUM / CLASS / Order / Family / Taxon	Collection Sites, Listed by Identification Number																TOTAL
	1	**2**	**3**	**6**	**7**	**9**	**10**	**12**	**13**	**14**	**15**	**16**	**18**	**20**	**21**	**22**	
Trichoptera																	
Hydropsychidae	47	.	5	3	194	.	21	324	2	13	.	.	152	.	1	.	**762**
Hydroptilidae	3	.	6	1	20	.	4	4	1	.	.	.	31	2	.	1	**73**
Leptoceridae	2	1	6	.	.	.	.	.	1	.	.	.	.	.	.	1	**11**
Phryganeidae	.	.	.	.	.	.	.	.	.	.	.	1	.	.	.	.	**1**
TOTAL specimens	**948**	**615**	**864**	**871**	**807**	**908**	**836**	**854**	**745**	**883**	**887**	**789**	**1897**	**881**	**894**	**594**	**14,273**
Cumulative EPT Richness	**5**	**3**	**9**	**4**	**5**	**2**	**3**	**3**	**6**	**3**	**1**	**3**	**5**	**3**	**4**	**4**	
Mean Taxa Richness	**8.33**	**6.75**	**11.00**	**10.22**	**7.44**	**8.44**	**8.77**	**9.33**	**8.56**	**10.22**	**6.56**	**7.11**	**21.33**	**9.67**	**9.10**	**12.83**	

Appendix 4-7

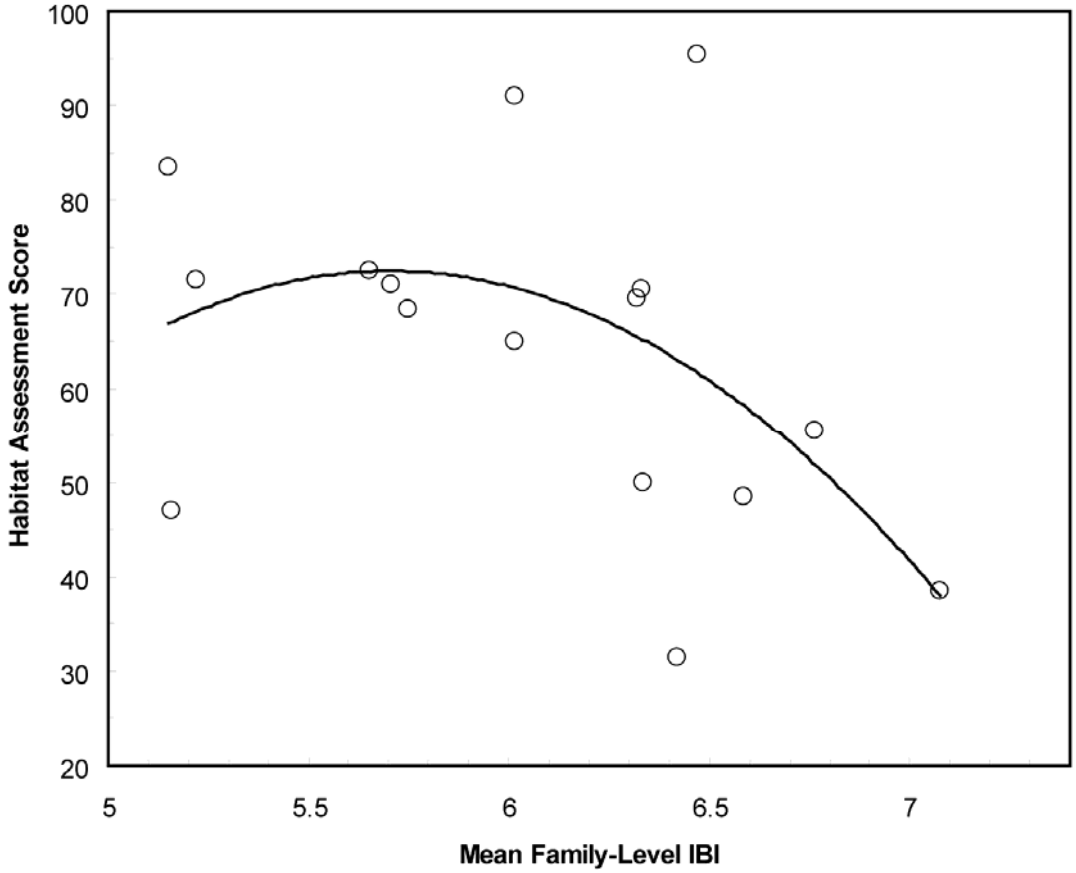
Relationships among Mean Family IBI, Mean Taxa Richness, Mean Habitat Assessment Scores, and Cumulative EPT Richness for sixteen sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois



Appendix 4-7. Relationships among Mean Family IBI, Mean Taxa Richness, Mean Habitat Assessment Scores, and Cumulative EPT Richness for sixteen sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, based on analyses of aquatic macroinvertebrate collections by INHS personnel during 2007. Each point represents pooled replicates and sampling seasons at a single site.

Appendix 4-8

Relationship between Mean Habitat Assessment Scores and Mean Family-Level IBI based on analysis of aquatic macroinvertebrate material from sixteen sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois



Appendix 4-8. Relationship between Mean Habitat Assessment Scores and Mean Family-Level IBI based on analysis of aquatic macroinvertebrate material from sixteen sites in the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, collected and identified by INHS personnel during 2007. Line is best fit polynomial regression (see text).

Appendix 4-9

Summary of ANOVA tests examining differences between sites and differences between sample dates for taxa richness and the family-level biotic index

Appendix 4-9. Summary of ANOVA tests examining differences between sites and differences between sample dates for taxa richness and the family-level biotic index. This summary is based on all aquatic macroinvertebrate composite samples identified by INHS personnel from the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, in 2007. Collection sites listed by identification number - complete site names and descriptions are presented in **Table 4-1**. A general linear models procedure was used to conduct two-way ANOVAs with an unbalanced design.

Metric	Variable [1]	df	F	P>F	Significance [2]
Taxa					
Richness		46,94	6.50	<0.0001	**
	Date	2	12.70	<0.0001	**
	Site	15	14.12	<0.0001	**
	Date x Site	29	2.02	0.0061	**
Family-Level					
Biotic Index		46,91	5.71	<0.0001	**
	Date	2	27.68	<0.0001	**
	Site	15	10.00	<0.0001	**
	Date x Site	29	2.06	0.0051	**

[1] df, F-value and P>F based on Type III sum of squares
[2] ns=not significant, *=significant at p=0.05, **=significant at p=0.01

Appendix 4-10

Summary of *post hoc* Duncan's multiple comparisons for ANOVA tests given in Appendix 4-9

Appendix 4-10. Summary of *post hoc* Duncan's multiple comparisons for ANOVA tests given in **Appendix 4-9,** based on all collections of macroinvertebrate taxa identified by INHS personnel from the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, in 2007. Collection sites are listed by identification number; complete site names and descriptions are presented in **Table 4-1**. Values are Mean scores for the family-level biotic index and species richness. Means with the same letter beneath are not significantly different (p=0.05 in the *post hoc* multiple comparisons).

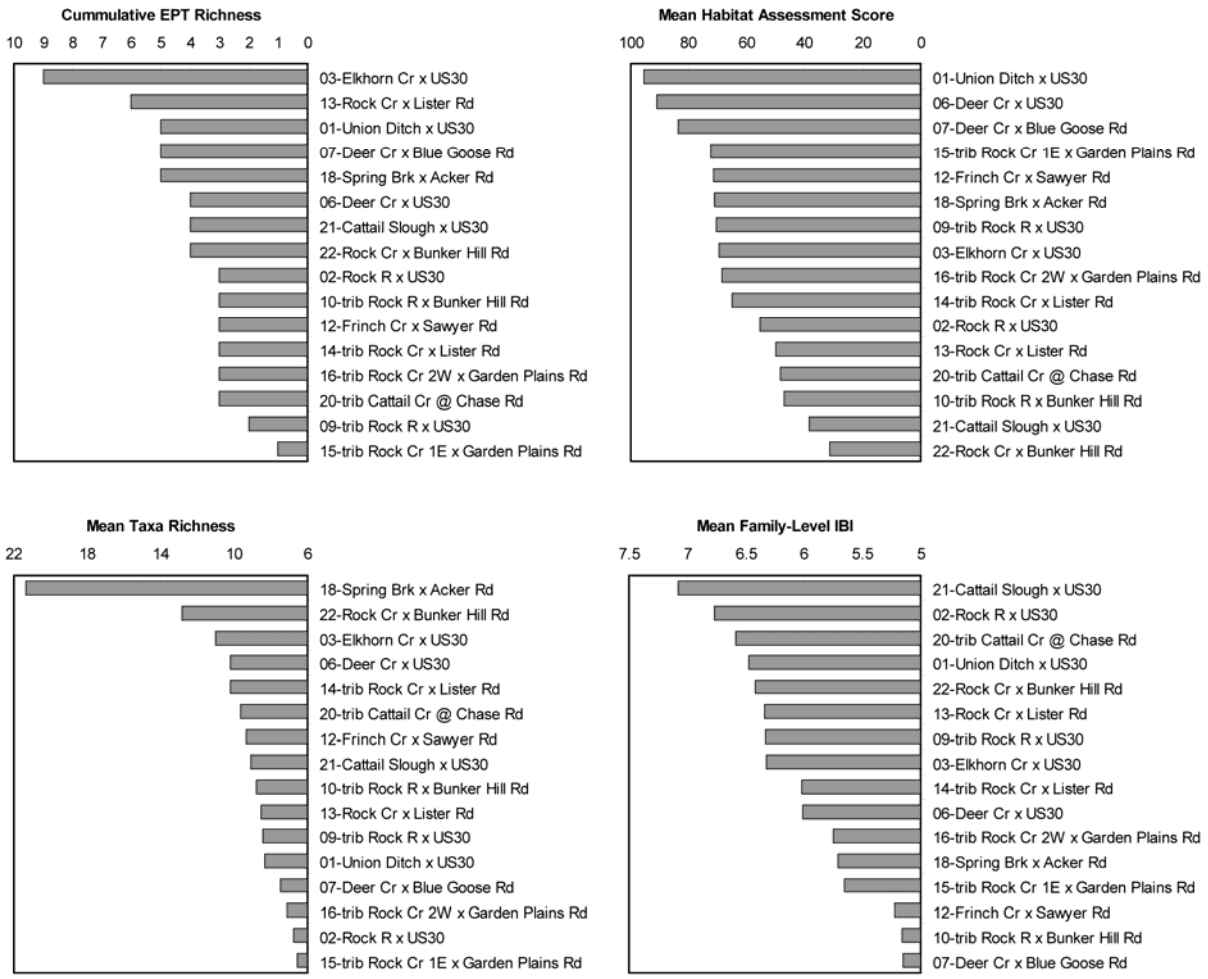
Variable Metric	Mean Value N		
Date	April	July	September
Taxa Richness	7.86 44 A	10.69 49 B	10.31 48 B
Family-Level Biotic Index	6.53 44 A	5.87 47 B	5.79 47 B

==========

Variable Metric	Mean Value N															
Site	1	2	3	6	7	9	10	12	13	14	15	16	18	20	21	22
Taxa Richness																
	8.39 E C D F	6.88 E F	11.09 B C 	10.29 B C D 	7.49 E D F	8.49 E C D F	8.89 E C D F	9.39 E C D F	8.69 E C D F	10.29 B C D 	6.69 F	7.19 E F	21.39 A 	9.79 E C 	9.1 10 E C D F	12.86 B
Family-Level Biotic Index																
	6.479 C B	6.779 A B	6.329 C D B	6.019 C D E	5.158 G 	6.339 C D B	5.169 G 	5.229 F G 	6.348 C D B	6.029 C D E	5.659 F G E	5.759 F D E	5.719 F G E	6.599 C A B	7.089 A 	6.426 C B

Appendix 4-11

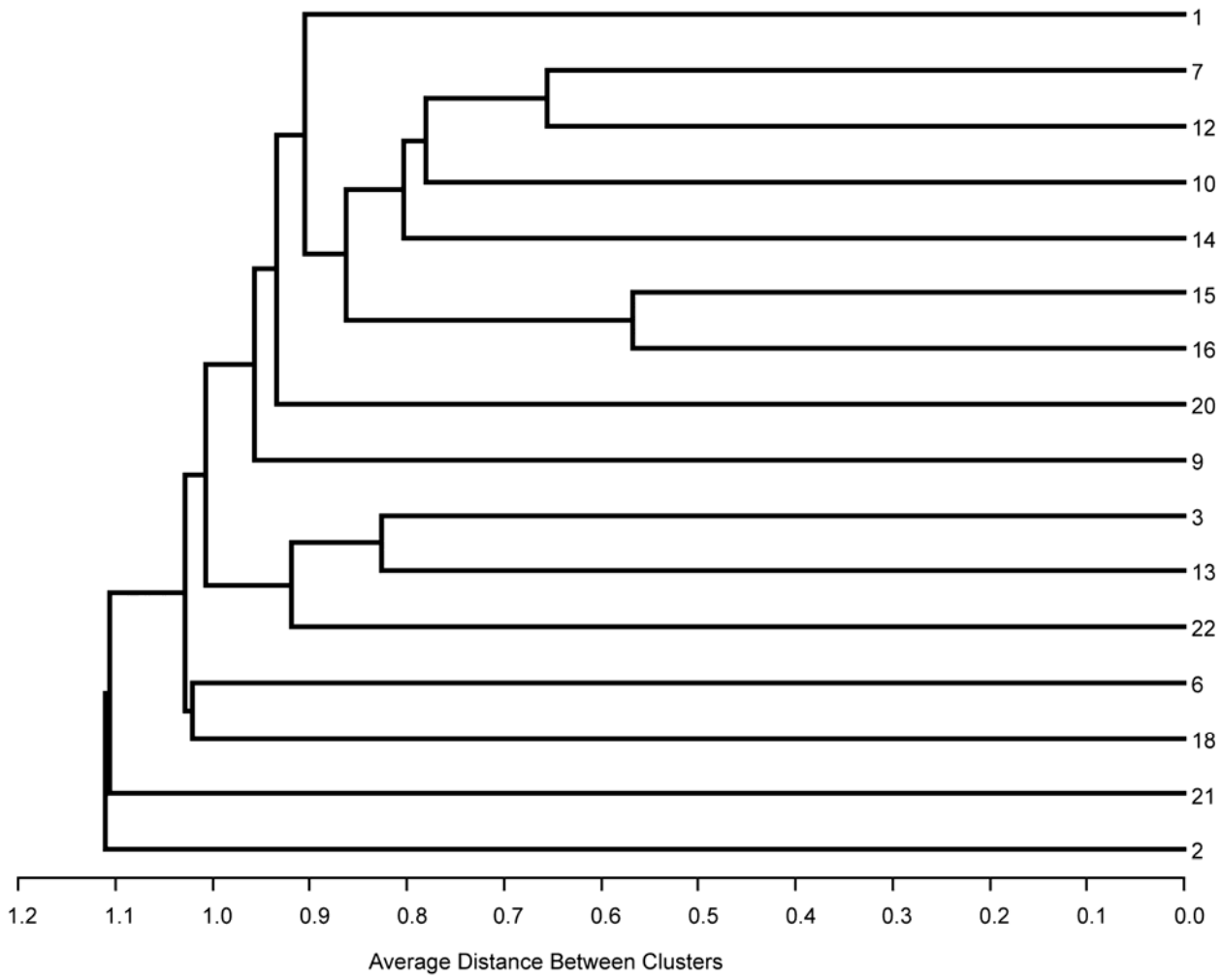
Rank order of Cumulative EPT Richness, Mean Habitat Assessment Score,Mean Taxa Richness, and Mean Family-Level IBI based on analysis of aquatic macroinvertebrate material from sixteen sites in the U.S. Route 30 project corridor, in Whiteside County, Illinois



Appendix 4-11. Rank order of Cumulative EPT Richness, Mean Habitat Assessment Score, Mean Taxa Richness, and Mean Family-Level IBI based on analysis of aquatic macroinvertebrate material from sixteen sites in the U.S. Route 30 project corridor, in Whiteside County, Illinois, collected and identified by INHS personnel during 2007.

Appendix 4-12

Cluster analysis (UPGMA average linkage analysis, RMS distance) of sixteen stream sites based on presence/absence of macroinvertebrate taxa from all collections identified by INHS personnel and collected from the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois



Appendix 4-12. Cluster analysis (UPGMA average linkage analysis, RMS distance) of sixteen stream sites based on presence/absence of macroinvertebrate taxa from all collections identified by INHS personnel and collected from the IDOT U.S. Route 30 project corridor in Whiteside County, Illinois, in 2007. Collection sites are listed by identification number; complete site names and descriptions are presented in **Table 4-1**.

Appendix 4-13

Water Quality Data

Values for field water quality parameters measured on
3-4 April 2007 by INHS personnel at IDOT U.S. Route 30 stream
sites in Whiteside County, Illinois

Appendix 4-13 Water Quality											
Station	HABITAT	Collection	Air	Water	Dissolvd	Dissolvd	pH	Specific	Salinity	TDS	Turbidity
#	(stream name) *	Date	Temp	Temp	Oxygen	Oxygen		Cndctvty			
			° C	° C	(mg/L)	% sat.	(in S.U.)	@25°C	(ppt)	(mg/L)	(FTU)
	Notes:		***1***	***2***	***2***	***2***	***2, 3***	***2***	***2***	***4***	***5***
US30-1	Union Drainage ditch	3-Apr-07	15	12.81	17.5	165.8	7.2	0.722	0.35	440	5.14
US30-2	Rock River	3-Apr-07	15	11.49	13.7	126	7.03	0.630	0.31	404	13.66
US30-3	Elkhorn Creek	3-Apr-07	14.5	11.07	13.7	124.7	6.52	0.725	0.36	448	9.82
US30-6	Deer Creek	3-Apr-07	15	10.46	13.65	122.5	5.76	0.683	0.34	448	8.59
US30-7	Deer Creek	3-Apr-07	13.5	10.29	15.21	135.9	6.23	0.693	0.34	428	6.25
US30-9	u.t. Rock River	3-Apr-07	11.5	9.9	13.48	119.4	5.87	0.569	0.28	368	17.6
US30-10	u.t. Rock River	3-Apr-07	11.7	10.23	13.76	122.8	5.61	0.655	0.32	400	11.27
US30-12	French Creek	3-Apr-07	11.5	10.62	14.1	127	5.84	0.696	0.34	420	5.54
US30-13	Rock Creek	3-Apr-07	8.5	10.7	13.45	121.4	6.33	0.698	0.34	416	7.31
US30-14	u.t. Rock Creek	3-Apr-07	8	10.72	14.1	127.3	6.01	0.640	0.31	396	5.47
US30-15	u.t. Rock Cr (e)	4-Apr-07	-2	4.98	17.97	141	5.15	0.764	0.37	452	3.74
US30-16	u.t. Rock Cr (w)	4-Apr-07	-2	6.15	17.52	141.6	4.8	0.688	0.34	424	4.75
US30-18	spring brook creek	4-Apr-07	-2	4.56	18.2	141.2	5.24	0.690	0.34	416	5.98
US30-20	u.t. Cattail Creek	4-Apr-07	-2	3.27	19.65	147.4	5.35	0.790	0.38	520	6.16
US30-21	Cattail Slough drainage	4-Apr-07	-1	7.27	13.1	108.8	4.9	0.460	0.22	284	19.63
US30-22	Rock Creek	This site (associated with the addendum alignment) was first surveyed in July 2007.									
*	u.t. = unnamed tributary										
Notes:											
1	Air temp obtained with red liquid hand thermometer. Negative values *are accurate* ; weather deteriorated on 4 Apr.										
2	All other values for measured field parameters (except turbidity) obtained with YSI model 556 multimeter.										
3	For pH values: S.U. = standard unit.										
4	Due to a software update, the field meter was set (by default) to an incorrect value [kg/L, rather than mg/L]										
	during our field water quality monitoring on 3 and 4 April 2007. Because of this, the TDS values measurements										
	previously reported to IDOT were incorrect. The TDS values presented here are those resulting from laboratory										
	analyses of water samples.										
5	Turbidity values (recorded in FTUs) obtained using Hanna model HI 93703 hand turbidity meter;										
	[1 Formazine Turbidity Unit (FTU) = 1 Nephelometric Turbidity Unit (NTU)]										

Appendix 4-14

Water Quality Data

Values for field water quality parameters measured on
19-20 June 2007 by INHS personnel at IDOT U.S. Route 30 stream
sites in Whiteside County, Illinois

Appendix 4-14 Water Quality Data											
Station	HABITAT	Collection	Air	Water	Dissolvd	Dissolvd	pH	Specific	Salinity	TDS	Turbidity
#	(stream name) *	Date	Temp	Temp	Oxygen	Oxygen		Cndctvty			
			° C	° C	(mg/L)	% sat.	(in S.U.)	@25°C	(ppt)	(mg/L)	(FTU)
	Notes:		***1***	***2***	***2***	***2***	***2, 3***	***2***	***2***	***4***	***5***
US30-1	Union Drainage ditch	20-Jun-07	20.3	20.43	3.56	39.5	7.28	0.724	0.35	471	1.01
US30-2	Rock River	20-Jun-07	22.8	25.33	10.53	128.5	8.31	0.639	0.31	415	18.03
US30-3	Elkhorn Creek	20-Jun-07	23	21.96	7.86	80	7.91	0.695	0.34	452	9.38
US30-6	Deer Creek	20-Jun-07	24.5	16.7	9.83	101.3	7.54	0.728	0.36	473	4.81
US30-7	Deer Creek	20-Jun-07	25	19.03	8.61	93	7.99	0.735	0.36	478	8.09
US30-9	u.t. Rock River	20-Jun-07	29.5	20.28	8.33	92.2	7.39	0.531	0.26	345	22.06
US30-10	u.t. Rock River	20-Jun-07	26.5	20.36	9.87	109.6	7.46	0.711	0.35	462	6.38
US30-12	French Creek	19-Jun-07	26	22.46	8.33	96.2	7.73	0.739	0.36	480	5.83
US30-13	Rock Creek	19-Jun-07	24	22.55	7.35	85.2	7.34	0.676	0.33	439	7.56
US30-14	u.t. Rock Creek	19-Jun-07	24	21.99	7.31	83.7	7.34	0.687	0.33	446	7.32
US30-15	u.t. Rock Cr (e)	19-Jun-07	24.5	19.23	7.54	81.8	7.06	0.741	0.36	482	3.82
US30-16	u.t. Rock Cr (w)	19-Jun-07	26	21.34	10.53	119.5	7.44	0.681	0.33	443	3.65
US30-18	spring brook creek	19-Jun-07	26	22.08	9.12	104.7	7.51	0.685	0.33	496	4.19
US30-20	u.t. Cattail Creek	19-Jun-07	25	22.27	7.81	90.1	7.95	0.781	0.38	508	2.5
US30-21	Cattail Slough drainage	19-Jun-07	27	23.57	8.58	102	7.16	0.651	0.32	423	5.84
US30-22	Rock Creek	This site (associated with the addendum alignment) was first surveyed in July 2007.									
*	u.t. = unnamed tributary										
Notes:											
1	Air temp obtained with red liquid hand thermometer.										
2	All other values for measured field parameters (except turbidity) obtained with YSI model 556 multimeter.										
3	For pH values: S.U. = standard unit.										
4	TDS values obtained from YSI model 556 meter; TDS values resulting from laboratory analyses are										
	presented on a separate table included with this report.										
5	Turbidity values (recorded in FTUs) obtained using Hanna model HI 93703 hand turbidity meter;										
	[1 Formazine Turbidity Unit (FTU) = 1 Nephelometric Turbidity Unit (NTU)]										

Appendix 4-15

Water Quality Data

Values for field water quality parameters measured on
1-2 October 2007 by INHS personnel at IDOT U.S. Route 30 stream
sites in Whiteside County, Illinois

Appendix 4-15 Water Quality Data

Station #	HABITAT (stream name)	Collection Date	Air Temp ° C	Water Temp ° C	Dissolvd Oxygen (mg/L)	Dissolvd Oxygen % sat.	pH (in S.U.)	Specific Cndctvty @25°C	Salinity (ppt)	TDS (mg/L)	Turbidity (FTU)
	Notes:		***1***	***2***	***2***	***2***	***2,3***	***2***	***2***	***4***	***5***
US30-22	Rock Creek	5-Jul-07	31.0	22.64	8.49	98.5	6.98	0.675	0.33	0.44	14.43
US30-1	Union Drainage ditch	2-Oct-07	16.0	17.43	3.21	33.5	7.55	0.659	0.32	0.429	0.47
US30-2	Rock River	2-Oct-07	16.0	18.69	5.47	58.7	8.51	0.699	0.34	0.454	3.12
US30-3	Elkhorn Creek	2-Oct-07	18.0	17.29	5.99	62.4	8.12	0.726	0.36	0.472	1.09
US30-6	Deer Creek	1-Oct-07	23.5	18.00	6.07	64.2	7.91	0.741	0.36	0.481	6.69
US30-7	Deer Creek	2-Oct-07	18.5	16.93	5.70	59.0	7.97	0.748	0.37	0.486	0.66
US30-9	u.t. Rock River	1-Oct-07	25.0	17.77	4.54	47.8	7.89	0.688	0.34	0.447	10.30
US30-10	u.t. Rock River	1-Oct-07	25.0	17.68	6.20	65.2	7.80	0.710	0.35	0.462	11.13
US30-12	French Creek	1-Oct-07	24.0	18.95	7.39	79.8	7.93	0.743	0.36	0.483	4.86
US30-13	Rock Creek	1-Oct-07	26.0	17.70	6.31	66.2	8.16	0.730	0.36	0.474	4.48
US30-14	u.t. Rock Creek	1-Oct-07	23.5	17.96	7.42	78.4	8.23	0.691	0.34	0.449	2.63
US30-15	u.t. Rock Cr (e)	1-Oct-07	24.0	15.79	6.62	66.9	7.89	0.652	0.32	0.423	1.39
US30-16	u.t. Rock Cr (w)	1-Oct-07	23.0	15.93	6.08	61.8	7.51	0.719	0.35	0.467	5.48
US30-18	spring brook creek	1-Oct-07	23.0	16.87	7.66	79.2	8.14	0.681	0.33	0.443	3.40
US30-20	u.t. Cattail Creek	1-Oct-07	21.0	17.84	7.17	75.7	8.25	0.764	0.38	0.497	2.73
US30-21	Cattail Slough drainage	1-Oct-07	22.0	18.25	4.14	44.0	7.48	0.396	0.19	0.258	6.84
US30-22	Rock Creek	1-Oct-07	26.0	18.35	6.43	68.6	8.18	0.726	0.36	0.472	5.01

Notes:

1 Air temp obtained with red liquid hand thermometer.

2 All other field parameters (except turbidity - see #5, below) measured with a calibrated YSI model 556 multimeter.

3 For pH values: S.U. = standard unit.

4 TDS values obtained from YSI model 556 meter; TDS values resulting from laboratory analyses of water samples are included on a separate excel sheet for the July (site US30-22 only) and October 2007 samping periods.

5 Field turbidity values (recorded in FTUs) obtained using Hanna model HI 93703 hand turbidity meter; [1 Formazine Turbidity Unit (FTU) = 1 Nephelometric Turbidity Unit (NTU)]

Appendix 4-16

Water Quality Data

Values resulting from analyses of physical-chemical properties of, and for nutrients and other consitutents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-16 Water Quality Data

ILLINOIS NATURAL HISTORY SURVEY
WATER QUALITY REPORT

Requested by: M.J. Wetzel — Project: IDOT U.S. Route 30

Collection Date: 4/3/2007 — Analyses completed on: 20 June 3007

# of samples: 15 — Analyzed by: J. Sandberger

	Station		Smpl Id	IDC *	TDC *	DOC *	SO4 *	NH3-N *	NO2-N *	NO3-N *	Tot.P *	Hard *
19	US30-1	4/3/2007	13556	44.5	48.3	3.8	46.1	0.04	<DL	2.59	<DL	302
20	US30-2		13557	43.8	49.0	5.2	37.8	<DL	<DL	4.45	0.01	291
21	US30-3		13558	48.9	52.4	3.5	35.8	<DL	<DL	12.2	0.03	359
22	US30-6		13559	49.6	53.4	3.8	28.7	0.05	<DL	11.5	0.04	339
23	US30-7		13560	49.0	52.5	3.5	29.7	<DL	<DL	11.3	0.01	356
24	US30-9		13561	40.5	44.4	3.8	46.7	<DL	<DL	6.72	0.01	285
25	US30-10		13562	38.8	42.4	3.6	36.2	0.01	<DL	13.6	0.03	308
26	US30-12		13563	48.3	52.2	3.9	32.8	<DL	<DL	15.0	0.03	342
27	US30-13		13564	40.3	44.0	3.7	38.0	0.10	0.76	11.8	0.04	300
28	US30-14		13565	46.4	49.4	3.0	30.0	<DL	<DL	12.5	0.02	359
29	US30-15		13566	40.0	43.2	3.2	30.7	<DL	<DL	11.9	<DL	318
30	US30-16		13567	48.1	51.7	3.6	32.8	0.04	<DL	16.6	0.02	352
31	US30-18		13568	48.1	51.7	3.6	38.1	<DL	<DL	10.2	0.02	352
32	US30-20		13569	41.0	44.5	3.5	50.7	0.03	<DL	23.9	0.05	385
33	US30-21		13570	33.3	38.6	5.3	33.0	0.03	0.11	2.04	0.05	231
	* mg/L (ppm)				DL<0.1	DL<0.1		DL<0.01		DL<0.01		
	** micro g/L (ppb)					DL<0.1	DL<0.01		DL<0.01		DL<0.01	

	Station		Smpl Id	Cl *	TDS *	Tot. Alk. *	Hg **
19	US30-1	4/3/2007	13556	76.3	440	228	<DL
20	US30-2		13557	50.9	404	208	0.09
21	US30-3		13558	48.4	448	235	0.09
22	US30-6		13559	35.9	448	239	0.06
23	US30-7		13560	33.0	428	258	0.11
24	US30-9		13561	25.7	368	202	<DL
25	US30-10		13562	47.1	400	201	0.16
26	US30-12		13563	46.5	420	230	0.12
27	US30-13		13564	37.4	416	238	0.08
28	US30-14		13565	44.8	396	204	0.17
29	US30-15		13566	68.8	452	241	0.16
30	US30-16		13567	52.3	424	259	<DL
31	US30-18		13568	32.9	416	203	0.18
32	US30-20		13569	47.4	520	214	0.10
33	US30-21		13570	24.0	284	177	0.09
					DL<4		DL=.05
				DL<0.1		DL<1 ppb	

Appendix 4-17

Water Quality Data

Values resulting from analyses of physical-chemical properties of, and for nutrients and other consitutents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-17 Water Quality Data

ILLINOIS NATURAL HISTORY SURVEY
WATER QUALITY REPORT

Requested by: M.J. Wetzel

Project: IDOT U.S. Route 30

Collection Date: 06/20/07

Analyses completed on: 13 August 3007

# of samples: 15

Analyzed by: J. Sandberger

	Station		Smpl Id	IDC *	TDC *	DOC *	SO4 *	NH3-N *	NO2-N *	NO3-N *	Tot.P *	Hard *
19	US30-1	06/20/07	13625	46.0	50.4	4.4	38.8	0.03	<DL	0.34	0.08	353
20	US30-2		13626	38.9	43.3	4.4	44.4	0.30	<DL	3.39	<DL	296
21	US30-3		13627	47.5	51.1	3.6	42.8	0.02	<DL	10.1	0.01	360
22	US30-6		13628	56.5	60.1	3.5	34.4	0.07	<DL	9.61	0.03	406
23	US30-7		13629	57.9	61.8	3.9	34.5	0.05	<DL	8.50	0.02	414
24	US30-9		13630	35.4	39.0	3.7	32.9	0.05	<DL	8.60	<DL	278
25	US30-10		13631	48.1	51.4	3.3	40.2	0.08	<DL	11.9	<DL	378
26	US30-12		13632	45.8	49.6	3.9	39.6	0.09	<DL	11.1	0.02	386
27	US30-13		13633	46.4	49.6	3.3	38.0	0.12	<DL	10.6	0.03	373
28	US30-14		13634	45.2	48.1	2.9	37.4	0.05	<DL	12.1	0.04	374
29	US30-15		13635	41.9	44.9	3.0	38.1	0.03	<DL	15.0	0.03	357
30	US30-16		13636	48.5	52.3	3.8	40.6	0.05	<DL	16.2	0.02	367
31	US30-18		13637	48.5	52.3	3.8	36.4	<DL	<DL	9.65	0.06	367
32	US30-20		13638	47.7	51.8	4.1	60.1	0.15	<DL	17.3	0.11	415
33	US30-21		13639	46.7	51.5	4.9	40.0	0.39	<DL	7.62	0.09	352
	* mg/L (ppm)			DL<0.1		DL<0.1		DL<0.01		DL<0.01		
	** micro g/L (ppb)				DL<0.1		DL<0.01		DL<0.01		DL<0.01	

	Station		Smpl Id	Cl *	TDS *	Tot. Alk. *	Hg **
19	US30-1	06/20/07	13625	79.2	464	238	<DL
20	US30-2		13626	57.7	420	210	<DL
21	US30-3		13627	34.4	468	261	<DL
22	US30-6		13628	29.8	476	295	<DL
23	US30-7		13629	30.6	476	300	<DL
24	US30-9		13630	25.6	344	188	<DL
25	US30-10		13631	39.5	440	262	<DL
26	US30-12		13632	34.0	460	283	<DL
27	US30-13		13633	30.4	416	244	<DL
28	US30-14		13634	33.9	428	252	<DL
29	US30-15		13635	65.1	456	242	<DL
30	US30-16		13636	39.7	416	234	<DL
31	US30-18		13637	26.1	420	271	<DL
32	US30-20		13638	34.5	504	263	<DL
33	US30-21		13639	33.0	416	258	<DL
					DL<4		DL=.05
				DL<0.1		DL<1 ppb	

Appendix 4-18

Water Quality Data

Values resulting from analyses of physical-chemical properties of, and for nutrients and other consitutents in water samples collected on 1-2 October 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-18 Water Quality Data

ILLINOIS NATURAL HISTORY SURVEY
WATER QUALITY REPORT

Requested by: M.J. Wetzel Project: IDOT U.S. Route 30

Collection Date: 10/02/07 Analyses completed on: 29 November 3007

# of samples: 16 Analyzed by: J. Sandberger

	Station		Smpl Id	IDC *	TDC *	DOC *	SO4 *	NH3-N *	NO2-N *	NO3-N *	Tot.P *	Hard *
1	US30-1	10/02/07	13658	41.9	49.1	7.2	32.6	0.07	<DL	0.58	<DL	281
2	US30-2		13659	42.2	49.0	6.8	25.6	0.14	<DL	2.62	<DL	327
3	US30-3		13660	43.2	48.2	5.0	27.9	0.13	<DL	7.79	<DL	373
4	US30-6		13661	55.8	61.8	6.0	28.7	<DL	<DL	3.21	<DL	404
5	US30-7		13662	51.4	56.6	5.2	23.1	<DL	<DL	2.34	<DL	403
6	US30-9		13663	59.6	64.7	5.1	35.0	<DL	<DL	1.54	<DL	360
7	US30-10		13664	45.4	50.3	4.9	33.7	<DL	<DL	3.46	<DL	369
8	US30-12		13665	47.3	51.4	4.1	27.5	<DL	<DL	3.38	<DL	382
9	US30-13		13666	37.8	41.5	3.7	29.1	<DL	<DL	8.56	<DL	346
10	US30-14		13667	38.6	41.6	3.1	22.6	<DL	<DL	6.27	<DL	355
11	US30-15		13668	38.3	41.2	2.9	23.7	<DL	<DL	10.6	<DL	358
12	US30-16		13669	45.5	49.0	3.6	26.2	<DL	<DL	9.59	<DL	362
13	US30-18		13670	45.5	49.0	3.6	28.5	<DL	<DL	8.18	<DL	362
14	US30-20		13671	43.2	46.8	3.6	42.1	<DL	<DL	10.4	<DL	382
15	US30-21		13672	30.2	33.5	3.3	30.3	<DL	<DL	0.40	<DL	198
16	US30-22		13673	49.5	53.3	3.8	36.0	<DL	<DL	9.53	<DL	355
	* mg/L (ppm)			DL<0.1		DL<0.1		DL<0.01		DL<0.01		
	** micro g/L (ppb)				DL<0.1		DL<0.01		DL<0.01		DL<0.01	

	Station		Smpl Id	Cl *	TDS *	Tot. Alk. *	Hg **
1	US30-1	10/02/07	13658	64.2	308	203	<DL
2	US30-2		13659	37.8	268	239	<DL
3	US30-3		13660	25.7	272	240	<DL
4	US30-6		13661	23.0	320	264	<DL
5	US30-7		13662	19.6	280	272	<DL
6	US30-9		13663	17.1	324	275	<DL
7	US30-10		13664	30.1	292	244	<DL
8	US30-12		13665	30.4	296	271	<DL
9	US30-13		13666	27.3	328	302	<DL
10	US30-14		13667	25.1	264	243	<DL
11	US30-15		13668	49.4	308	277	<DL
12	US30-16		13669	29.1	280	237	<DL
13	US30-18		13670	21.7	292	223	<DL
14	US30-20		13671	24.4	332	253	<DL
15	US30-21		13672	13.0	192	151	<DL
16	US30-22		13673	33.0	327	225	<DL
					DL<4		DL=.05
				DL<0.1		DL<1 ppb	

Appendix 4-19

Water Quality Data

Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-19. Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**Al**	**Al**	**As**	**As**	**B**	**B**	**Ba**	**Ba**	**Be**	**Be**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0022**		**0.108**		**0.023**		**0.00011**		**0.00055**	
U530-1	3-Apr-07	0.0432	5/17/07	<0.108	5/17/07	0.033	5/17/07	0.06152	5/17/07	<0.00055	5/17/07
0530-2	3-Apr-07	0.0486	5/17/07	<0.108	5/17/07	0.029	5/17/07	0.05445	5/17/07	<0.00055	5/17/07
U530-3	3-Apr-07	0.0554	5/17/07	<0.108	5/17/07	<0.023	5/17/07	0.08434	5/17/07	<0.00055	5/17/07
U530-6	3-Apr-07	0.0534	5/17/07	<0.108	5/17/07	<0.023	5/17/07	0.11128	5/17/07	<0.00055	5/17/07
U530-7	3-Apr-07	0.0591	5/17/07	<0.108	5/17/07	0.025	5/17/07	0.11357	5/17/07	<0.00055	5/17/07
0530-9	3-Apr-07	0.0604	5/17/07	<0.108	5/17/07	0.028	5/17/07	0.08566	5/17/07	<0.00055	5/17/07
U530-10	3-Apr-07	0.0528	5/17/07	<0.108	5/17/07	0.031	5/17/07	0.10941	5/17/07	<0.00055	5/17/07
U530-12	3-Apr-07	0.0578	5/17/07	<0.108	5/17/07	0.027	5/17/07	0.11052	5/17/07	<0.00055	5/17/07
U530-13	3-Apr-07	0.0529	5/17/07	<0.108	5/17/07	0.032	5/17/07	0.08428	5/17/07	<0.00055	5/17/07
U530-14	3-Apr-07	0.0511	5/17/07	<0.108	5/17/07	0.027	5/17/07	0.08965	5/17/07	<0.00055	5/17/07
U530-15	3-Apr-07	0.0470	5/17/07	<0.108	5/17/07	<0.023	5/17/07	0.07168	5/17/07	<0.00055	5/17/07
U530-16	3-Apr-07	0.0425	5/17/07	<0.108	5/17/07	0.025	5/17/07	0.09436	5/17/07	<0.00055	5/17/07
U530-18	4-Apr-07	0.0493	5/17/07	<0.108	5/17/07	0.028	5/17/07	0.07049	5/17/07	<0.00055	5/17/07
U530-20	4-Apr-07	0.0508	5/17/07	<0.108	5/17/07	0.025	5/17/07	0.09883	5/17/07	<0.00055	5/17/07
U530-21	4-Apr-07	0.0522	5/17/07	<0.108	5/17/07	0.031	5/17/07	0.06170	5/17/07	<0.00055	5/17/07
Standard		9.811	5/17/07	<0.108	5/17/07	9.98	5/17/07	9.9163	6/4/07	<0.00055	5/17/07

[Appendix 4-19 continued on following page]

Appendix 4-19 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**Ca**	**Ca**	**Cd**	**Cd**	**Co**	**Co**	**Cr**	**Cr**	**Cu**	**Cu**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.012**		**0.012**		**0.013**		**0.0058**		**0.00079**	
U530-1	3-Apr-07	74.3	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00209	5/17/07
0530-2	3-Apr-07	63.6	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00339	5/17/07
U530-3	3-Apr-07	81.2	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00419	5/17/07
U530-6	3-Apr-07	79.1	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00224	5/17/07
U530-7	3-Apr-07	83.8	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00321	5/17/07
0530-9	3-Apr-07	68.1	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00384	5/17/07
U530-10	3-Apr-07	73.3	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00268	5/17/07
U530-12	3-Apr-07	80.5	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00363	5/17/07
U530-13	3-Apr-07	80.5	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00279	5/17/07
U530-14	3-Apr-07	71.5	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00226	5/17/07
U530-15	3-Apr-07	81.6	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00489	5/17/07
U530-16	3-Apr-07	75.2	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00627	5/17/07
U530-18	4-Apr-07	81.7	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00404	5/17/07
U530-20	4-Apr-07	91.2	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00474	5/17/07
U530-21	4-Apr-07	54.7	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00561	5/17/07
Standard		<0.012	5/17/07	<0.012	5/17/07	<0.013	5/17/07	<0.0058	5/17/07	0.00107	5/17/07

[Appendix 4-19 continued on following page]

Appendix 4-19 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**Fe**	**Fe**	**K**	**K**	**Li**	**Li**	**Mg**	**Mg**	**Mn**	**Mn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0059**		**0.016**		**0.0048**		**0.0025**		**0.0015**	
U530-1	3-Apr-07	0.0085	5/17/07	2.59	5/17/07	<0.0048	5/17/07	28.1	5/17/07	0.0484	5/17/07
0530-2	3-Apr-07	0.0111	5/17/07	3.24	5/17/07	<0.0048	5/17/07	31.9	5/17/07	<0.0015	5/17/07
U530-3	3-Apr-07	0.0080	5/17/07	2.00	5/17/07	<0.0048	5/17/07	37.9	5/17/07	0.0452	5/17/07
U530-6	3-Apr-07	0.0073	5/17/07	2.10	5/17/07	<0.0048	5/17/07	34.2	5/17/07	0.0555	5/17/07
U530-7	3-Apr-07	0.0064	5/17/07	1.88	5/17/07	<0.0048	5/17/07	35.5	5/17/07	0.0767	5/17/07
0530-9	3-Apr-07	0.0125	5/17/07	2.16	5/17/07	<0.0048	5/17/07	27.7	5/17/07	0.0561	5/17/07
U530-10	3-Apr-07	0.0068	5/17/07	2.25	5/17/07	<0.0048	5/17/07	30.3	5/17/07	0.0506	5/17/07
U530-12	3-Apr-07	0.0165	5/17/07	2.41	5/17/07	<0.0048	5/17/07	34.1	5/17/07	0.0393	5/17/07
U530-13	3-Apr-07	0.0069	5/17/07	2.03	5/17/07	<0.0048	5/17/07	36.2	5/17/07	0.0731	5/17/07
U530-14	3-Apr-07	0.0081	5/17/07	1.82	5/17/07	<0.0048	5/17/07	29.4	5/17/07	0.0772	5/17/07
U530-15	3-Apr-07	<0.0059	5/17/07	2.12	5/17/07	<0.0048	5/17/07	37.7	5/17/07	0.0313	5/17/07
U530-16	3-Apr-07	0.0072	5/17/07	1.64	5/17/07	<0.0048	5/17/07	31.5	5/17/07	0.0268	5/17/07
U530-18	4-Apr-07	<0.0059	5/17/07	1.53	5/17/07	<0.0048	5/17/07	35.9	5/17/07	0.0538	5/17/07
U530-20	4-Apr-07	0.0060	5/17/07	2.07	5/17/07	<0.0048	5/17/07	38.0	5/17/07	0.0193	5/17/07
U530-21	4-Apr-07	0.0835	5/17/07	2.70	5/17/07	<0.0048	5/17/07	22.7	5/17/07	0.1048	5/17/07
Standard		<0.0059	5/17/07	49.1	5/17/07	<0.0048	5/29/07	0.0053	5/17/07	<0.0015	5/17/07

[Appendix 4-19 continued on following page]

Appendix 4-19 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**Mo**	**Mo**	**Na**	**Na**	**Ni**	**Ni**	**P**	**P**	**Pb**	**Pb**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.022**		**0.026**		**0.014**		**0.063**		**0.041**	
U530-1	3-Apr-07	<0.022	5/17/07	30.0	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
0530-2	3-Apr-07	<0.022	5/17/07	19.0	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-3	3-Apr-07	<0.022	5/17/07	13.4	5/17/07	0.018	5/17/07	0.108	5/17/07	<0.041	5/17/07
U530-6	3-Apr-07	<0.022	5/17/07	8.23	5/17/07	0.014	5/17/07	0.081	5/17/07	<0.041	5/17/07
U530-7	3-Apr-07	<0.022	5/17/07	8.83	5/17/07	0.015	5/17/07	0.068	5/17/07	<0.041	5/17/07
0530-9	3-Apr-07	<0.022	5/17/07	6.73	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-10	3-Apr-07	<0.022	5/17/07	12.8	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-12	3-Apr-07	<0.022	5/17/07	12.3	5/17/07	0.015	5/17/07	0.063	5/17/07	<0.041	5/17/07
U530-13	3-Apr-07	<0.022	5/17/07	9.51	5/17/07	<0.014	5/17/07	0.079	5/17/07	<0.041	5/17/07
U530-14	3-Apr-07	<0.022	5/17/07	13.4	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-15	3-Apr-07	<0.022	5/17/07	20.0	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-16	3-Apr-07	<0.022	5/17/07	14.9	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-18	4-Apr-07	<0.022	5/17/07	10.5	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
U530-20	4-Apr-07	<0.022	5/17/07	13.5	5/17/07	0.015	5/17/07	0.136	5/17/07	<0.041	5/17/07
U530-21	4-Apr-07	<0.022	5/17/07	6.23	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07
Standard		<0.022	5/17/07	10.9	5/17/07	<0.014	5/17/07	<0.063	5/17/07	<0.041	5/17/07

[Appendix 4-19 continued on following page]

Appendix 4-19 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**S**	**S**	**Sb**	**Sb**	**Se**	**Se**	**Si**	**Si**	**Sn**	**Sn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.217**		**0.059**		**0.131**		**0.066**		**0.070**	
U530-1	3-Apr-07	14.2	5/17/07	<0.059	5/17/07	<0.131	5/17/07	2.92	5/17/07	<0.070	5/17/07
0530-2	3-Apr-07	12.0	5/17/07	<0.059	5/17/07	<0.131	5/17/07	3.63	5/17/07	<0.070	5/17/07
U530-3	3-Apr-07	11.4	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.28	5/17/07	<0.070	5/17/07
U530-6	3-Apr-07	8.79	5/17/07	<0.059	5/17/07	<0.131	5/17/07	6.19	5/17/07	<0.070	5/17/07
U530-7	3-Apr-07	9.58	5/17/07	<0.059	5/17/07	<0.131	5/17/07	6.24	5/17/07	<0.070	5/17/07
0530-9	3-Apr-07	13.7	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.46	5/17/07	<0.070	5/17/07
U530-10	3-Apr-07	11.2	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.06	5/17/07	<0.070	5/17/07
U530-12	3-Apr-07	10.1	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.56	5/17/07	<0.070	5/17/07
U530-13	3-Apr-07	11.1	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.72	5/17/07	<0.070	5/17/07
U530-14	3-Apr-07	9.32	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.34	5/17/07	<0.070	5/17/07
U530-15	3-Apr-07	9.69	5/17/07	<0.059	5/17/07	<0.131	5/17/07	6.24	5/17/07	<0.070	5/17/07
U530-16	3-Apr-07	9.85	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.35	5/17/07	<0.070	5/17/07
U530-18	4-Apr-07	11.1	5/17/07	<0.059	5/17/07	<0.131	5/17/07	6.85	5/17/07	<0.070	5/17/07
U530-20	4-Apr-07	14.8	5/17/07	<0.059	5/17/07	<0.131	5/17/07	5.41	5/17/07	<0.070	5/17/07
U530-21	4-Apr-07	10.1	5/17/07	<0.059	5/17/07	<0.131	5/17/07	7.42	5/17/07	<0.070	5/17/07
Standard		<0.217	5/17/07	<0.059	5/17/07	<0.131	5/17/07	31.3	5/17/07	<0.070	5/17/07

[Appendix 4-19 concluded on following page]

Appendix 4-19 (concluded). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 3-4 April 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: June 15, 2007.

	Constituent:	**Sr**	**Sr**	**Ti**	**Ti**	**Tl**	**Tl**	**V**	**V**	**Zn**	**Zn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.00037**		**0.00056**		**0.017**		**0.047**		**0.0073**	
U530-1	3-Apr-07	0.116	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0204	5/17/07
0530-2	3-Apr-07	0.108	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0305	5/17/07
U530-3	3-Apr-07	0.131	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0460	5/17/07
U530-6	3-Apr-07	0.132	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0296	5/17/07
U530-7	3-Apr-07	0.137	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0232	5/29/07
0530-9	3-Apr-07	0.121	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0228	5/29/07
U530-10	3-Apr-07	0.134	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0201	5/29/07
U530-12	3-Apr-07	0.143	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0125	5/29/07
U530-13	3-Apr-07	0.140	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0226	5/29/07
U530-14	3-Apr-07	0.140	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0138	5/29/07
U530-15	3-Apr-07	0.127	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0220	5/29/07
U530-16	3-Apr-07	0.143	5/17/07	<0.00056	5/17/07	0.020	5/17/07	<0.047	5/17/07	0.0200	5/29/07
U530-18	4-Apr-07	0.138	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0190	5/29/07
U530-20	4-Apr-07	0.174	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0176	5/29/07
U530-21	4-Apr-07	0.0906	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0452	5/29/07
Standard		<0.00037	5/17/07	<0.00056	5/17/07	<0.017	5/17/07	<0.047	5/17/07	0.0129	5/29/07

Appendix 4-20

Water Quality Data

Values resulting from analyses for inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-20. Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

	Constituent:	**Al**	**Al**	**As**	**As**	**B**	**B**	**Ba**	**Ba**	**Be**	**Be**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0022**		**0.108**		**0.023**		**0.00011**		**0.00055**	
US30-1	20-Jun-07	0.0161	7/11/07	<0.108	7/11/07	0.041	7/11/07	0.0574	7/11/07	<0.00055	7/11/07
US30-2	20-Jun-07	0.0096	7/11/07	<0.108	7/11/07	0.046	7/11/07	0.0526	7/11/07	<0.00055	7/11/07
US30-3	20-Jun-07	0.0154	7/11/07	<0.108	7/11/07	0.027	7/11/07	0.0924	7/11/07	<0.00055	7/11/07
US30-6	20-Jun-07	0.0184	7/11/07	<0.108	7/11/07	<0.023	7/11/07	0.131	7/11/07	<0.00055	7/11/07
US30-7	20-Jun-07	0.0169	7/11/07	<0.108	7/11/07	<0.023	7/11/07	0.130	7/11/07	<0.00055	7/11/07
US30-9	20-Jun-07	0.0192	7/11/07	<0.108	7/11/07	<0.023	7/11/07	0.0829	7/11/07	<0.00055	7/11/07
US30-10	20-Jun-07	0.0152	7/11/07	<0.108	7/11/07	0.030	7/11/07	0.131	7/11/07	<0.00055	7/11/07
US30-12	19-Jun-07	0.0165	7/11/07	<0.108	7/11/07	0.026	7/11/07	0.133	7/11/07	<0.00055	7/11/07
US30-13	19-Jun-07	0.0169	7/11/07	<0.108	7/11/07	<0.023	7/11/07	0.0796	7/11/07	<0.00055	7/11/07
US30-14	19-Jun-07	0.0165	7/11/07	<0.108	7/11/07	0.023	7/11/07	0.100	7/11/07	<0.00055	7/11/07
US30-15	19-Jun-07	0.0585	7/11/07	<0.108	7/11/07	0.027	7/11/07	0.0784	7/11/07	<0.00055	7/11/07
US30-16	19-Jun-07	0.0160	7/11/07	<0.108	7/11/07	0.029	7/11/07	0.0891	7/11/07	<0.00055	7/11/07
US30-18	19-Jun-07	0.0148	7/11/07	<0.108	7/11/07	0.029	7/11/07	0.0666	7/11/07	<0.00055	7/11/07
US30-20	19-Jun-07	0.0207	7/11/07	<0.108	7/11/07	0.033	7/11/07	0.107	7/11/07	<0.00055	7/11/07
US30-21	19-Jun-07	0.0141	7/11/07	<0.108	7/11/07	0.043	7/11/07	0.0840	7/11/07	<0.00055	7/11/07

[Appendix 4-20 continued on following page]

Appendix 4-20 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

	Constituent:	**Ca**	**Ca**	**Cd**	**Cd**	**Co**	**Co**	**Cr**	**Cr**	**Cu**	**Cu**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.012**		**0.012**		**0.013**		**0.0058**		**0.00079**	
U530-1	20-Jun-07	79.3	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	<0.00079	7/11/07
0530-2	20-Jun-07	54.2	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00225	7/11/07
U530-3	20-Jun-07	83.9	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00125	7/11/07
U530-6	20-Jun-07	97.1	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00180	7/11/07
U530-7	20-Jun-07	98.6	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00117	7/11/07
0530-9	20-Jun-07	62.4	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00141	7/11/07
U530-10	20-Jun-07	90.8	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00172	7/11/07
U530-12	19-Jun-07	95.8	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00218	7/11/07
U530-13	19-Jun-07	82.6	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00159	7/11/07
U530-14	19-Jun-07	86.2	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00137	7/11/07
U530-15	19-Jun-07	84.4	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00097	7/11/07
U530-16	19-Jun-07	83.3	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00147	7/11/07
U530-18	19-Jun-07	87.3	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00171	7/11/07
U530-20	19-Jun-07	101	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.00210	7/11/07
U530-21	19-Jun-07	79.8	7/11/07	<0.012	7/11/07	<0.013	7/11/07	<0.0058	7/11/07	0.01115	7/11/07

[Appendix 4-20 continued on following page]

Appendix 4-20 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

	Constituent:	**Fe**	**Fe**	**K**	**K**	**Li**	**Li**	**Mg**	**Mg**	**Mn**	**Mn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0059**		**0.016**		**0.0048**		**0.0025**		**0.0015**	
U530-1	20-Jun-07	0.0065	7/11/07	3.13	7/11/07	<0.0048	7/12/07	37.4	7/11/07	0.116	7/11/07
0530-2	20-Jun-07	<0.0059	7/11/07	3.51	7/11/07	<0.0048	7/12/07	38.8	7/11/07	<0.0015	7/11/07
U530-3	20-Jun-07	<0.0059	7/11/07	1.80	7/11/07	<0.0048	7/12/07	36.4	7/11/07	0.0086	7/11/07
U530-6	20-Jun-07	<0.0059	7/11/07	1.34	7/11/07	<0.0048	7/12/07	39.6	7/11/07	0.0912	7/11/07
U530-7	20-Jun-07	<0.0059	7/11/07	1.41	7/11/07	<0.0048	7/12/07	40.7	7/11/07	0.0864	7/11/07
0530-9	20-Jun-07	<0.0059	7/11/07	2.05	7/11/07	<0.0048	7/12/07	29.4	7/11/07	0.0105	7/11/07
U530-10	20-Jun-07	<0.0059	7/11/07	1.34	7/11/07	<0.0048	7/12/07	36.7	7/11/07	0.0691	7/11/07
U530-12	19-Jun-07	<0.0059	7/11/07	1.90	7/11/07	<0.0048	7/12/07	35.5	7/11/07	0.0408	7/11/07
U530-13	19-Jun-07	<0.0059	7/11/07	2.24	7/11/07	<0.0048	7/12/07	36.4	7/11/07	0.0468	7/11/07
U530-14	19-Jun-07	<0.0059	7/11/07	1.52	7/11/07	<0.0048	7/12/07	38.1	7/11/07	0.0474	7/11/07
U530-15	19-Jun-07	<0.0059	7/11/07	2.05	7/12/07	<0.0048	7/12/07	39.5	7/11/07	0.0136	7/11/07
U530-16	19-Jun-07	<0.0059	7/11/07	1.46	7/12/07	<0.0048	7/12/07	36.2	7/11/07	0.0227	7/11/07
U530-18	19-Jun-07	<0.0059	7/11/07	1.78	7/12/07	<0.0048	7/12/07	36.2	7/11/07	0.0198	7/11/07
U530-20	19-Jun-07	<0.0059	7/11/07	2.29	7/12/07	<0.0048	7/12/07	39.4	7/11/07	0.0031	7/11/07
U530-21	19-Jun-07	<0.0059	7/11/07	3.86	7/12/07	<0.0048	7/12/07	37.0	7/11/07	0.163	7/11/07

[Appendix 4-20 continued on following page]

Appendix 4-20 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

	Constituent:	**Mo**	**Mo**	**Na**	**Na**	**Ni**	**Ni**	**P**	**P**	**Pb**	**Pb**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.022**		**0.026**		**0.014**		**0.063**		**0.041**	
U530-1	20-Jun-07	<0.022	7/11/07	34.5	7/11/07	<0.014	7/11/07	0.069	7/11/07	<0.041	7/11/07
0530-2	20-Jun-07	<0.022	7/11/07	26.4	7/11/07	0.017	7/11/07	<0.063	7/11/07	<0.041	7/11/07
U530-3	20-Jun-07	<0.022	7/11/07	11.3	7/11/07	0.015	7/11/07	0.115	7/11/07	<0.041	7/11/07
U530-6	20-Jun-07	<0.022	7/11/07	10.0	7/11/07	0.019	7/11/07	0.065	7/11/07	<0.041	7/11/07
U530-7	20-Jun-07	<0.022	7/11/07	9.80	7/11/07	<0.014	7/11/07	0.115	7/11/07	<0.041	7/11/07
0530-9	20-Jun-07	<0.022	7/11/07	8.72	7/11/07	0.015	7/11/07	<0.063	7/11/07	<0.041	7/11/07
U530-10	20-Jun-07	<0.022	7/11/07	13.1	7/11/07	<0.014	7/11/07	0.072	7/11/07	<0.041	7/11/07
U530-12	19-Jun-07	<0.022	7/11/07	13.8	7/11/07	0.015	7/11/07	0.083	7/11/07	<0.041	7/11/07
U530-13	19-Jun-07	<0.022	7/11/07	10.1	7/11/07	0.018	7/11/07	0.120	7/11/07	<0.041	7/11/07
U530-14	19-Jun-07	<0.022	7/11/07	12.6	7/11/07	<0.014	7/11/07	<0.063	7/11/07	<0.041	7/11/07
U530-15	19-Jun-07	<0.022	7/11/07	21.6	7/11/07	0.019	7/11/07	<0.063	7/11/07	<0.041	7/11/07
U530-16	19-Jun-07	<0.022	7/11/07	13.1	7/11/07	<0.014	7/11/07	<0.063	7/11/07	<0.041	7/11/07
U530-18	19-Jun-07	<0.022	7/11/07	10.0	7/11/07	0.014	7/11/07	0.099	7/11/07	<0.041	7/11/07
U530-20	19-Jun-07	<0.022	7/11/07	13.7	7/11/07	0.020	7/11/07	0.220	7/11/07	<0.041	7/11/07
U530-21	19-Jun-07	<0.022	7/11/07	10.8	7/11/07	0.021	7/11/07	0.138	7/11/07	<0.041	7/11/07

[Appendix 4-20 continued on following page]

Appendix 4-20 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

	Constituent:	**S**	**S**	**Sb**	**Sb**	**Se**	**Se**	**Si**	**Si**	**Sn**	**Sn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.217**		**0.059**		**0.131**		**0.066**		**0.070**	
U530-1	20-Jun-07	13.6	7/11/07	<0.059	7/11/07	<0.131	7/11/07	5.56	7/11/07	<0.070	7/11/07
0530-2	20-Jun-07	13.8	7/11/07	<0.059	7/11/07	<0.131	7/11/07	1.45	7/11/07	<0.070	7/11/07
U530-3	20-Jun-07	14.0	7/11/07	<0.059	7/11/07	<0.131	7/11/07	5.54	7/11/07	<0.070	7/11/07
U530-6	20-Jun-07	11.4	7/11/07	<0.059	7/11/07	<0.131	7/11/07	7.71	7/11/07	<0.070	7/11/07
U530-7	20-Jun-07	11.6	7/11/07	<0.059	7/11/07	<0.131	7/11/07	7.60	7/11/07	<0.070	7/11/07
0530-9	20-Jun-07	11.0	7/11/07	<0.059	7/11/07	<0.131	7/11/07	3.82	7/11/07	<0.070	7/11/07
U530-10	20-Jun-07	13.2	7/11/07	<0.059	7/11/07	<0.131	7/11/07	6.46	7/11/07	<0.070	7/11/07
U530-12	19-Jun-07	12.8	7/11/07	<0.059	7/11/07	<0.131	7/11/07	7.51	7/11/07	<0.070	7/11/07
U530-13	19-Jun-07	13.2	7/11/07	<0.059	7/11/07	<0.131	7/11/07	6.47	7/11/07	<0.070	7/11/07
U530-14	19-Jun-07	12.5	7/11/07	<0.059	7/11/07	<0.131	7/11/07	7.46	7/11/07	<0.070	7/11/07
U530-15	19-Jun-07	9.91	7/12/07	<0.059	7/11/07	<0.131	7/11/07	7.67	7/11/07	<0.070	7/11/07
U530-16	19-Jun-07	11.6	7/12/07	<0.059	7/11/07	<0.131	7/11/07	6.69	7/11/07	<0.070	7/11/07
U530-18	19-Jun-07	11.2	7/12/07	<0.059	7/11/07	<0.131	7/11/07	9.18	7/11/07	<0.070	7/11/07
U530-20	19-Jun-07	17.6	7/12/07	<0.059	7/11/07	<0.131	7/11/07	8.40	7/11/07	<0.070	7/11/07
U530-21	19-Jun-07	11.9	7/12/07	<0.059	7/11/07	<0.131	7/11/07	7.94	7/11/07	<0.070	7/11/07

[Appendix 4-20 concluded on following page]

Appendix 4-20 (concluded). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 19-20 June 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report date: August 2, 2007.

Sample #	Constituent:	Sr mg/L	Sr date analyzed	Ti mg/L	Ti date analyzed	Tl mg/L	Tl date analyzed	V mg/L	V date analyzed	Zn mg/L	Zn date analyzed
MDL	**Collection Date**	**0.00037**		**0.00056**		**0.017**		**0.047**		**0.0073**	
U530-1	20-Jun-07	0.116	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.222	7/11/07
0530-2	20-Jun-07	0.100	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.157	7/11/07
U530-3	20-Jun-07	0.109	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.0671	7/11/07
U530-6	20-Jun-07	0.135	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.148	7/11/07
U530-7	20-Jun-07	0.129	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.159	7/11/07
0530-9	20-Jun-07	0.122	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.223	7/11/07
U530-10	20-Jun-07	0.128	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.0181	7/11/07
U530-12	19-Jun-07	0.144	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.166	7/11/07
U530-13	19-Jun-07	0.114	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.270	7/11/07
U530-14	19-Jun-07	0.125	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.132	7/11/07
U530-15	19-Jun-07	0.108	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.221	7/11/07
U530-16	19-Jun-07	0.120	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.0380	7/11/07
U530-18	19-Jun-07	0.115	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.0165	7/11/07
U530-20	19-Jun-07	0.160	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.227	7/11/07
U530-21	19-Jun-07	0.116	7/11/07	<0.00056	7/11/07	<0.017	7/11/07	<0.047	7/11/07	0.0331	7/11/07

Appendix 4-21

Water Quality Data

Values resulting from analyses for inorganic constituents in water samples collected on 1-2 October 2007 by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois

Appendix 4-21. Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**Al**	**Al**	**As**	**As**	**B**	**B**	**Ba**	**Ba**	**Be**	**Be**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0022**		**0.108**		**0.023**		**0.00011**		**0.00055**	
US30-22	5-Jul-07	0.0220	8/3/07	<0.108	8/3/07	0.035	8/3/07	0.0951	8/3/07	<0.00055	8/3/07
US30-1	2-Oct-07	0.0200	10/12/07	<0.108	10/11/07	0.043	10/11/07	0.0862	10/11/07	<0.00055	10/11/07
US30-2	2-Oct-07	0.0794	10/12/07	<0.108	10/11/07	0.036	10/11/07	0.0623	10/11/07	<0.00055	10/11/07
US30-3	2-Oct-07	0.0190	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.0834	10/11/07	<0.00055	10/11/07
US30-6	1-Oct-07	0.0234	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.156	10/11/07	<0.00055	10/11/07
US30-7	2-Oct-07	0.0238	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.154	10/11/07	<0.00055	10/11/07
US30-9	1-Oct-07	0.0210	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.136	10/11/07	<0.00055	10/11/07
US30-10	1-Oct-07	0.0262	10/12/07	<0.108	10/11/07	0.030	10/11/07	0.158	10/11/07	<0.00055	10/11/07
US30-12	1-Oct-07	0.0202	10/12/07	<0.108	10/11/07	0.024	10/11/07	0.157	10/11/07	<0.00055	10/11/07
US30-13	1-Oct-07	0.0229	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.0855	10/11/07	<0.00055	10/11/07
US30-14	1-Oct-07	0.0209	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.106	10/11/07	<0.00055	10/11/07
US30-15	1-Oct-07	0.0214	10/12/07	<0.108	10/11/07	0.029	10/11/07	0.0707	10/11/07	<0.00055	10/11/07
US30-16	1-Oct-07	0.0226	10/12/07	<0.108	10/11/07	0.026	10/11/07	0.111	10/11/07	<0.00055	10/11/07
US30-18	1-Oct-07	0.0216	10/12/07	<0.108	10/11/07	0.026	10/11/07	0.0690	10/11/07	<0.00055	10/11/07
US30-20	1-Oct-07	0.0234	10/12/07	<0.108	10/11/07	0.025	10/11/07	0.106	10/11/07	<0.00055	10/11/07
US30-21	1-Oct-07	0.0134	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.0645	10/11/07	<0.00055	10/11/07
US30-22	1-Oct-07	0.0237	10/12/07	<0.108	10/11/07	<0.023	10/11/07	0.0874	10/11/07	<0.00055	10/11/07
US30-1*	2-Oct-07	0.0560	10/12/07	<0.108	10/11/07	0.030	10/11/07	0.0886	10/11/07	<0.00055	10/11/07

*duplicate sample included for quality control

[Appendix 4-21 continued on following page]

Appendix 4-21 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**Ca**	**Ca**	**Cd**	**Cd**	**Co**	**Co**	**Cr**	**Cr**	**Cu**	**Cu**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.012**		**0.012**		**0.013**		**0.0058**		**0.00079**	
US30-22	5-Jul-07	77.2	8/3/07	<0.012	8/3/07	<0.013	8/3/07	<0.0058	8/3/07	0.00324	8/3/07
US30-1	2-Oct-07	68.9	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00357	10/11/07
US30-2	2-Oct-07	72.8	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00320	10/11/07
US30-3	2-Oct-07	83.3	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00396	10/11/07
US30-6	1-Oct-07	94.6	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00338	10/11/07
US30-7	2-Oct-07	97.1	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00539	10/11/07
US30-9	1-Oct-07	87.4	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00329	10/11/07
US30-10	1-Oct-07	87.0	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00516	10/11/07
US30-12	1-Oct-07	90.8	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00214	10/11/07
US30-13	1-Oct-07	84.9	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00202	10/11/07
US30-14	1-Oct-07	80.7	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00410	10/11/07
US30-15	1-Oct-07	80.5	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00240	10/11/07
US30-16	1-Oct-07	83.5	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00213	10/11/07
US30-18	1-Oct-07	81.7	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00304	10/11/07
US30-20	1-Oct-07	93.5	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00369	10/11/07
US30-21	1-Oct-07	44.4	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00319	10/11/07
US30-22	1-Oct-07	81.3	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00279	10/11/07
US30-1*	2-Oct-07	67.1	10/11/07	<0.012	10/11/07	<0.013	10/11/07	<0.0058	10/11/07	0.00417	10/11/07

*duplicate sample included for quality control

[Appendix 4-21 continued on following page]

Appendix 4-21 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**Fe**	**Fe**	**K**	**K**	**Li**	**Li**	**Mg**	**Mg**	**Mn**	**Mn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.0059**		**0.016**		**0.0048**		**0.0025**		**0.0015**	
US30-22	5-Jul-07	<0.0059	8/3/07	3.54	8/3/07	<0.0048	8/3/07	32.2	8/3/07	0.0283	8/3/07
US30-1	2-Oct-07	0.0476	10/11/07	3.84	10/11/07	<0.0048	10/11/07	26.2	10/11/07	0.185	10/11/07
US30-2	2-Oct-07	0.0604	10/11/07	4.15	10/11/07	<0.0048	10/11/07	35.0	10/11/07	0.0201	10/11/07
US30-3	2-Oct-07	0.0067	10/11/07	2.32	10/11/07	<0.0048	10/11/07	40.0	10/11/07	0.0420	10/11/07
US30-6	1-Oct-07	0.0186	10/11/07	3.25	10/11/07	<0.0048	10/11/07	40.6	10/11/07	0.113	10/11/07
US30-7	2-Oct-07	0.0142	10/11/07	2.88	10/11/07	<0.0048	10/11/07	39.0	10/11/07	0.124	10/11/07
US30-9	1-Oct-07	<0.0059	10/11/07	1.30	10/11/07	<0.0048	10/11/07	34.2	10/11/07	0.110	10/11/07
US30-10	1-Oct-07	0.0147	10/11/07	3.28	10/11/07	<0.0048	10/11/07	36.7	10/11/07	0.119	10/11/07
US30-12	1-Oct-07	0.0110	10/11/07	4.85	10/11/07	<0.0048	10/11/07	37.7	10/11/07	0.102	10/11/07
US30-13	1-Oct-07	0.0093	10/11/07	2.54	10/11/07	<0.0048	10/11/07	37.0	10/11/07	0.0667	10/11/07
US30-14	1-Oct-07	0.0105	10/11/07	3.19	10/11/07	<0.0048	10/11/07	34.9	10/11/07	0.0411	10/11/07
US30-15	1-Oct-07	0.0170	10/11/07	2.71	10/11/07	<0.0048	10/11/07	37.5	10/11/07	0.0341	10/11/07
US30-16	1-Oct-07	0.0102	10/11/07	1.85	10/11/07	<0.0048	10/11/07	36.3	10/11/07	0.101	10/11/07
US30-18	1-Oct-07	0.0143	10/11/07	2.49	10/11/07	<0.0048	10/11/07	38.3	10/11/07	0.0328	10/11/07
US30-20	1-Oct-07	0.0119	10/11/07	3.57	10/11/07	<0.0048	10/11/07	36.0	10/11/07	0.0032	10/11/07
US30-21	1-Oct-07	0.0098	10/11/07	2.94	10/11/07	<0.0048	10/11/07	21.0	10/11/07	0.0990	10/11/07
US30-22	1-Oct-07	0.0109	10/11/07	2.69	10/11/07	<0.0048	10/11/07	36.9	10/11/07	0.0702	10/11/07
US30-1*	2-Oct-07	0.113	10/11/07	4.01	10/11/07	<0.0048	10/11/07	24.8	10/11/07	0.194	10/11/07

*duplicate sample included for quality control

[Appendix 4-21 continued on following page]

Appendix 4-21 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**Mo**	**Mo**	**Na**	**Na**	**Ni**	**Ni**	**P**	**P**	**Pb**	**Pb**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.022**		**0.026**		**0.014**		**0.063**		**0.041**	
US30-22	5-Jul-07	<0.022	8/3/07	11.1	8/3/07	0.021	8/3/07	0.091	8/3/07	<0.041	8/3/07
US30-1	2-Oct-07	0.030	10/11/07	29.1	10/11/07	<0.014	10/11/07	<0.063	10/11/07	<0.041	10/11/07
US30-2	2-Oct-07	<0.022	10/11/07	22.2	10/11/07	0.026	10/11/07	0.115	10/11/07	<0.041	10/11/07
US30-3	2-Oct-07	<0.022	10/11/07	10.8	10/11/07	0.026	10/11/07	0.086	10/11/07	<0.041	10/11/07
US30-6	1-Oct-07	<0.022	10/11/07	9.04	10/11/07	0.026	10/11/07	0.137	10/11/07	<0.041	10/11/07
US30-7	2-Oct-07	<0.022	10/11/07	9.57	10/11/07	0.038	10/11/07	0.104	10/11/07	<0.041	10/11/07
US30-9	1-Oct-07	<0.022	10/11/07	7.83	10/11/07	0.015	10/11/07	0.114	10/11/07	<0.041	10/11/07
US30-10	1-Oct-07	<0.022	10/11/07	14.5	10/11/07	0.014	10/11/07	0.106	10/11/07	<0.041	10/11/07
US30-12	1-Oct-07	<0.022	10/11/07	13.4	10/11/07	0.024	10/11/07	0.128	10/11/07	<0.041	10/11/07
US30-13	1-Oct-07	<0.022	10/11/07	11.5	10/11/07	0.028	10/11/07	0.123	10/11/07	<0.041	10/11/07
US30-14	1-Oct-07	<0.022	10/11/07	12.6	10/11/07	0.031	10/11/07	0.071	10/11/07	<0.041	10/11/07
US30-15	1-Oct-07	0.031	10/11/07	22.0	10/11/07	0.044	10/11/07	0.068	10/11/07	<0.041	10/11/07
US30-16	1-Oct-07	<0.022	10/11/07	13.0	10/11/07	0.023	10/11/07	<0.063	10/11/07	<0.041	10/11/07
US30-18	1-Oct-07	<0.022	10/11/07	9.75	10/11/07	0.021	10/11/07	0.101	10/11/07	<0.041	10/11/07
US30-20	1-Oct-07	<0.022	10/11/07	11.5	10/11/07	0.021	10/11/07	0.089	10/11/07	0.056	10/11/07
US30-21	1-Oct-07	<0.022	10/11/07	6.74	10/11/07	<0.014	10/11/07	<0.063	10/11/07	<0.041	10/11/07
US30-22	1-Oct-07	<0.022	10/11/07	11.9	10/11/07	0.025	10/11/07	0.086	10/11/07	<0.041	10/11/07
US30-1*	2-Oct-07	<0.022	10/11/07	30.1	10/11/07	0.016	10/11/07	0.093	10/11/07	<0.041	10/11/07

*duplicate sample included for quality control

[Appendix 4-21 continued on following page]

Appendix 4-21 (continued). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**S**	**S**	**Sb**	**Sb**	**Se**	**Se**	**Si**	**Si**	**Sn**	**Sn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.217**		**0.059**		**0.131**		**0.066**		**0.070**	
US30-22	5-Jul-07	10.2	8/3/07	<0.059	8/3/07	<0.131	8/3/07	6.96	8/3/07	<0.070	8/3/07
US30-1	2-Oct-07	11.8	10/11/07	<0.059	10/11/07	<0.131	10/11/07	3.95	10/11/07	<0.070	10/11/07
US30-2	2-Oct-07	11.2	10/11/07	<0.059	10/11/07	<0.131	10/11/07	3.40	10/11/07	<0.070	10/11/07
US30-3	2-Oct-07	12.5	10/11/07	<0.059	10/11/07	<0.131	10/11/07	5.05	10/11/07	<0.070	10/11/07
US30-6	1-Oct-07	10.3	10/11/07	<0.059	10/11/07	0.171	10/11/07	8.11	10/11/07	<0.070	10/11/07
US30-7	2-Oct-07	10.4	10/11/07	<0.059	10/11/07	<0.131	10/11/07	8.06	10/11/07	<0.070	10/11/07
US30-9	1-Oct-07	11.8	10/11/07	<0.059	10/11/07	<0.131	10/11/07	8.65	10/11/07	<0.070	10/11/07
US30-10	1-Oct-07	13.5	10/11/07	<0.059	10/11/07	<0.131	10/11/07	7.18	10/11/07	<0.070	10/11/07
US30-12	1-Oct-07	12.3	10/11/07	<0.059	10/11/07	0.147	10/11/07	8.12	10/11/07	<0.070	10/11/07
US30-13	1-Oct-07	11.8	10/11/07	<0.059	10/11/07	<0.131	10/11/07	6.69	10/11/07	<0.070	10/11/07
US30-14	1-Oct-07	10.3	10/11/07	<0.059	10/11/07	<0.131	10/11/07	7.83	10/11/07	<0.070	10/11/07
US30-15	1-Oct-07	10.1	10/11/07	<0.059	10/11/07	<0.131	10/11/07	7.98	10/11/07	<0.070	10/11/07
US30-16	1-Oct-07	11.3	10/11/07	<0.059	10/11/07	<0.131	10/11/07	7.78	10/11/07	<0.070	10/11/07
US30-18	1-Oct-07	10.6	10/11/07	<0.059	10/11/07	<0.131	10/11/07	9.09	10/11/07	<0.070	10/11/07
US30-20	1-Oct-07	16.5	10/11/07	<0.059	10/11/07	<0.131	10/11/07	8.41	10/11/07	<0.070	10/11/07
US30-21	1-Oct-07	11.2	10/11/07	<0.059	10/11/07	<0.131	10/11/07	0.703	10/11/07	<0.070	10/11/07
US30-22	1-Oct-07	11.5	10/11/07	<0.059	10/11/07	<0.131	10/11/07	6.69	10/11/07	<0.070	10/11/07
US30-1*	2-Oct-07	11.5	10/11/07	<0.059	10/11/07	<0.131	10/11/07	4.07	10/11/07	<0.070	10/11/07

*duplicate sample included for quality control

[Appendix 4-21 concluded on following page]

Appendix 4-21 (concluded). Values resulting from analyses for metals and other inorganic constituents in water samples collected on 5 July 2007 (site 22 only), and on 1-2 October 2007 (sites 1-22) by INHS personnel from IDOT U.S. Route 30 stream sites in Whiteside County, Illinois.

ICP analyses by the Illinois State Water Survey (ISWS); report dates: August 10 (site 22, July collection), and 29 October 2007 (sites 1-22, October collection).

	Constituent:	**Sr**	**Sr**	**Ti**	**Ti**	**Tl**	**Tl**	**V**	**V**	**Zn**	**Zn**
Sample #		mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed	mg/L	date analyzed
MDL	**Collection Date**	**0.00037**		**0.00056**		**0.017**		**0.047**		**0.0073**	
US30-22	5-Jul-07	0.134	8/3/07	<0.00056	8/3/07	<0.017	8/3/07	<0.047	8/3/07	0.0076	8/3/07
US30-1	2-Oct-07	0.116	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-2	2-Oct-07	0.107	10/11/07	0.00238	10/11/07	<0.017	10/11/07	<0.047	10/11/07	0.146	10/11/07
US30-3	2-Oct-07	0.111	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	0.0756	10/11/07
US30-6	1-Oct-07	0.137	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-7	2-Oct-07	0.137	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-9	1-Oct-07	0.133	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-10	1-Oct-07	0.134	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-12	1-Oct-07	0.148	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-13	1-Oct-07	0.131	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-14	1-Oct-07	0.129	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-15	1-Oct-07	0.114	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-16	1-Oct-07	0.134	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-18	1-Oct-07	0.119	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-20	1-Oct-07	0.159	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-21	1-Oct-07	0.0900	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-22	1-Oct-07	0.131	10/11/07	<0.00056	10/11/07	<0.017	10/11/07	<0.047	10/11/07	<0.0073	10/11/07
US30-1*	2-Oct-07	0.120	10/11/07	0.00103	10/11/07	<0.017	10/11/07	<0.047	10/11/07	0.0129	10/11/07

*duplicate sample included for quality control

Appendix 4-22

Summary of the physical and biological parameters of the streams in the IDOT U.S. Route 30 project corridor, Whiteside County, Illinois.

Appendix 4-22. Summary of the physical and biological parameters of the streams in the IDOT U.S. Route 30 project corridor, Whiteside County, Illinois. With the exception of the NWI classifications, all data presented here have been summarized from field observations and results of surveys for aquatic resources conducted by INHS personnel during 2007.

Water Resource Name *	Surrounding Land Use [1]	Riparian Vegetation	Stream Substrate Type	Stream width (m)	Stream depth (m)	Aquatic Habitat Quality [2]	Dominant Fish species / %	Total # Fish Species	Flow Characteristics	NWI Classification
1-Union Drainage ditch @ US30, NE of Allen	homestead, agriculture, pasture	grasses, herbaceous vegetation, Trees	sand, gravel, silt, cobble	3.	0.5	fairly poor / fair	Spotfin shiner / 34%	6	lentic, perennial	R2UBHx / PFO1A
2-Rock River, @ US30, W of Allen	agriculture, light woods, homestead	grasses, trees	gravel cobble, silt, san/	150.	1.4	poor / poor	Spotfin shiner / >18%	27	lentic, perennial	R2UBH
3-Elkhorn Crk, @ US30, NNW of Como	agriculture, light woods, campground	grasses, trees, forbs	sand, gravel	18.	0.8	fairly poor / poor	Spotfin shiner + Sand shiner / >21%	27	lentic, perennial	PFO1A
4-Elkhorn Crk, @ Como Road, W of Como	agriculture,	grasses, trees, forest	sand, silt, gravel	40.	4?	N/A / poor	N/A	N/A	lentic, perennial	R2UBH
5-Elkhorn Crk, @ I-88 ramp, WSW of Como	agriculture, forest, pasture	grasses, trees	silt, sand	40.	4.5?	N/A / poor	N/A	N/A	lentic, perennial	R2UBH
6-Deer Crk, @ US30, ENE of Round Grove	light woods, homestead, pasture	grasses, trees forbs	cobble, hard-packed sand & gravel	4.9	0.26	fairly poor / fair	Johnny darter / 29%	13	lentic, perennial	R2UBH
7-Deer Crk, @ Blue Goose Rd., ESE of Round Grove	agriculture, fallow field, light woods	grasses, trees herbaceous	some cobble over sand & gravel	8.	0.23	fair / fair	Bluntnose minnow / 19%	15	lentic, perennial	R2UBH
8-Deer Crk, @ I-88, SSE of Round Grove	agriculture, forest,	grasses, trees	silt, sand	3.5	0.3	N/A / poor	N/A	N/A	lentic, perennial	R2UBH

Appendix 4-22 continued on following page

Appendix 4-22 (continued).

Water Resource Name *	Surrounding Land Use [1]	Riparian Vegetation	Stream Substrate Type	Stream width (m)	Stream depth (m)	Aquatic Habitat Quality [2]	Dominant Fish species / %	Total # Fish Species	Flow Characteristics	NWI Classification
9-Unnamed trib Rock River, @ US30, NW of Round Grove	agriculture, pasture homestead	grasses, trees, forbs	mud / silt	1.2	0.33	fairly poor / poor	Fathead minnow / 57%	4	lentic, intermittent	PSS1A / PFO1A
10-Unnamed trib Rock River, @ Bunker Hill Rd, SW of Round Grove	agriculture	grasses, forbs	coarse sand & gravel over hardpan clay; silt, mud	1.9	0.27	fair / poor	Creek chub / 19%	17	lentic, intermittent	PFO1AX / R4SBCX
11-French Crk, @ US30, ESE Morrison	agriculture, forest	grasses, trees	silt, clay	2.5	0.35	N/A / poor	N/A	N/A	lentic, perennial	R2UBH
12-French Crk, @ Sawyer Rd, ESE of Morrison	agriculture	grasses, forbs,	mud, gravel hardpan clay a few trees	2.5	0.4	fair / poor	Fantail darter / >33%	12	lentic, perennial	R2UBH
13-Rock Crk, E side Lister Rd, SSW Morrison	livestock, pasture, homestead	trees, herbaceous vegetation	mud, sand	12.	0.9	fairly poor / poor	Johnny darter / 32%	8	lentic, perennial	R2UBH
14-Unnamed trib Rock Crk @ Lister Rd. SSW Morrison	pasture, light woods, agriculture	trees, grasses forbs	mud/silt, some detritus	2.1	0.25	fairly poor / poor	Johnny darter / 42%	12	lentic, perennial	R2UBH
15-Unnamed trib Rock Crk (1E) @ Garden Plains Rd.	pasture, light woods, homestead	grasses, forbs, trees	mud/ sand mix, w/ some gravel, detritus	2.1	0.2	fair / poor	Creek chub / 49%	4	lentic, perennial	R2UBH
16-Unnamed trib. Rock Crk (2W) @ Garden Plains Rd.	homesteads, fallow field, pasture agriculture	grasses, herbaceous vegetation	mud, clay, silt, over hardpan clay	1.3	0.2	fair / poor	Brook stickleback / 56%	7	intermittent	PEMA

Appendix 4-22 concluded on following page

Appendix 4-22 (concluded).

Water Resource Name *	Surrounding Land Use [1]	Riparian Vegetation	Stream Substrate Type	Stream width (m)	Stream depth (m)	Aquatic Habitat Quality [2]	Dominant Fish species / %	Total # Fish Species	Flow Characteristics	NWI Classification
17-Spring Brook Crk, SW Hillside Road, WNW of Unionville	agriculture	grasses	silt, sand	2.5	0.5	N/A / poor	N/A	N/A	lentic, intermittent	R2SBFX
18-Spring Brook Crk @ Acker Rd, just N US30, E of Fulton	agriculture, homestead, pasture	grasses, forbs,	sand, gravel silt, cobble, hardpan clay	3.	0.25	fair / poor	Blacknose dace / >37%	9	lentic, perennial	R2UBH
19-Cattail Crk, at Chicago & NW RR trestle, ESE Fulton	agriculture	grasses	silt, sand	5.	0.5	N/A / poor	N/A	N/A	lentic, perennial	R2UBHx
20-Unnamed trib Cattail Crk, W side of Chase Rd., S of Chicago & NW RR trestle SE Fulton	agriculture, light woods, homestead	trees, grasses	mud, silt, hardpan clay detritus	2.2	0.25	poor / poor	Central stoneroller / 20%	11	lentic, perennial	R2UBHx
21-Cattail Slough drainage @ Chase Rd, S Fulton	agriculture; fallow wildlife set-aside	grasses	mud, silt, detritus, sand	9.	0.75	poor / poor	Emerald shiner / >58%	8	lentic, perennial	R2UBHx
22-Rock Crk, @ Bunker Hill Rd, S of Morrison	livestock, pasture, agriculture	grasses, herbaceous vegetation	silt, mud, sand	13.5	0.75	fairly poor / poor	Sand shiner / 37%	8	lentic, perennial	R2UBH

Notes: * Site numbers, names of streams assessed for fishes, unionid mussels, and other aquatic macroinvertebrates are underlined; [1] ROW=right of way; [2] Water quality based on Hilsenhoff's (1988) family level biotic index (cutoff points are: 0.00-3.75, Excellent, Organic pollution unlikely; 3.76-4.25, Very good, Possible slight organic pollution; 4.26-5.00, Good, Some organic pollution probable; 5.01-5.75, Fair, Fairly substantial pollution likely; 5.76-6.50, Fairly poor, Substantial pollution likely; 6.51-7.25, Poor, Very substantial pollution likely; 7.26-10.00, Very poor, Severe organic pollution likely; NA=not available) **/** habitat classification based on habitat assessment scores. Habitat assessment score labels: “Excellent” is ≥ 130,“Good” is 110-129.9, “Fair” is 80-109.9, “Poor” is < 80). † = estimated. N/A = Analyses not available because surveys were not conducted at these sites.

Appendix 5-1

Wetland location maps

US Route 30
Whiteside County

US Route 30
Whiteside County

Figure 1

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415b

US Route 30
Whiteside County

Figure 2

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

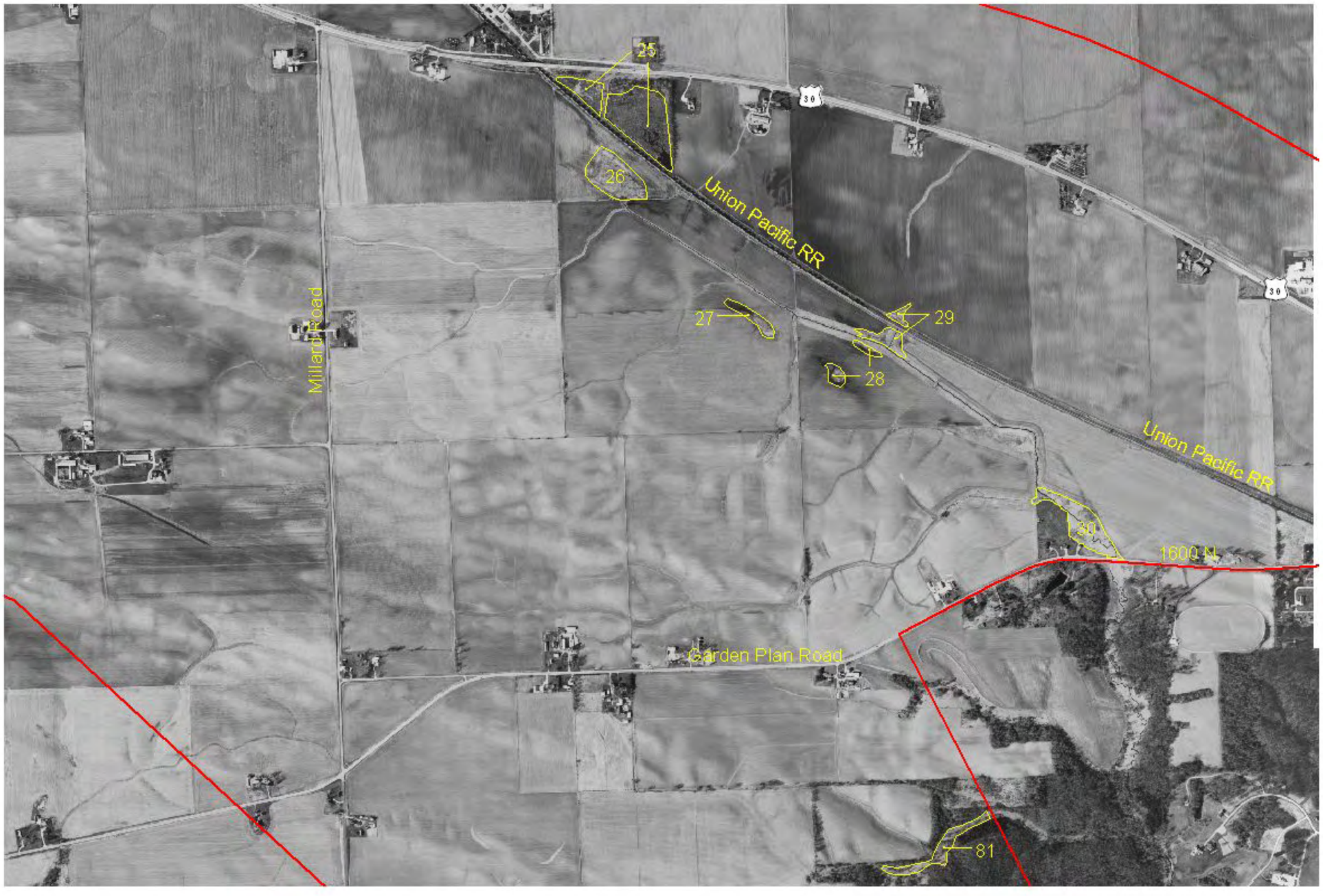
scale 1:14400
1 inch=1200 ft

01/08

415c

US Route 30
Whiteside County

Figure 3



Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415d

US Route 30
Whiteside County

Figure 4

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415e

US Route 30
Whiteside County

Figure 5

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415f

US Route 30
Whiteside County

Figure 6

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415g

US Route 30
Whiteside County

Figure 7

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

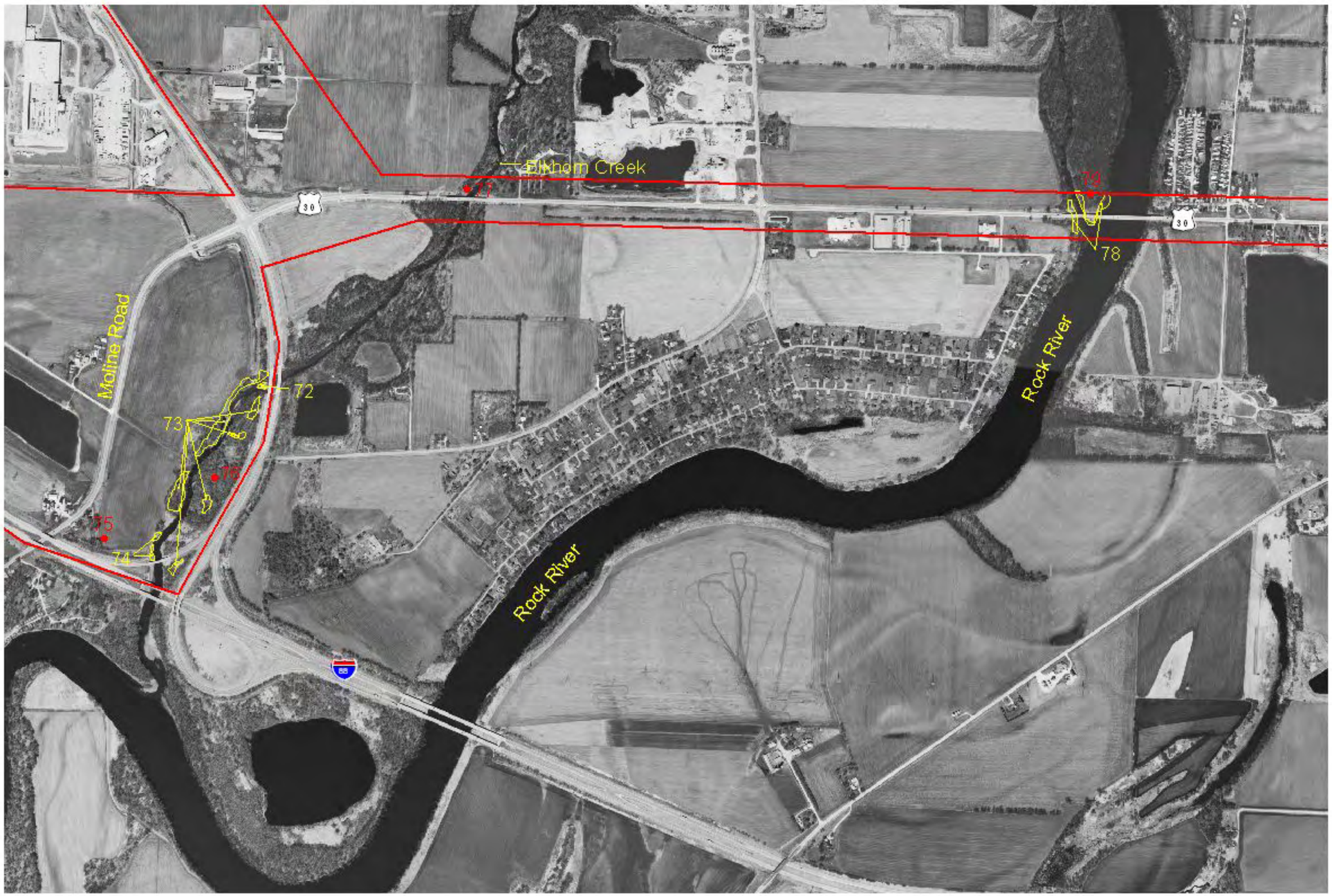
scale 1:14400
1 inch=1200 ft

01/08

415h

US Route 30
Whiteside County

Figure 8



Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415i

US Route 30
Whiteside County

Figure 9

Project boundary
Wetland site
Non-wet NWI site

0 1000 2000 Feet

0 500 Meters

scale 1:14400
1 inch=1200 ft

01/08

415j

Appendix 5-2
Wetland delineation forms

ROUTINE ON-SITE WETLAND DETERMINATION
Site 1 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NW ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 14.3 m (47 ft) south of US30 and 42.6 m (140 ft) east of IL84

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Gilford loam (Typic Endoaquoll)

On County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions?	Yes:	No: X	

Matrix color: 2.5Y 3/1 over 4/1
Other indicators: None

Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Gilford loam as a Typic Endoaquoll which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 1 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NW ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 14.3 m (47 ft) south of US30 and 42.6 m (140 ft) east of IL84

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.08 m (3 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and runoff from adjacent roads. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No:
Rationale: Low landscape position, the presence of hydric soils, and the absence of other methods for water to leave the site indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PSS1C (a seasonally flooded broad leaved deciduous scrub shrub palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
Scott Wiesbrook (soils and hydrology)
Brad Zercher (GIS)
Illinois Natural History Survey
1816 S. Oak Street
Champaign, Illinois 61820
(217) 265-7888 (Zylka)

ROUTINE ON-SITE WETLAND DETERMINATION

Site 1 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NW ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 14.3 m (47 ft) south of US30 and 42.6 m (140 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Anemone canadensis	meadow anemone	herb	FACW	4
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Betula nigra	red birch	tree	FACW	4
Boehmeria cylindrica	false nettle	herb	OBL	3
Bromus inermis	awnless brome grass	herb	UPL	*
Calystegia sepium	American bindweed	herb	FAC	1
Carex sp.	Sedge	herb	------	--
Cassia fasciculata	partridge pea	herb	FACU-	1
Cirsium discolor	pasture thistle	herb	UPL	3
Conyza canadensis	horseweed	herb	FAC-	0
Daucus carota	Queen Anne's lace	herb	UPL	*
Eleocharis palustris	great spike rush	herb	OBL	8
Eragrostis pectinacea	carolina love grass	herb	FAC	0
Erigeron philadelphicus	marsh fleabane	herb	FACW	3
Fraxinus pennsylvanica	green ash	herb	FACW	2
Galium aparine	annual bedstraw	herb	FACU	0
Geum laciniatum	rough avens	herb	FACW	2
Iris shrevei	southern blue flag	herb	OBL	5
Juniperus virginiana	eastern red cedar	tree	FACU	1
Lycopus americanus	common water horehound	herb	OBL	3
Parthenocissus quinquefolia	Virginia creeper	vine	FAC-	2
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Senecio pauperculus	balsam groundsel	herb	FAC+	3
Solidago gigantea	late goldenrod	herb	FACW	3
Spartina pectinata	freshwater cord grass	herb	FACW+	4
Stachys palustris	woundwort	herb	OBL	5
Vernonia fasciculata	common ironweed	herb	FACW	5

Continued on next page…

ROUTINE ON-SITE WETLAND DETERMINATION
Site 1 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NW ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 14.3 m (47 ft) south of US30 and 42.6 m (140 ft) east of IL84

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

mC_v = R/N = 75/28 =2.7
FQI = R/(√N) = 75/(√28) =14.2

ROUTINE ON-SITE WETLAND DETERMINATION
Site 2 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 12 m (39 ft) north of US30 and 25 m (82 ft) east of IL84

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb
Veronica peregrina	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Gilford loam (Typic Endoaquoll)

On County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions?	Yes:	No: X	

Matrix color: 2.5Y 3/1 over 4/1
Other indicators: None

Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Gilford loam as a Typic Endoaquoll which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 2 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 12 m (39 ft) north of US30 and 25 m (82 ft) east of IL84

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.08 m (3 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and runoff from adjacent impervious surfaces. Water leaves this site through evapotransipiration, soil infiltration, and runoff into the adjacent pond.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape and has hydric soils. These conditions will likely lead the site to be inundated for a sufficient period to meet the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PSS1C (a seasonally flooded, broad leaved deciduous, scrub-shrub palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 2 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 12 m (39 ft) north of US30 and 25 m (82 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Chenopodium album	lamb's quarters	herb	FAC-	*
Cirsium arvense	Canada thistle	herb	FACU	*
Conyza canadensis	horseweed	herb	FAC-	0
Cyperus sp.	Flatsedge	herb	---	-
Eleocharis obtusa	blunt spike rush	herb	OBL	2
Eragrostis pectinacea	carolina love grass	herb	FAC	0
Erechtites hieracifolia	fire weed	herb	FACU	2
Lactuca serriola	prickly lettuce	herb	FAC	*
Panicum dichotomiflorum	fall panicum	herb	FACW-	0
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum lapathifolium	curttop lady's thumb	herb	FACW+	0
Scirpus fluviatilis	river bulrush	herb	OBL	3
Sparganium eurycarpum	burreed	herb	OBL	5
Tragopogon pratensis	common goat's beard	herb	UPL	*
Veronica peregrina	purslane speedwell	herb	FACW+	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 16/14 = 1.1$
$FQI = R/(\sqrt{N}) = 16/(\sqrt{14}) = 4.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 3 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 70 m (230 ft) north of US30 79 m (260 ft) east of IL84

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
None		

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: No: X
Rationale: Less than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Water

On county hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox Concentrations?	Yes:	No: X
Redox Depletions?	Yes:	No: X

Matrix color: Undetermined
Other indicators: This site was completely inundated.
Hydric soils? Yes: X No:
Rationale: This site is a pond that is inundated for long or very long duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 3 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 70 m (230 ft) north of US30 79 m (260 ft) east of IL84

HYDROLOGY

Inundated: Yes: X No:
Depth of standing water: <2.0 m (79 in)
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is a pond and is inundated year round, except in extreme conditions. This satisfies the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although hydric soils and wetland hydrology are present, this pond is not vegetated enough for any species to be considered dominant. Due to a lack of dominant hydrophytic vegetation, this site is not a wetland. The NWI coded this site as a PEMAF (a farmed temporarily flooded emergent palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 3 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 70 m (230 ft) north of US30 79 m (260 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Boehmeria cylindrica	false nettle	herb	OBL	3
Bromus commutatus	hairy brome	herb	UPL	*
Lycopus americanus	common water horehound	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Plantago lanceolata	narrow-leaved plantain	herb	FAC	*
Polygonum amphibium	water smartweed	herb	OBL	3
Potentilla norvegica	rough cinquefoil	herb	FAC	0
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Trifolium repens	white clover	herb	FACU+	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 17/7 = 2.4$
$FQI = R/(\sqrt{N}) = 17/(\sqrt{7}) = 6.4$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 4 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 27 m (89 ft) south of US30 and 260 m (853 ft) east of IL84

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Potomogeton nodosus	OBL	herb
Typha angustifolia	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Zumbro sandy loam; revised to Water

On county hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox Concentrations?	Yes:	No: X
Redox Depletions?	Yes:	No: X

Matrix color: Undetermined
Other indicators: This site was completely inundated.
Hydric soils? Yes: X No:
Rationale: This site is a pond that is inundated for long or very long duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 4 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 27 m (89 ft) south of US30 and 260 m (853 ft) east of IL84

HYDROLOGY

Inundated: Yes: X No:
Depth of standing water: <2.0 m (79 in)
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and runoff from adjacent impervious surfaces. Water leaves this site through evapotransipiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is a vegetated pond that is likely inundated year round. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 4 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, SE ¼, Sec 33, R3E, T22N
Location: 27 m (89 ft) south of US30 and 260 m (853 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer saccharinum	silver maple	herb	FACW	1
Agropyron repens	quack grass	herb	FACU	*
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Bromus commutatus	hairy brome	herb	UPL	*
Calystegia sepium	American bindweed	herb	FAC	1
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium discolor	pasture thistle	herb	UPL	3
Eupatorium serotinum	late boneset	herb	FAC+	1
Fragaria virginiana	wild strawberry	herb	FAC-	2
Melilotus alba	white sweet clover	herb	FACU	*
Oenothera biennis	evening primrose	herb	FACU	1
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	herb/shrub	FAC+	2
Potamogeton nodosus	american pondweed	herb	OBL	7
Ranunculus abortivus	little-leaf buttercup	herb	FACW-	1
Rumex crispus	curly dock	herb	FAC+	*
Taraxacum officinale	common dandelion	herb	FACU	*
Tragopogon pratensis	common goat's beard	herb	UPL	*
Trifolium arvense	rabbit-foot clover	herb	UPL	*
Trifolium pratense	red clover	herb	FACU+	*
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Verbascum thapsus	woolly mullein	herb	UPL	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 25/12 = 2.1$
$FQI = R/(\sqrt{N}) = 25/(\sqrt{12}) = 7.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 5 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Agricultural Land
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 230 m (755 ft) south of US30 and 435 m (1427 ft) east of IL84

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Zea mays*	UPL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 0%

Hydrophytic vegetation: Yes: No: X
Rationale: Less than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Sawmill silty clay loam (Cumulic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions? Yes: X No: Color: 5G 5/1
Matrix color: N 2.5/ over N 5/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sawmill as a Cumulic Endoaquoll which is poorly drained. Presence of redox concentrations and depletions within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicators A11 – Depleted below dark surface and F6 – Redox dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 5 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Agricultural Land
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 230 m (755 ft) south of US30 and 435 m (1427 ft) east of IL84

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.10 m (4 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No:
Rationale: This site has hydric soils and no visible hydrologic outputs. There are also a number of wet depressions with standing water throughout the field. These signs indicate that wetland hydrology is likely present.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although hydric soils and wetland hydrology are present, dominant hydrophytic vegetation is not, thus we determined that this site is not a wetland. The NWI coded this site as a PEMC (a seasonally flooded emergent palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 5 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Agricultural Land
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N
Location: 230 m (755 ft) south of US30 and 435 m (1427 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Equisetum arvense	common horsetail	herb	FAC	0
Zea mays	corn	herb	UPL	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 0/1 = 0$
$FQI = R/(\sqrt{N}) = 0/(\sqrt{1}) = 0$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 6 (page 1 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow/pond
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N and
NW ¼, NW ¼, NW ¼, Sec 3, R3E, T21N and
E ½ Sec 34, R3E, T22N
Location: North and south of US 30 from Elston Road to Chase Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
1. *Phalaris arundinacea*	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Sawmill silty clay loam (Cumulic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions?	Yes: X	No:	Color: 5G 5/1

Matrix color: N 2.5/ over N 5/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sawmill as a Cumulic Endoaquoll which is poorly drained. Presence of redox concentrations and depletions within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicators A11 – Depleted below dark surface and F6 – Redox dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 6 (page 2 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow/pond
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N and
NW ¼, NW ¼, NW ¼, Sec 3, R3E, T21N and
E ½ Sec 34, R3E, T22N
Location: North and south of US 30 from Elston Road to Chase Road

HYDROLOGY
Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.10 m (4 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and from runoff from adjacent roads. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site has a low landscape position compared to surrounding land and has hydric soils. There are no visible hydrologic outputs. These signs indicate that wetland hydrology is likely present.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland), a PSS1C (a seasonally flooded, broad leaved deciduous, scrub-shrub palustrine wetland), a PSS1A (a temporarily flooded, broad leaved deciduous scrub-shrub palustrine wetland), a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland), and a PEMADF (a farmed, drained partially ditched, temporarily flooded, emergent palustrine wetland.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 6 (page 3 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow/pond
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N and
NW ¼, NW ¼, NW ¼, Sec 3, R3E, T21N and
E ½ Sec 34, R3E, T22N
Location: North and south of US 30 from Elston Road to Chase Road

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
Scott Wiesbrook (soils and hydrology)
Brad Zercher (GIS)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree	FACW	1
Agropyron repens	quack grass	herb	FACU	*
Agrostis alba	red top	herb	FACW	0
Alisma plantago-aquatica	broad-leaf water-plantain	herb	OBL	2
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Anemone canadensis	meadow anemone	herb	FACW	4
Angelica atropurpurea	angelica	herb	OBL	6
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Aster pilosus	hairy aster	herb	FACU+	0
Bromus commutatus	hairy brome	herb	UPL	*
Bromus inermis	awnless brome grass	herb	UPL	*
Carduus nutans	musk bristle thistle	herb	UPL	*
Carex stricta	tussock sedge	herb	OBL	5
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Conium maculatum	poison hemlock	herb	FACW	*
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Cyperus sp.	flatsedge	herb	---	-
Eleocharis erythropoda	red-rooted spike rush	herb	OBL	3
Eleocharis obtusa	blunt spike rush	herb	OBL	2

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 6 (page 4 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow/pond
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N and
NW ¼, NW ¼, NW ¼, Sec 3, R3E, T21N and
E ½ Sec 34, R3E, T22N
Location: North and south of US 30 from Elston Road to Chase Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Fraxinus pennsylvanica	green ash	herb/tree	FACW	2
Hordeum jubatum	squirrel-tail	herb	FAC+	*
Juncus tenuis	path rush	herb	FAC	0
Lactuca floridana	blue lettuce	herb	FAC-	4
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lobelia spicata	spiked lobelia	herb	FAC	4
Lotus corniculatus	birdsfoot-trefoil	herb	FAC-	*
Ludwigia peploides glabrescens	creeping primrose willow	herb	OBL	5
Lythrum alatum	winged loosestrife	herb	OBL	5
Medicago lupulina	black medic	herb	FAC-	*
Melilotus alba	white sweet clover	herb	FACU	*
Morus alba	white mulberry	tree	FAC	*
Oenothera biennis	evening primrose	herb	FACU	1
Pastinaca sativa	parsnip	herb	UPL	*
Penthorum sedoides	ditch stonecrop	herb	OBL	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Plantago rugelii	red-stalked plantain	herb	FAC	0
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Potamogeton nodosus	american pondweed	herb	OBL	7
Potentilla norvegica	rough cinquefoil	herb	FAC	0
Quercus bicolor	swamp white oak	tree	FACW+	7
Rhus glabra	smooth sumac	shrub	UPL	1
Rumex altissimus	pale dock	herb	FACW-	2
Rumex crispus	curly dock	herb	FAC+	*
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	herb/shrub/tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus atrovirens	dark green bulrush	herb	OBL	4

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 6 (page 5 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow/pond
Legal Description: NE ¼, NE ¼, NE ¼, Sec 4, R3E, T21N and
NW ¼, NW ¼, NW ¼, Sec 3, R3E, T21N and
E ½ Sec 34, R3E, T22N
Location: North and south of US 30 from Elston Road to Chase Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Scirpus cyperinus	wool grass	herb	OBL	5
Scirpus fluviatilis	river bulrush	herb	OBL	3
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Senecio pauperculus	balsam groundsel	herb	FAC+	3
Silene stellata	starry campion	herb	UPL	6
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Stachys palustris	woundwort	herb	OBL	5
Taraxacum officinale	common dandelion	herb	FACU	*
Thlaspi arvense	field penny cress	herb	UPL	*
Trifolium pratense	red clover	herb	FACU+	*
Trifolium repens	white clover	herb	FACU+	*
Triodanis perfoliata	venus' looking-glass	herb	FAC	2
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2
Verbascum thapsus	woolly mullein	herb	UPL	*
Vernonia fasciculata	common ironweed	herb	FACW	5
Vicia villosa	winter vetch	herb	UPL	*
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 130/49 = 2.7$
$FQI = R/(\sqrt{N}) = 130/(\sqrt{49}) = 18.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 7 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Scrub-shrub wetland
Legal Description: SE ¼, SW ¼, SW ¼, Sec 34, R3E, T22N
Location: 165 m (541 ft) south of US30 and 940 m (3083 ft) east of IL84

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb
Salix exigua	OBL	shrub
Solidago gigantea	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Sawmill silty clay loam (Cumulic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 2.5Y 3/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sawmill as a Cumulic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 7 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Scrub-shrub wetland
Legal Description: SE ¼, SW ¼, SW ¼, Sec 34, R3E, T22N
Location: 165 m (541 ft) south of US30 and 940 m (3083 ft) east of IL84

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.08 m (3 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape and is blocked from the adjacent creek by a berm of spoils. Water will naturally gather here and there are no visible outlets. These factors combined with hydric soils makes it likely that this site is inundated for a sufficient period to meet the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 7 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Scrub-shrub wetland
Legal Description: SE ¼, SW ¼, SW ¼, Sec 34, R3E, T22N
Location: 165 m (541 ft) south of US30 and 940 m (3083 ft) east of IL84

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Brassica nigra	black mustard	herb	UPL	*
Carex sp.	sedge	herb	------	--
Cirsium discolor	pasture thistle	herb	UPL	3
Equisetum arvense	common horsetail	herb	FAC	0
Galium aparine	annual bedstraw	herb	FACU	0
Geum canadense	white avens	herb	FAC	2
Lycopus americanus	common water horehound	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Salix exigua	sandbar willow	shrub	OBL	1
Sambucus canadensis	common elder	shrub	FACW-	2
Solidago gigantea	late goldenrod	herb	FACW	3
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Ulmus americana	American elm	tree	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 30/14 = 2.14$
$FQI = R/(\sqrt{N}) = 30/(\sqrt{14}) = 8.0$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 8 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 34, R3E, T22N
Location: 7 m (23 ft) south of US30 and directly west of Chase Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Populous deltoids	FAC+	tree
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 3/4 and 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 2.5Y 2.5/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 8 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 34, R3E, T22N
Location: 7 m (23 ft) south of US30 and directly west of Chase Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and runoff from adjacent impervious surfaces. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and lacks any visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 8 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 34, R3E, T22N
Location: 7 m (23 ft) south of US30 and directly west of Chase Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Bromus inermis	awnless brome grass	herb	UPL	*
Celtis occidentalis	hackberry	tree	FAC-	3
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Fraxinus pennsylvanica	green ash	herb/shrubtree	FACW	2
Galium aparine	annual bedstraw	herb	FACU	0
Lactuca floridana	blue lettuce	herb	FAC-	4
Lonicera maackii	Amur honeysuckle	shrub	UPL	*
Morus alba	white mulberry	shrub/tree	FAC	*
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Parthenocissus quinquefolia	Virginia creeper	vine	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Sambucus canadensis	common elder	shrub	FACW-	2
Silphium perfoliatum	cup plant	herb	FACW-	4
Smilax hispida	bristly greenbrier	vine	FAC	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Taraxacum officinale	common dandelion	herb	FACU	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 34/17 = 2$
$FQI = R/(\sqrt{N}) = 34/(\sqrt{17}) = 8.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 9 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: S ½, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 550 m (1804 ft) west of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb
Scirpus fluviatilis	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 9 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: S ½, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 550 m (1804 ft) west of Sand Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: From surface to 0.20 m (8 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water leaves this site through soil infiltration and evapotranspiration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low area on the landscape and has hydric soils. These factors make it likely that water persists here for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PUBGX (an excavated intermittently exposed unconsolidated bottom palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 9 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: S ½, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 550 m (1804 ft) west of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer saccharinum	silver maple	tree	FACW	1
Alisma plantago-aquatica	broad-leaf water-plantain	herb	OBL	2
Apios americana	groundnut	herb	FACW	4
Asclepias syriaca	common milkweed	herb	UPL	0
Boehmeria cylindrica	false nettle	herb	OBL	3
Calystegia sepium	American bindweed	herb	FAC	1
Carex vulpinoidea	fox sedge	herb	OBL	3
Eleocharis acicularis	needle spike rush	herb	OBL	3
Eupatorium serotinum	late boneset	herb	FAC+	1
Gleditsia triacanthos	honey locust	tree	FAC	2
Lemna minor	common duckweed	herb	OBL	3
Ludwigia alternifolia	seedbox	herb	OBL	5
Lycopus americanus	common water horehound	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	herb	FAC+	2
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Scirpus fluviatilis	river bulrush	herb	OBL	3
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Solanum carolinense	horse nettle	herb	FACU-	0
Solidago gigantea	late goldenrod	herb	FACW	3
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2
Wolffia columbiana	common watermeal	herb	OBL	5
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 62/26 = 2.4$
$FQI = R/(\sqrt{N}) = 65/(\sqrt{27}) = 12.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 10 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SE ¼, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 535 m (1804 ft) west of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 10 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SE ¼, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 535 m (1804 ft) west of Sand Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.20 m (8 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low area in the landscape, has hydric soils, and no visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period to meet the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 10 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SE ¼, NW ¼, SE ¼, Sec 34, R3E, T22N
Location: 110 m (361 ft) south of US 30 and 535 m (1804 ft) west of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Achillea millefolium	common milfoil	herb	FACU	*
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Andropogon gerardii	big bluestem	herb	FAC-	5
Asclepias syriaca	common milkweed	herb	UPL	0
Fraxinus pennsylvanica	green ash	tree	FACW	2
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	shrub	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Solidago gigantea	late goldenrod	herb	FACW	3
Taraxacum officinale	common dandelion	herb	FACU	*
Trifolium pratense	red clover	herb	FACU+	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 17/9 = 1.9$
$FQI = R/(\sqrt{N}) = 17/(\sqrt{9}) = 5.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 11 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 107 m (351 ft) south of US30 and 188 m (617 ft) west of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 11 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 107 m (351 ft) south of US30 and 188 m (617 ft) west of Sand Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.20 m (8 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotransipiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low area in the landscape, has hydric soils, and no visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period to meet the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 11 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 107 m (351 ft) south of US30 and 188 m (617 ft) west of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Boehmeria cylindrica	false nettle	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Fraxinus pennsylvanica	green ash	tree	FACW	2
Galium aparine	annual bedstraw	herb	FACU	0
Geum canadense	white avens	herb	FAC	2
Impatiens capensis	jewelweed	herb	FACW	2
Leonurus marrubiastrum	lion's-tail	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Rubus occidentalis	black raspberry	shrub	UPL	2
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Saponaria officinalis	bouncing bet	herb	FACU	*
Scirpus fluviatilis	river bulrush	herb	OBL	3
Stachys palustris	woundwort	herb	OBL	5
Toxicodendron radicans	poison ivy	shrub	FAC+	1
Ulmus americana	American elm	tree	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mC_V = R/N = 43/19 = 2.3$
$FQI = R/(\sqrt{N}) = 43/(\sqrt{19}) = 9.9$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 12 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and 130 m (426 ft) west of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
None	---	---

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 0%

Hydrophytic vegetation: Yes: No: X
Rationale: Less than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Water

On county hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox Concentrations?	Yes:	No: X
Redox Depletions?	Yes:	No: X

Matrix color: Undetermined
Other indicators: This site was completely inundated.
Hydric soils? Yes: X No:
Rationale: This site is a pond that is inundated for long or very long duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 12 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and 130 m (426 ft) west of Sand Road

HYDROLOGY

Inundated: Yes: X No:
Depth of standing water: <2.0 m (79 in)
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is an excavated pond and is likely inundated year round except during extreme conditions. Therefore, this site is inundated for a sufficient period to meet the wetlandy hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Despite having hydric soils and wetland hydrology present, this site is an excavated pond and no vegetation covers a sufficient area to be considered domininant. Due to the lack of hydrophytic vegetation, this site is not a wetland.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 12 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and 130 m (426 ft) west of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Carex sp.	sedge	herb	------	--
Iris shrevei	southern blue flag	herb	OBL	5
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 12/4 = 3$
$FQI = R/(\sqrt{N}) = 12/(\sqrt{4}) = 6$

ROUTINE ON-SITE WETLAND DETERMINATION

Site 13 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and directly west of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 13 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and directly west of Sand Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.20 m (8 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low position in the landscape, has hydric soils, and no visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 13 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, NE ¼, SE ¼, Sec 34, R3E, T22N
Location: 130 m (426 ft) south of US30 and directly west of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	herb/tree	FACW	1
Galium aparine	annual bedstraw	herb	FACU	0
Gleditsia triacanthos	honey locust	herb	FAC	2
Impatiens capensis	jewelweed	herb	FACW	2
Parthenocissus quinquefolia	Virginia creeper	vine	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Rubus occidentalis	black raspberry	shrub	UPL	2
Urtica dioica	stinging nettle	herb	FAC+	2
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 13/9 = 1.4$
$FQI = R/(\sqrt{N}) = 13/(\sqrt{9}) = 4.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 14 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NW ¼, SW ¼, Sec 35, R3E, T22N
Location: 340 m (1115 ft) south of US30 and 840 m (2755 ft) east of Chase Road.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Populous deltoids	FAC+	tree
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Plainfield sand; revised to generic Typic Psammaquent

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 4/1 and 4/2
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Typic Psammaquents as poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator S5 – Sandy redox.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 14 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NW ¼, SW ¼, Sec 35, R3E, T22N
Location: 340 m (1115 ft) south of US30 and 840 m (2755 ft) east of Chase Road.

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: Water marks on trees and blackened leaves were present at this site.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape and the presence of hydric soils, blackened leaves, and water marks indicate that this site is likely inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMCX (an excavated, seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 14 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NW ¼, SW ¼, Sec 35, R3E, T22N
Location: 340 m (1115 ft) south of US30 and 840 m (2755 ft) east of Chase Road.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Asclepias incarnata	swamp milkweed	herb	OBL	4
Equisetum arvense	common horsetail	herb	FAC	0
Lonicera maackii	Amur honeysuckle	shrub	UPL	*
Lycopus americanus	common water horehound	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Populus deltoides	eastern cottonwood	tree	FAC+	2
Robinia pseudoacacia	black locust	shrub	FACU-	1
Salix exigua	sandbar willow	shrub	OBL	1
Taraxacum officinale	common dandelion	herb	FACU	*
Tradescantia ohiensis	spiderwort	herb	FACU+	3
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 16/8 = 2.0$
$FQI = R/(\sqrt{N}) = 16/(\sqrt{8}) = 5.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 15 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, NW ¼, Sec 35, R3E, T22N
Location: 190 m (623 ft) south of US30 and 412 m (1352 ft) east of Sand Road

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Populous deltoids	FAC+	sapling
Aster simplex	FACW	herb
Ludwigia palustris	OBL	herb
Phalaris arundinacea	FACW+	herb
Scirpus validus	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 5/6 and 7.5YR 4/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: N 3/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicators A11 – Depleted below dark surface, F3 – Depleted matrix, and F6 – Redox Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 15 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, NW ¼, Sec 35, R3E, T22N
Location: 190 m (623 ft) south of US30 and 412 m (1352 ft) east of Sand Road

HYDROLOGY

Inundated: Yes: X No:
Depth of standing water: Your call - <2 m
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Allen Plocher
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 15 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, NW ¼, Sec 35, R3E, T22N
Location: 190 m (623 ft) south of US30 and 412 m (1352 ft) east of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Agalinus tenuifolia	slender false foxglove	herb	FACW	5
Agrostis alba	red top	herb	FACW	0
Alisma plantago aquatica	water plantain	herb	OBL	2
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Asclepias syriaca	common milkweed	herb	UPL	0
Aster simplex	panicled aster	herb	FACW	3
Betula nigra	river birch	sapling	FACW	4
Bidens frondosa	beggar's ticks	herb	FACW	1
Carex sp	sedge	herb	-------	--
Carex trichocarpa	sedge	herb	OBL	6
Cyperus esculentus	chufa	herb	FACW	0
Echinochloa muricata	barnyard grass	herb	OBL	0
Eleocharis erythropoda	red rooted spikerush	herb	OBL	3
Epilobium coloratum	cinnamon willow herb	herb	OBL	3
Eupatorium serotinum	late flowering thoroughwort	herb	FAC+	1
Helenium autumnale	sneezeweed	herb	FACW+	3
Juncus interior	inland rush	herb	FAC+	3
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lemna minor	duckweed	herb	OBL	3
Ludwigia palustris	marsh seedbox	herb	OBL	4
Mimulus ringens	monkey flower	herb	OBL	5
Phalaris arundinacea	reed canarygrass	herb	FACW+	*
Populus deltoides	cottonwood	sapling	FAC+	2
Rumex altissimus	pale dock	herb	FACW-	2
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix amygdaloides	peach leaf willow	sapling/shrub	FACW	4
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree/sapling	OBL	3
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Scirpus validus	great bulrush	herb	OBL	4
Senecio pauperculus	balsam groundsel	herb	FAC+	4
Setaria glauca	yellow foxtail	herb	FAC	*
Silphium perfoliatum	cup plant	herb	FACW-	4
Solidago gigantea	late goldenrod	herb	FACW	3
Typha angustifolia	narrow leaf cattail	herb	OBL	*

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 15 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: SW ¼, SE ¼, NW ¼, Sec 35, R3E, T22N
Location: 190 m (623 ft) south of US30 and 412 m (1352 ft) east of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Typha latifolia	common cattail	herb	OBL	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 85/32 = 2.7$
$FQI = R/(\sqrt{N}) = 85/(\sqrt{32}) = 15.0$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 16 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Shrubland
Legal Description: SE ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: 500 m (1640 ft) south of US30 and 570 m (1870 ft) west of Frog Pond Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Salix exigua	OBL	shrub

Percentage of dominant species that are OBL, FACW, FAC+, or FAC:

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Faxon silty clay loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes:	No: X	Color: N/A
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Faxon as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 16 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Shrubland
Legal Description: SE ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: 500 m (1640 ft) south of US30 and 570 m (1870 ft) west of Frog Pond Road

HYDROLOGY

Inundated: Yes: X No:
Depth of standing water: <0.15 m (6 in)
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters flows through this site because it is a ditch. Water also enters through precipitation and sheetflow and exits through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is a man made ditch and is likely to stay saturated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Despite having hydric soils, hydrophytic vegetation, and wetland hydrology, this site does not qualify as a wetland because it is a man made feature excavated for drainage purposes The NWI coded this site as a PEMCX (an excavated, seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 16 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Shrubland
Legal Description: SE ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: 500 m (1640 ft) south of US30 and 570 m (1870 ft) west of Frog Pond Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Salix exigua	sandbar willow	shrub	OBL	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 1/1 = 1$
$FQI = R/(\sqrt{N}) = 1/(\sqrt{1}) = 1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 17 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: N ½, SW ¼, NW ¼, Sec 36, R3E, T22N
Location: 415 m (1361 ft) south of US30 and 86 m (282 ft) east of Frog Pond Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 17 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: N ½, SW ¼, NW ¼, Sec 36, R3E, T22N
Location: 415 m (1361 ft) south of US30 and 86 m (282 ft) east of Frog Pond Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and runoff from adjacent impervious surfaces. Water exits this site through soil infiltration and evapotranspiration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low area in the landscape, has hydric soils, and no visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period of time to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 17 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: N ½, SW ¼, NW ¼, Sec 36, R3E, T22N
Location: 415 m (1361 ft) south of US30 and 86 m (282 ft) east of Frog Pond Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Angelica atropurpurea	angelica	herb	OBL	6
Calystegia sepium	American bindweed	herb	FAC	1
Cirsium discolor	pasture thistle	herb	UPL	3
Conium maculatum	poison hemlock	herb	FACW	*
Cryptotaenia canadensis	honewort	herb	FAC	1
Daucus carota	Queen Anne's lace	herb	UPL	*
Erigeron annuus	annual fleabane	herb	FAC-	1
Galium aparine	annual bedstraw	herb	FACU	0
Oenothera biennis	evening primrose	herb	FACU	1
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Solidago gigantea	late goldenrod	herb	FACW	3
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 22/11 = 2.0$
$FQI = R/(\sqrt{N}) = 22/(\sqrt{11}) = 6.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 18 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SW ¼, SE ¼, Sec 31, R4E, T22N
Location: 1430 m (4691 ft) south of US30 and 2450 m (8038 ft) east of Frog Pond Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Ambrosia trifida	FAC+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Palms muck (Terric Haplosaprist)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes: X	No:	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes:	No: X	Color: N/A
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/
Other indicators: None.

Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Palms as a Terric Haplosaprist which is very poorly drained. Presence of muck indicates a saturated and reduced environment. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A1 – Histosol.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 18 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SW ¼, SE ¼, Sec 31, R4E, T22N
Location: 1430 m (4691 ft) south of US30 and 2450 m (8038 ft) east of Frog Pond Road

HYDROLOGY

Inundated: No
Depth of inundation: N/A
Depth to saturated soil: From surface to 0.48 m (19 in Overview of hydrological flow through the system: Water enters this site through precipitation, runoff, and possibly from groundwater. Water exits this site through soil infiltration and evapotranspiration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is at the base of a hillside and likely receives hydrologic inputs from sheetflow from that source. The site has hydric soils and no visible hydrologic outputs. Based on these factos it is likely the site is saturated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 18 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SW ¼, SE ¼, Sec 31, R4E, T22N
Location: 1430 m (4691 ft) south of US30 and 2450 m (8038 ft) east of Frog Pond Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Alliaria petiolata	garlic mustard	herb	FAC	*
Ambrosia trifida	giant ragweed	herb	FAC+	0
Conium maculatum	poison hemlock	herb	FACW	*
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Lychnis alba	evening campion	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Solidago gigantea	late goldenrod	herb	FACW	3
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 14/6 = 2.3$
$FQI = R/(\sqrt{N}) = 14/(\sqrt{6}) = 5.7$

ROUTINE ON-SITE WETLAND DETERMINATION

Site 19 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Sedge meadow
Legal Description: E ½, Sec 31, R4E, T22N
Location: 660 m (2165 ft) south of US30 and 2375 m (7792 ft) east of Frog Pond Road.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Carex stricta	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Palms muck (Terric Haplosaprist)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes: X	No:	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes:	No: X	Color: N/A
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 10B 4/1
Other indicators: None.

Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Palms as a Terric Haplosaprist which is very poorly drained. Presence of muck indicates a saturated and reduced environment. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A1 – Histosol.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 19 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Sedge meadow
Legal Description: E ½, Sec 31, R4E, T22N
Location: 660 m (2165 ft) south of US30 and 2375 m (7792 ft) east of Frog Pond Road.

HYDROLOGY
Inundated: No
Depth of inundation: N/A
Depth to saturated soil: From surface to 0.41 m (16 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, runoff, and groundwater. Water leaves this site through evapotranspiration, sheetflow, and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is a series of wet depressions along a hillside that is being grazed by cattle. The depressions are significantly wetter than the surrounding hillside and are likely being influenced by groundwater. The conditions at the site make it apparent that the site is inundated for a sufficient period to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland) and a PEMA (a temporarily flooded emergent palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 19 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Sedge meadow
Legal Description: E ½, Sec 31, R4E, T22N
Location: 660 m (2165 ft) south of US30 and 2375 m (7792 ft) east of Frog Pond Road.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Asclepias incarnata	swamp milkweed	herb	OBL	4
Aster puniceus	swamp aster	herb	OBL	7
Bidens tripartita	beggar's ticks	herb	OBL	2
Caltha palustris	cowslip	herb	OBL	7
Carex bebbii	beautiful sedge	herb	OBL	8
Carex frankii	sedge	herb	OBL	4
Carex hystricina	bottlebrush sedge	herb	OBL	6
Carex sartwellii	sartwell sedge	herb	OBL	5
Carex stipata	prickly sedge	herb	OBL	2
Carex stricta	tussock sedge	herb	OBL	5
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium discolor	pasture thistle	herb	UPL	3
Cryptotaenia canadensis	honewort	herb	FAC	1
Eleocharis erythropoda	red-rooted spike rush	herb	OBL	3
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Eupatorium perfoliatum	common boneset	herb	FACW+	4
Eupatorium serotinum	late boneset	herb	FAC+	1
Galium boreale	northern bedstraw	herb	FAC	7
Geum canadense	white avens	herb	FAC	2
Glyceria striata	fowl manna grass	herb	OBL	4
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Lathyrus palustris	marsh peavine	herb	OBL	7
Lycopus americanus	common water horehound	herb	OBL	3
Lythrum alatum	winged loosestrife	herb	OBL	5
Oenothera biennis	evening primrose	herb	FACU	1
Onoclea sensibilis	sensitive fern	herb	FACW	5
Penthorum sedoides	ditch stonecrop	herb	OBL	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum punctatum	dotted smartweed	herb	OBL	3
Pycnanthemum tenuifolium	slender mountain mint	herb	FAC	4
Pycnanthemum virginianum	common mountain mint	herb	FACW+	5

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 19 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Sedge meadow
Legal Description: E ½, Sec 31, R4E, T22N
Location: 660 m (2165 ft) south of US30 and 2375 m (7792 ft) east of Frog Pond Road.

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ranunculus sceleratus	cursed crowfoot	herb	OBL	3
Rumex crispus	curly dock	herb	FAC+	*
Saxifraga pensylvanica	swamp saxifrage	herb	OBL	10
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Solidago gigantea	late goldenrod	herb	FACW	3
Sphenopholis obtusata	prairie wedge grass	herb	FAC	5
Stachys palustris	woundwort	herb	OBL	5
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Typha latifolia	cattail	herb	OBL	1
Ulmus americana	American elm	tree	FACW-	5
Verbena hastata	blue vervain	herb	FACW+	3
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 165/42 = 3.9$
$FQI = R/(\sqrt{N}) = 165/(\sqrt{42}) = 25.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 20 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: NE ¼, SE ¼, Sec 31, R4E, T22N
Location: 800 m (2624 ft) south of US30 and 1000 m (3281 ft) west of Millard Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Sable silt loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 3/4 and 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 2.5Y 2.5/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sable as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 20 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: NE ¼, SE ¼, Sec 31, R4E, T22N
Location: 800 m (2624 ft) south of US30 and 1000 m (3281 ft) west of Millard Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: From surface to 0.30 m (12 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot on the landscape, has hydric soils, and no visible hydrologic outputs. These factors make it likely that this site is inundated for a sufficient period of time to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 20 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: NE ¼, SE ¼, Sec 31, R4E, T22N
Location: 800 m (2624 ft) south of US30 and 1000 m (3281 ft) west of Millard Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Alisma plantago-aquatica	broad-leaf water-plantain	herb	OBL	2
Eleocharis acicularis	needle spike rush	herb	OBL	3
Eleocharis erythropoda	red-rooted spike rush	herb	OBL	3
Lemna minor	common duckweed	herb	OBL	3
Lycopus americanus	common water horehound	herb	OBL	3
Lythrum alatum	winged loosestrife	herb	OBL	5
Oenothera biennis	evening primrose	herb	FACU	1
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	tree	FAC+	2
Potamogeton nodosus	american pondweed	herb	OBL	7
Rumex altissimus	pale dock	herb	FACW-	2
Rumex crispus	curly dock	herb	FAC+	*
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Solidago canadensis	Canada goldenrod	herb	FACU	1
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Verbena hastata	blue vervain	herb	FACW+	3
Verbena urticifolia	white vervian	herb	FAC+	3

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 56/20 = 2.8$
$FQI = R/(\sqrt{N}) = 56/(\sqrt{20}) = 12.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 21 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SW ¼, NW ¼, Sec 32, R4E, T22N
Location: 280 m (919 ft) south of US30 and 670 m (2198 ft) west of Millard Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb
Eleocharis acicularis	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Sable silt loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 3/1 over 5/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sable as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 21 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SW ¼, NW ¼, Sec 32, R4E, T22N
Location: 280 m (919 ft) south of US30 and 670 m (2198 ft) west of Millard Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: From surface to <2.0 m (79 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: No:
Rationale: This site is a depression in a cropfield. Its low landscape position, hydric soils, and no visible hydrologic outputs make it likely that it stays inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 21 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SW ¼, NW ¼, Sec 32, R4E, T22N
Location: 280 m (919 ft) south of US30 and 670 m (2198 ft) west of Millard Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Calystegia sepium	American bindweed	herb	FAC	1
Eleocharis acicularis	needle spike rush	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum punctatum	dotted smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	herb	OBL	1
Setaria faberi	giant foxtail	herb	FACU+	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 10/5 = 2.0$
$FQI = R/(\sqrt{N}) = 10/(\sqrt{5}) = 4.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 22 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SE ¼, NE ¼, Sec 31, R4E, T22N
Location: 460 m (1509 ft) south of US30 and 980 m (3215 ft) west of Millard Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb
Carex vulpinoidea	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Plainfield sand; revised to generic Typic Endoaquoll

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4 and 3/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Typic Endoaquolls as poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 22 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SE ¼, NE ¼, Sec 31, R4E, T22N
Location: 460 m (1509 ft) south of US30 and 980 m (3215 ft) west of Millard Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 22 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SE ¼, NE ¼, Sec 31, R4E, T22N
Location: 460 m (1509 ft) south of US30 and 980 m (3215 ft) west of Millard Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer saccharinum	silver maple	shrub	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Bromus inermis	awnless brome grass	herb	UPL	*
Carex vulpinoidea	fox sedge	herb	OBL	3
Catalpa speciosa	cigar tree	shrub	FACU	5
Juglans nigra	black walnut	tree	FACU	4
Onoclea sensibilis	sensitive fern	herb	FACW	5
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum persicaria	spotted lady's thumb	herb	FACW	*
Rubus occidentalis	black raspberry	shrub	UPL	2
Smilax hispida	bristly greenbrier	vine	FAC	3
Smilax hispida	bristly greenbrier	vine	FAC	3
Toxicodendron radicans	poison ivy	shrub	FAC+	1
Ulmus americana	American elm	shrub	FACW-	5
Verbena hastata	blue vervain	herb	FACW+	3
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 40/14 = 2.9$
$FQI = R/(\sqrt{N}) = 40/(\sqrt{14}) = 10.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 23 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SE ¼, NW ¼, SE ¼, Sec 30, R4E, T22N
Location: 225 m (738 ft) north of US30 and 504 m (1653 ft) east of Acker Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb
Lemna minor	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Wakeland silt loam; revised to Birds silt loam (Typic Fluvaquent)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Birds as a Typic Fluvaquent which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 23 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SE ¼, NW ¼, SE ¼, Sec 30, R4E, T22N
Location: 225 m (738 ft) north of US30 and 504 m (1653 ft) east of Acker Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: From surface to <1.50 m (59 in)
Overview of hydrological flow through the system: Water enters this site through sheetflow, precipitation, and runoff from adjacent impervious surfaces. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland) and a PUBG (an intermittently exposed unconsolidated bottom palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 23 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SE ¼, NW ¼, SE ¼, Sec 30, R4E, T22N
Location: 225 m (738 ft) north of US30 and 504 m (1653 ft) east of Acker Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Apios americana	groundnut	herb	FACW	4
Bidens frondosa	common beggar's ticks	herb	FACW	1
Catalpa speciosa	cigar tree	tree	FACU	5
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Echinochloa muricata	barnyard grass	herb	OBL	0
Equisetum arvense	common horsetail	herb	FAC	0
Galium aparine	annual bedstraw	herb	FACU	0
Glyceria striata	fowl manna grass	herb	OBL	4
Impatiens capensis	jewelweed	herb	FACW	2
Lemna minor	common duckweed	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ranunculus sceleratus	cursed crowfoot	herb	OBL	3
Rubus occidentalis	black raspberry	shrub	UPL	2
Stellaria longifolia	chickweed	herb	FACW+	6
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 39/17=2.3$
$FQI = R/(\sqrt{N}) = 39/(\sqrt{17}) =9.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 24 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SW ¼, NE ¼, Sec 30, R4E, T22N
Location:770 m (2526 ft) north of US30 and 680 m (2230 ft) east of Acker Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundincaea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Orio loam (Mollic Endoaqualf)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/4 and 5/6
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 3/1 over 4/1 and 4/2
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Orio as a Mollic Endoaqualf which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 24 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SW ¼, NE ¼, Sec 30, R4E, T22N
Location:770 m (2526 ft) north of US30 and 680 m (2230 ft) east of Acker Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >.41 m (16 in
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 24 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, SW ¼, NE ¼, Sec 30, R4E, T22N
Location:770 m (2526 ft) north of US30 and 680 m (2230 ft) east of Acker Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Bidens frondosa	common beggar's ticks	herb	FACW	1
Panicum dichotomiflorum	fall panicum	herb	FACW-	0
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Salix nigra	black willow	herb	OBL	3
Solanum carolinense	horse nettle	herb	FACU-	0
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 7/9 = 0.8$
$FQI = R/(\sqrt{N}) = 7/(\sqrt{9}) = 2.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 25 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 45 m (148 ft) south of US30 and 3250 m (10, 662 ft) east of Millard Road.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Salix exigua	OBL	shrub
Typha latifolia	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Millington silt loam (Cumulic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Millington as a Cumulic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 25 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 45 m (148 ft) south of US30 and 3250 m (10, 662 ft) east of Millard Road.

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.08 m (3 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and runoff from adjacent impervious surfaces. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 25 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Marsh
Legal Description: SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 45 m (148 ft) south of US30 and 3250 m (10, 662 ft) east of Millard Road.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Agrimonia pubescens	soft agrimony	herb	UPL	5
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Aster puniceus	swamp aster	herb	OBL	7
Boehmeria cylindrica	false nettle	herb	OBL	3
Carex sp.	sedge	herb	------	--
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Coronilla varia	crown vetch	herb	UPL	*
Equisetum arvense	common horsetail	herb	FAC	0
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Eupatorium perfoliatum	common boneset	herb	FACW+	4
Eupatorium serotinum	late boneset	herb	FAC+	1
Fragaria virginiana	wild strawberry	herb	FAC-	2
Fraxinus pennsylvanica	green ash	tree	FACW	2
Glechoma hederacea	ground ivy	herb	FACU	*
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Lonicera maackii	Amur honeysuckle	shrub	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Rosa palustris	swampy rose	shrub	OBL	7
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Toxicodendron radicans	poison ivy	shrub	FAC+	1
Typha latifolia	cattail	herb	OBL	1
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 61/24 = 2.5$
$FQI = R/(\sqrt{N}) = /(\sqrt{}) = 12.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 26 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½, SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 266 m (872 ft) south of US30 and 3312 m (10, 866 ft) east of Millard Road.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Ambrosia trifida	FAC+	herb
Solidago gigantean	FACW	herb
Solidago canadensis	FACU	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 67%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Prophetstown silt loam; revised to Drummer silt loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 3/4 and 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over 4/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 26 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½, SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 266 m (872 ft) south of US30 and 3312 m (10, 866 ft) east of Millard Road.

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.41 m (16 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 26 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 13 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½, SW ¼, SE ¼, Sec 3, R4E, T21N
Location: 266 m (872 ft) south of US30 and 3312 m (10, 866 ft) east of Millard Road.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ambrosia trifida	giant ragweed	herb	FAC+	0
Asclepias syriaca	common milkweed	herb	UPL	0
Carex frankii	sedge	herb	OBL	4
Carex stipata	prickly sedge	herb	OBL	2
Carex vulpinoidea	fox sedge	herb	OBL	3
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Galium aparine	annual bedstraw	herb	FACU	0
Geum canadense	white avens	herb	FAC	2
Glyceria striata	fowl manna grass	herb	OBL	4
Juncus dudleyi	Dudley's rush	herb	FAC	4
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Rumex crispus	curly dock	herb	FAC+	*
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Urtica dioica	stinging nettle	herb	FAC+	2
Verbascum thapsus	woolly mullein	herb	UPL	*
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 38/18 = 2.1$
$FQI = R/(\sqrt{N}) = 38/(\sqrt{18}) = 9.0$

ROUTINE ON-SITE WETLAND DETERMINATION

Site 27 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, NE ¼, Sec 10, R4E, T21N
Location: 755 m (2477 ft) south of US30 and 3766 m (12,355 ft) east of CR-19

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Typha latifolia	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Elburn silt loam; revised to Drummer silt loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/4 and 4/6
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 3/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 27 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, NE ¼, Sec 10, R4E, T21N
Location: 755 m (2477 ft) south of US30 and 3766 m (12,355 ft) east of CR-19

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.13 m (5 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 27 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, NE ¼, Sec 10, R4E, T21N
Location: 755 m (2477 ft) south of US30 and 3766 m (12,355 ft) east of CR-19

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Asclepias syriaca	common milkweed	herb	UPL	0
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Carex frankii	sedge	herb	OBL	4
Carex stipata	prickly sedge	herb	OBL	2
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Eupatorium perfoliatum	common boneset	herb	FACW+	4
Juncus dudleyi	Dudley's rush	herb	FAC	4
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lycopus americanus	common water horehound	herb	OBL	3
Lythrum alatum	winged loosestrife	herb	OBL	5
Mentha arvensis villosa	field mint	herb	FACW	4
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Solidago canadensis	Canada goldenrod	herb	FACU	1
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 57/22 = 2.6$
$FQI = R/(\sqrt{N}) = 57/(\sqrt{22}) = 12.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 28 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, NW ¼, Sec 11, R4E, T21N
Location: 860 m (2821 ft) south of US30 and 2210 m (7250 ft) west of Carroll Road

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Ambrosia trifida	FAC+	herb
Scirpus atrovirens	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC:

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Elburn silt loam; revised to Drummer silt loam (Typic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 28 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, NW ¼, Sec 11, R4E, T21N
Location: 860 m (2821 ft) south of US30 and 2210 m (7250 ft) west of Carroll Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.08 m (3 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

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DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA (a temporarily flooded emergent palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 28 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, NW ¼, Sec 11, R4E, T21N
Location: 860 m (2821 ft) south of US30 and 2210 m (7250 ft) west of Carroll Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer saccharinum	silver maple	tree	FACW	1
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Asclepias incarnata	swamp milkweed	herb	OBL	4
Asclepias syriaca	common milkweed	herb	UPL	0
Brassica nigra	black mustard	herb	UPL	*
Carex frankii	sedge	herb	OBL	4
Carex vulpinoidea	fox sedge	herb	OBL	3
Eleocharis erythropoda	red-rooted spike rush	herb	OBL	3
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Eupatorium perfoliatum	common boneset	herb	FACW+	4
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Juncus dudleyi	Dudley's rush	herb	FAC	4
Lythrum alatum	winged loosestrife	herb	OBL	5
Melilotus officinalis	yellow sweet clover	herb	FACU	*
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Polygonum punctatum	dotted smartweed	herb	OBL	3
Ranunculus abortivus	little-leaf buttercup	herb	FACW-	1
Rumex crispus	curly dock	herb	FAC+	*
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Setaria faberi	giant foxtail	herb	FACU+	*
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 51/23 = 2.2$
$FQI = R/(\sqrt{N}) = 51/(\sqrt{23}) = 10.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 29 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: W ½, NW ¼, Sec 11, R4E, T21N
Location: 635 m (2083 ft) south of US30 and 1990 m (6528 ft) west of Carroll Road

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Helianthus grosseserratus	FACW-	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Elburn silt loam; revised to Drummer silt loam (Typic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/6 and 7.5YR 4/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 29 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: W ½, NW ¼, Sec 11, R4E, T21N
Location: 635 m (2083 ft) south of US30 and 1990 m (6528 ft) west of Carroll Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: 0.15 m (6 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, runoff from adjacent impervious surfaces and overflow from and adjacent ditch. Water exits this site through evapotranspiration, soil infiltration, and runoff into an adjacent ditch.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape and the hydrologic inputs outweigh the hydrologic outputs, thus making it likely that this site is inundated for a sufficient duration to ensure that the wetland hydrology criteria is met.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA (a temporarily flooded emergent palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek (vegetation, GPS and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 29 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: W ½, NW ¼, Sec 11, R4E, T21N
Location: 635 m (2083 ft) south of US30 and 1990 m (6528 ft) west of Carroll Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Arctium minus	common burdock	herb	UPL	*
Asclepias syriaca	common milkweed	herb	UPL	0
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Equisetum arvense	common horsetail	herb	FAC	0
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum amphibium	water smartweed	herb	OBL	3
Salix glaucophylloides glaucophylla	blue-leaf willow	shrub	FACW	8
Sambucus canadensis	common elder	shrub	FACW-	2
Spartina pectinata	freshwater cord grass	herb	FACW+	4
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 30/15 = 2.0$
$FQI = R/(\sqrt{N}) = 30/(\sqrt{15}) = 7.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 30 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SE ¼, Sec 11, R4E, T21N
Location: 1118 m (3668 ft) south of US 30 and 2350 m (7710 ft) east of CR-19

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Sawmill and Birds; revised to Sawmill silty clay loam (Cumulic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 7.5YR 4/4 and 4/6
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 2/1 and 3/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Sawmill as a Cumulic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 30 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SE ¼, Sec 11, R4E, T21N
Location: 1118 m (3668 ft) south of US 30 and 2350 m (7710 ft) east of CR-19

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.46 m (18 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, runoff from adjacent impervious surfaces, and overflow from an adjacent ditch. Water exits this site through soil infiltration, evapotranspiration, and runoff into the adjacent ditch.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot on the landscape and has hydric soils. The drainage provided by the ditch through the middle of the site is likely balanced out by overflow from the ditch and other inputs. These factors indicate that this site is likely inundated for a sufficient duration to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA (a temporarily flooded emergent palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 30 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: E ½, SE ¼, Sec 11, R4E, T21N
Location: 1118 m (3668 ft) south of US 30 and 2350 m (7710 ft) east of CR-19

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Angelica atropurpurea	angelica	herb	OBL	6
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Aster puniceus	swamp aster	herb	OBL	7
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Salix exigua	sandbar willow	shrub	OBL	1
Sambucus canadensis	common elder	shrub	FACW-	2
Solidago gigantea	late goldenrod	herb	FACW	3

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 28/11 = 2.5$
$FQI = R/(\sqrt{N}) = 28/(\sqrt{11}) = 8.4$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 31 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 29, T 21 N, R 6 E
Location: Surrounding Deer Creek, immediately south of Matthew Road and extending southward

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Acer negundo*	FACW-	tree
2. *Morus alba*	FAC	tree
3. *Juglans nigra*	FACU	tree
4. *Acer negundo*	FACW-	sapling
5. *Morus alba*	FAC	sapling
6. *Lonicera tatarica*	FACU	shrub
7. *Rhus glabra*	UPL	shrub
8. *Laportea canadensis*	FACW	herb
9. *Toxicodendron radicans*	FAC+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 67%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 31 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 29, T 21 N, R 6 E
Location: Surrounding Deer Creek, immediately south of Matthew Road and extending southward

SOILS

Series and phase: Mapped as Wakeland silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 10YR 4/3
Other indicators: N/A

Hydric soils: Yes: No: X
Rationale: The NRCS classifies Wakeland as an Aeric Fluvaquents that is somewhat poorly drained. This soil has neither a low chroma matrix nor any redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 31 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 29, T 21 N, R 6 E
Location: Surrounding Deer Creek, immediately south of Matthew Road and extending southward

HYDROLOGY

Inundated: No Depth of standing water: None
Depth to saturated soil: About 0.76 m (30 in)
Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to a stream.

Wetland hydrology: Yes: No: X
Rationale: Although this site is located adjacent to Deer Creek, it is substantially elevated and does not appear to readily collect and hold substantial amounts of water. The site, therefore, is not inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 31 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 29, T 21 N, R 6 E
Location: Surrounding Deer Creek, immediately south of Matthew Road and extending southward

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Angelica atropurpurea	angelica	herb	OBL	6
Apios americana	groundnut	herb	FACW	4
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Campanula americana	American bellflower	herb	FAC	4
Cirsium discolor	pasture thistle	herb	UPL	3
Erigeron annuus	annual fleabane	herb	FAC-	1
Fraxinus pennsylvanica	green ash	tree, sapling, shrub	FACW	2
Geum canadense	white avens	herb	FAC	2
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Helianthus tuberosus	Jerusalem artichoke	herb	FAC	3
Juglans nigra	black walnut	tree, sapling, shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia virginica	white grass	herb	FACW	4
Lonicera tatarica	Tartarian honeysuckle	shrub	FACU	*

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 31 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 29, T 21 N, R 6 E
Location: Surrounding Deer Creek, immediately south of Matthew Road and extending southward

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Morus alba	white mulberry	tree, sapling, shrub	FAC	*
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Parthenocissus quinquefolia	Virginia creeper	vine, herb	FAC-	2
Pastinaca sativa	parsnip	herb	UPL	*
Phleum pratense	Timothy	herb	FACU	*
Rhus glabra	smooth sumac	shrub	UPL	1
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree, sapling, shrub	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Silphium perfoliatum	cup plant	herb	FACW-	4
Smilax hispida	bristly greenbrier	vine, herb	FAC	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Teucrium canadense	American germander	herb	FACW-	3
Toxicodendron radicans	poison ivy	vine, herb	FAC+	1
Trifolium pratense	red clover	herb	FACU+	*
Verbesina alternifolia	wingstem	herb	FACW	4
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 76/√31 = 13.7
mean C = R/N = 76/31 = 2.5

ROUTINE ON-SITE WETLAND DETERMINATION

Site 32 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 12, R4E, T21N
Location: 87 m (285 ft) south of US30 and 480 m (1574 ft) west of Norton Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree
Glechoma hederacea	FACU	herb
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 67%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Lawson silt loam (Aquic Cumulic Hapludoll)

On county hydric soils list?	Yes:	No: X	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/4 (very few at depth only)
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 10YR 3/2
Other indicators: None.

Hydric soils? Yes: No: X

Rationale: The Natural Resources Conservation Service identifies Lawson as an Aquic Cumulic Hapludoll which is somewhat poorly drained. The presence of very few redoximorphic features only at depths greater than 0.5 m within a medium low chroma matrix indicates conditions of saturation for very brief duration during the growing season. Therefore, the soil at this site does not meet the hydric soil criteria. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 32 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 12, R4E, T21N
Location: 87 m (285 ft) south of US30 and 480 m (1574 ft) west of Norton Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: > 0.66 m (26 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: No: X
Rationale: This site is higher than some of the surrounding landscape. Non-hydric soils and it's positon on the landscape make it likely that this site will drain rapidly and not be inundated long enough to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Thus, this site is not a wetland. The NWI coded this site as a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 32 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 12, R4E, T21N
Location: 87 m (285 ft) south of US30 and 480 m (1574 ft) west of Norton Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Arctium minus	common burdock	herb	UPL	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Bromus inermis	awnless brome grass	herb	UPL	*
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Erigeron strigosus	daisy fleabane	herb	FAC-	2
Galium aparine	annual bedstraw	herb	FACU	0
Glechoma hederacea	ground ivy	herb	FACU	*
Gleditsia triacanthos	honey locust	tree	FAC	2
Heracleum lanatum	cow parsnip	herb	FACW	6
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Osmorhiza longistylis	anise-root	herb	FACU-	3
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Prunus serotina	wild black cherry	tree	FACU	1
Rubus occidentalis	black raspberry	shrub	UPL	2
Salix alba	white willow	tree	FACW	*
Sambucus canadensis	common elder	shrub	FACW-	2
Toxicodendron radicans	poison ivy	shrub	FAC+	1
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 35/18 = 1.9$
$FQI = R/(\sqrt{N}) = 35/(\sqrt{18}) = 8.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 33 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 2085 m (635 ft) W of IL 78, 2365 m (7755 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Crataegus mollis	FACW-	tree
Glechoma hederacea	FACU	herb
Poa pratensis	FAC-	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 33%

Hydrophytic vegetation: Yes: No:X
Rationale: Fewer than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Wakeland silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 5/6 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 33 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 2085 m (635 ft) W of IL 78, 2365 m (7755 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.66 m (26 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: No:X
Rationale: This site lies relatively high in the landscape and there is no field evidence to indicate that the site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Based on the absence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is not a wetland. The NWI coded this site as a PFO1A

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 33 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 2085 m (635 ft) W of IL 78, 2365 m (7755 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Aster ontarionis	ontario aster	herb	FAC	4
Cannabis sativa	hashish	herb	FAC	*
Chenopodium album	lamb's quarters	herb	FAC-	*
Cirsium arvense	Canada thistle	herb	FACU	*
Conium maculatum	poison hemlock	herb	FACW	*
Crataegus mollis	downy hawthorn	tree	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Digitaria sanguinalis	hairy crab grass	herb	FACU	*
Eupatorium serotinum	late boneset	herb	FAC+	1
Fraxinus pennsylvanica	green ash	tree	FACW	2
Glechoma hederacea	ground ivy	herb	FACU	*
Helenium autumnale	autumn sneezeweed	herb	FACW+	3
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Maclura pomifera	hedge apple	shrub	FACU	*
Plantago rugelii	red-stalked plantain	herb	FAC	0
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum punctatum	dotted smartweed	herb	OBL	3
Salix nigra	black willow	tree	OBL	3
Smilax hispida	bristly greenbrier	vine	FAC	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Taraxacum officinale	common dandelion	herb	FACU	*
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervian	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 40/18 = 2.2$
$FQI = R/(\sqrt{N}) = 40/(\sqrt{18}) = 9.4$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 34 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, SE ¼, NW ¼, Sec 19, RSE, T21N
Location: Approx. 420 m (1380 ft) W of IL 78, 2520 m (8270 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Salix nigra	OBL	tree
Phalaris arundinacea	FACW+	herb
Polygonum hydropiper	OBL	herb
Polygonum pensylvanicum	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 5/6
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 34 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, SE ¼, NW ¼, Sec 19, RSE, T21N
Location: Approx. 420 m (1380 ft) W of IL 78, 2520 m (8270 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.66 m (26 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and possibly overflow from the nearby stream. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape, and is likely to collect water from surrounding land. It might also receive floodwater from the nearby stream.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 34 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, SE ¼, NW ¼, Sec 19, RSE, T21N
Location: Approx. 420 m (1380 ft) W of IL 78, 2520 m (8270 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer saccharum	sugar maple	tree	FACU	4
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Bidens frondosa	common beggar's ticks	herb	FACW	1
Bidens tripartita	beggar's ticks	herb	OBL	2
Carex sp. 1	sedge	herb	---	-
Carex sp. 2	sedge	herb	---	-
Crataegus mollis	downy hawthorn	shrub	FACW-	2
Digitaria sanguinalis	hairy crab grass	herb	FACU	*
Echinochloa muricata	barnyard grass	herb	OBL	0
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lycopus virginicus	bugle weed	herb	OBL	5
Lysimachia nummularia	moneywort	herb	FACW+	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Rumex crispus	curly dock	herb	FAC+	*
Salix nigra	black willow	tree	OBL	3
Ulmus americana	American elm	tree	FACW-	5
Vernonia fasciculata	common ironweed	herb	FACW	5

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 33/12 = 2.8$
$FQI = R/(\sqrt{N}) = 33/(\sqrt{12}) = 9.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 35 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 1690 m (515 ft) W of IL 78, 2290 m (7520 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acalypha rhomboidea	FACU	herb
Phalaris arundinacea	FACW+	herb
Polygonum hydropiperoides	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 66%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 5/6
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 35 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 1690 m (515 ft) W of IL 78, 2290 m (7520 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.66 m (26 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and possibly creek overflow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site occupies a low area in the landscape that likely collects runoff from the surrounding landscape. It might receive floodwater from a nearby creek as well.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 35 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 1690 m (515 ft) W of IL 78, 2290 m (7520 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Achillea millefolium	common milfoil	herb	FACU	*
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Bidens tripartita	beggar's ticks	herb	OBL	2
Conyza canadensis	horseweed	herb	FAC-	0
Cyperus strigosus	straw-colored flatsedge	herb	FACW	0
Echinochloa muricata	barnyard grass	herb	OBL	0
Erechtites hieracifolia	fire weed	herb	FACU	2
Helenium autumnale	autumn sneezeweed	herb	FACW+	3
Mimulus ringens	monkey flower	herb	OBL	5
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Phyla lanceolata	fog-fruit	herb	OBL	1
Phytolacca americana	pokeweed	herb	FAC-	1
Polygonum hydropiperoides	swamp smartweed	herb	OBL	4
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Polygonum punctatum	dotted smartweed	herb	OBL	3
Rumex crispus	curly dock	herb	FAC+	*
Setaria glauca	pigeon grass	herb	FAC	*
Stellaria media	common chickweed	herb	FACU	*
Verbena urticifolia	white vervian	herb	FAC+	3
Vernonia fasciculata	common ironweed	herb	FACW	5
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 34/19 = 1.8$
$FQI = R/(\sqrt{N}) = 34/(\sqrt{19}) = 7.8$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 36 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: E ½, Sec 34, R3E, T22N and
SW ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: Immediately south of US30 on either side of Sand Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Ambraw clay loam (Fluvaquentic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 3/4 and 4/4
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: 2.5Y 2.5/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted below dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 36 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: E ½, Sec 34, R3E, T22N and
SW ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: Immediately south of US30 on either side of Sand Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and runoff from adjacent impervious surfaces. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low area in the landscape and has hydric soils. There are no visible hydrologic outputs and water will likely persist at this site for a sufficient period to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland) and a PSS1C (a seasonally flooded, broad leaved deciduous, scrub-shrub palustrine wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 36 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: E ½, Sec 34, R3E, T22N and
SW ¼, SW ¼, NW ¼, Sec 35, R3E, T22N
Location: Immediately south of US30 on either side of Sand Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree	FACW	1
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Calystegia sepium	American bindweed	herb	FAC	1
Carex sp.	sedge	herb	------	--
Cirsium arvense	Canada thistle	herb	FACU	*
Fraxinus pennsylvanica	green ash	tree	FACW	2
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Rumex crispus	curly dock	herb	FAC+	*
Sambucus canadensis	common elder	shrub	FACW-	2
Scirpus fluviatilis	river bulrush	herb	OBL	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 25/14 = 1.8$
$FQI = R/(\sqrt{N}) = 25/(\sqrt{14}) = 6.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 37 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 515 m (1690 ft) W of IL 78, 2230 m (7320 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree
Crataegus mollis	FACW-	tree
Juglans nigra	FACU	tree
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 75%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson and Wakeland silt loams; revised to Wakeland silt loam (Aeric Fluvaquent)

On county hydric soils list?	Yes:	No: X	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 5/6 (few)
Redox Depletions?	Yes: X	No:	Color: N 5/ (few)

Matrix color: 10YR 3/2 over strata of 10YR 4/3 and 3/1
Other indicators: None
Hydric soils? Yes: No: X
Rationale: The Natural Resources Conservation Service defines Wakeland as an Aeric Fluvaquent which is somewhat poorly drained. Presence of few redox concentrations within a low to medium chroma matrix indicates that this site is saturated or inundated for a brief duration during the growing season. Therefore, this soil does not meet the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 37 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 515 m (1690 ft) W of IL 78, 2230 m (7320 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: >0.71 cm (28 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: No: X
Rationale: This site lies relatively high in the landscape, and there is no field evidence to indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No:X
Rationale for decision: Although this site has dominant hydrophytic vegetation, it lacks hydric soils and wetland hydrology. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PFO1A.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 37 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 515 m (1690 ft) W of IL 78, 2230 m (7320 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Celtis occidentalis	hackberry	tree	FAC-	3
Crataegus mollis	downy hawthorn	tree	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Glechoma hederacea	ground ivy	herb	FACU	*
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Lonicera sp	honeysuckle	shrub	---	-
Lonicera tatarica	Tartarian honeysuckle	shrub	FACU	*
Maclura pomifera	hedge apple	tree	FACU	*
Morus alba	white mulberry	shrub, tree	FAC	*
Polygonum virginianum	Virginia knotweed	herb	FAC	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Prunus serotina	wild black cherry	shrub	FACU	1
Rosa multiflora	multiflora rose	shrub	FACU	*
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	vine	FAC	3
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 48/19 = 2.5$
$FQI = R/(\sqrt{N}) = 48/(\sqrt{19}) = 11.0$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 38 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 480 m (1575 ft) W of IL 78, 2375 m (7795 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Populus deltoides	FAC+	tree
Glechoma hederacea	FACU	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 50%

Hydrophytic vegetation: Yes: No:X
Rationale: No more than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Orion silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 5/6 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 38 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 480 m (1575 ft) W of IL 78, 2375 m (7795 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.66 m (26 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: No:X
Rationale: This site lies relatively high in the landscape and there is no field evidence to indicate that the site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No:X
Rationale for decision: Although this site has hydric soils, it lacks dominant hydrophytic vegetation and wetland hydrology. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PFO1A.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 38 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pasture
Legal Description: NE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 480 m (1575 ft) W of IL 78, 2375 m (7795 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Arctium minus	common burdock	herb	UPL	*
Cannabis sativa	hashish	herb	FAC	*
Chenopodium album	lamb's quarters	herb	FAC-	*
Conium maculatum	poison hemlock	herb	FACW	*
Crataegus mollis	downy hawthorn	shrub	FACW-	2
Diodia teres	poorjoe	herb	FACU	2
Glechoma hederacea	ground ivy	herb	FACU	*
Maclura pomifera	hedge apple	shrub	FACU	*
Plantago rugelii	red-stalked plantain	herb	FAC	0
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Populus deltoides	eastern cottonwood	tree	FAC+	2
Salix nigra	black willow	tree	OBL	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Taraxacum officinale	common dandelion	herb	FACU	*
Verbena urticifolia	white vervian	herb	FAC+	3
Viola pratincola	common blue violet	herb	FAC	1
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 16/10 = 1.6$
$FQI = R/(\sqrt{N}) = 16/(\sqrt{10}) = 5.1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 39 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 490 m (1615 ft) W of IL 78, 2160 m (7085 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 5/6
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 39 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 490 m (1615 ft) W of IL 78, 2160 m (7085 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No: X Depth of standing water: N/A
Depth to saturated soil: 0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies in a low, open creek scar within a floodplain forest, and likely collects runoff from surrounding land and floodwater from a nearby creek.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMF.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 39 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 490 m (1615 ft) W of IL 78, 2160 m (7085 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Asclepias incarnata	swamp milkweed	herb	OBL	4
Bidens frondosa	common beggar's ticks	herb	FACW	1
Calystegia sepium	American bindweed	herb	FAC	1
Crataegus mollis	downy hawthorn	tree	FACW-	2
Cynanchum laeve	blue vine	herb	FAC	1
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Erechtites hieracifolia	fire weed	herb	FACU	2
Glechoma hederacea	ground ivy	herb	FACU	*
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Sicyos angulatus	bur cucumber	vine	FACW-	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Urtica dioica	stinging nettle	herb	FAC+	2
Vernonia fasciculata	common ironweed	herb	FACW	5
Viburnum opulus	European high-bush cranberry	shrub	UPL	*
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mC_V = R/N = 42/19 = 2.2$
$FQI = R/(\sqrt{N}) = 42/(\sqrt{19}) = 9.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 40 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SE ¼, SE ¼, NW ¼; SW ¼, SW ¼, NE ¼; NE ¼, NE ¼, SW ¼; NW ¼, NW ¼, SE ¼; SE ¼, NE ¼, SW ¼; SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Wakeland, Otter, and Orion silt loams; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 40 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SE ¼, SE ¼, NW ¼; SW ¼, SW ¼, NE ¼; NE ¼, NE ¼, SW ¼; NW ¼, NW ¼, SE ¼; SE ¼, NE ¼, SW ¼; SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: From surface to 0.76 m (30 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and is likely to collect and retain water.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 40 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SE ¼, SE ¼, NW ¼; SW ¼, SW ¼, NE ¼; NE ¼, NE ¼, SW ¼; NW ¼, NW ¼, SE ¼; SE ¼, NE ¼, SW ¼; SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer negundo	box elder	shrub	FACW-	1
Acer saccharinum	silver maple	shrub	FACW	1
Agrostis alba	red top	herb	FACW	0
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Angelica atropurpurea	angelica	herb	OBL	6
Asclepias incarnata	swamp milkweed	herb	OBL	4
Asclepias syriaca	common milkweed	herb	UPL	0
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster simplex	panicled aster	herb	FACW	3
Bidens frondosa	common beggar's ticks	herb	FACW	1
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium vulgare	bull thistle	herb	FACU-	*
Conyza canadensis	horseweed	herb	FAC-	0
Cynanchum laeve	blue vine	herb	FAC	1
Cyperus strigosus	straw-colored flatsedge	herb	FACW	0
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Erechtites hieracifolia	fire weed	herb	FACU	2
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium serotinum	late boneset	herb	FAC+	1
Fraxinus pennsylvanica	green ash	shrub	FACW	2
Glechoma hederacea	ground ivy	herb	FACU	*
Helenium autumnale	autumn sneezeweed	herb	FACW+	3
Impatiens capensis	jewelweed	herb	FACW	2
Juncus torreyi	Torrey's rush	herb	FACW	3
Lycopus americanus	common water horehound	herb	OBL	3
Oenothera biennis	evening primrose	herb	FACU	1
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Plantago rugelii	red-stalked plantain	herb	FAC	0

Species list continues on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 40 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SE ¼, SE ¼, NW ¼; SW ¼, SW ¼, NE ¼; NE ¼, NE ¼, SW ¼; NW ¼, NW ¼, SE ¼; SE ¼, NE ¼, SW ¼; SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 ft) N of Bunker Hill Rd.

SPECIES LIST, cont.

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	shrub	FAC+	2
Quercus bicolor	swamp white oak	herb	FACW+	7
Quercus palustris	pin oak	shrub	FACW	4
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Setaria glauca	pigeon grass	herb	FAC	*
Sium suave	water parsnip	herb	OBL	5
Solidago canadensis	Canada goldenrod	herb	FACU	1
Solidago gigantea	late goldenrod	herb	FACW	3
Sphenopholis obtusata	prairie wedge grass	herb	FAC	5
Trifolium pratense	red clover	herb	FACU+	*
Typha latifolia	cattail	herb	OBL	1
Verbena hastata	blue vervain	herb	FACW+	3
Verbena urticifolia	white vervian	herb	FAC+	3
Vernonia fasciculata	common ironweed	herb	FACW	5

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 92/41 = 2.2$
$FQI = R/(\sqrt{N}) = 92/(\sqrt{41}) = 14.4$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 41 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 205 m (670 ft) W of IL 78, 2220 m (7285 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer saccharinum	FACW	tree, shrub, sapling
Salix nigra	OBL	tree, shrub, sapling
Salix exigua	OBL	shrub, sapling
Impatiens capensis	FACW	herb
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 41 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 205 m (670 ft) W of IL 78, 2220 m (7285 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and likely collects water from surrounding land.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 41 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 205 m (670 ft) W of IL 78, 2220 m (7285 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer saccharinum	silver maple	tree, shrub, sapling	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Cinna arundinacea	stout wood reed	herb	FACW	5
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Lysimachia nummularia	moneywort	herb	FACW+	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Phyla lanceolata	fog-fruit	herb	OBL	1
Pilea pumila	Canada clearweed	herb	FACW	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix exigua	sandbar willow	shrub, sapling	OBL	1
Salix nigra	black willow	tree, shrub, sapling	OBL	3
Toxicodendron radicans	poison ivy	vine, herb	FAC+	1
Ulmus americana	American elm	tree, shrub, sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 34/14 = 2.4$
$FQI = R/(\sqrt{N}) = 34/(\sqrt{14}) = 9.1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 42 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 2100 m (6890 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Populus deltoides	FAC+	tree
Salix nigra	OBL	shrub, tree

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Orion silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 42 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 2100 m (6890 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: >0.30 m (12 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and likely collects water from surrounding land.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
(vegetation and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 42 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 2100 m (6890 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	herb	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Angelica atropurpurea	angelica	herb	OBL	6
Aster pilosus	hairy aster	herb	FACU+	0
Cynanchum laeve	blue vine	herb	FAC	1
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Geum canadense	white avens	herb	FAC	2
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	shrub, tree	OBL	3
Smilax hispida	bristly greenbrier	vine	FAC	3
Teucrium canadense	American germander	herb	FACW-	3
Urtica dioica	stinging nettle	herb	FAC+	2
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 41/18 = 2.3$
$FQI = R/(\sqrt{N}) = 41/(\sqrt{18}) = 9.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 43 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: marsh
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 130 m (430 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Alisma plantago-aquatica	OBL	herb
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 43 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: marsh
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 130 m (430 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: X No: Depth of standing water: < 0.30 m (12 in)
Depth to saturated soil: surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration, soil infiltration and overflow.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site was inundated at the time of this survey. There is nothing to indicate that the site is not inundated or saturated for a sufficient duration to satisfy the hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PUBF.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 43 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: marsh
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 130 m (430 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Alisma plantago-aquatica	broad-leaf water-plantain	herb	OBL	2
Asclepias incarnata	swamp milkweed	herb	OBL	4
Lemna minor	common duckweed	herb	OBL	3
Lobelia siphilitica	blue cardinal-flower	herb	FACW+	4
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Populus deltoides	eastern cottonwood	herb	FAC+	2
Sagittaria latifolia	arrowhead	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Typha latifolia	cattail	herb	OBL	1
Vernonia fasciculata	common ironweed	herb	FACW	5

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 29/9 = 3.2$
$FQI = R/(\sqrt{N}) = 29/(\sqrt{9}) = 9.7$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 44 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 m) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 44 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 m) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: From surface to 0.30 m (12 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and likely receives water from surrounding land.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 44 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NW ¼, SE ¼, Sec 19, RSE, T21N
Location: Approx. 180 m (590 ft) W of IL 78, 2005 m (6575 m) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ambrosia trifida	giant ragweed	herb	FAC+	0
Asclepias incarnata	swamp milkweed	herb	OBL	4
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	shrub	FAC+	2
Setaria faberi	giant foxtail	herb	FACU+	*
Solidago canadensis	Canada goldenrod	herb	FACU	1
Urtica dioica	stinging nettle	herb	FAC+	2
Vernonia fasciculata	common ironweed	herb	FACW	5

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 21/8 = 2.6$
$FQI = R/(\sqrt{N}) = 21/(\sqrt{8}) = 7.4$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 45 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, and SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 455 m (1495 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb
Sicyos angulatus	FACW-	vine

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson silt loam; revised to Birds silt loam (Typic Fluvaquent)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions?	Yes:	No: X	

Matrix color: 10YR 4/1
Other indicators: None

Hydric soils? Yes: X No:

Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 45 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, and SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 455 m (1495 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: From surface to 0.30 m (12 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and possibly occasional overflow from the nearby creek. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies in a depression near a stream, and likely receives and retains water from the surrounding floodplain forest and uplands. It might also receive water through occasional stream overflow.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMF.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 45 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, NE ¼, SW ¼, and SE ¼, NE ¼, SW ¼, Sec 19, RSE, T21N
Location: Approx. 455 m (1495 ft) W of IL 78, 2040 m (6690 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Angelica atropurpurea	angelica	herb	OBL	6
Bidens frondosa	common beggar's ticks	herb	FACW	1
Fraxinus pennsylvanica	green ash	shrub	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum lapathifolium	curttop lady's thumb	herb	FACW+	0
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	tree	OBL	3
Sicyos angulatus	bur cucumber	vine	FACW-	3
Toxicodendron radicans	poison ivy	herb	FAC+	1
Ulmus americana	American elm	sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 33/15 = 2.2$
$FQI = R/(\sqrt{N}) = 33/(\sqrt{15}) = 8.5$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 46 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SW ¼, SW ¼, SW ¼, Sec 30, RSE, T21N
Location: Approx. 480 m (1575 ft) E of IL 78, 1765 m (5790 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Fraxinus pennsylvanica	FACW	tree
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Drummer silt loam (Typic Endoaquoll)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 2.5Y 5/6
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over N 5/
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a gleyed matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 46 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SW ¼, SW ¼, SW ¼, Sec 30, RSE, T21N
Location: Approx. 480 m (1575 ft) E of IL 78, 1765 m (5790 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.74 cm (29 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and stream overflow. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape, and likely receives water from surrounding land and from the stream that runs through it.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PFO1A.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 46 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: SW ¼, SW ¼, SW ¼, Sec 30, RSE, T21N
Location: Approx. 480 m (1575 ft) E of IL 78, 1765 m (5790 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Angelica atropurpurea	angelica	herb	OBL	6
Campanula americana	American bellflower	herb	FAC	4
Celtis occidentalis	hackberry	tree	FAC-	3
Chaerophyllum procumbens	wild chervil	herb	FAC+	1
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Fraxinus pennsylvanica	green ash	tree	FACW	2
Geum canadense	white avens	herb	FAC	2
Laportea canadensis	wood nettle	herb	FACW	2
Morus alba	white mulberry	tree	FAC	*
Prunus serotina	wild black cherry	tree	FACU	1
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Sambucus canadensis	common elder	shrub	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	vine	FAC	3
Toxicodendron radicans	poison ivy	herb	FAC+	1
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 37/16 = 2.3$
$FQI = R/(\sqrt{N}) = 37/(\sqrt{16}) = 9.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 47 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, NE ¼, and NE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 12 m (40 ft) and 110 m (355 ft) W of IL 78, 1430 m (4685 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations?	Yes: X	No:	Color: 10YR 4/6
Redox Depletions?	Yes:	No: X	

Matrix color: 10YR 3/1 over 3/1 and 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 47 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, NE ¼, and NE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 12 m (40 ft) and 110 m (355 ft) W of IL 78, 1430 m (4685 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies in a depression in the landscape and likely receives water from surrounding land and from roadway runoff.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PSS1A.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 47 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NW ¼, NE ¼, NE ¼, and NE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 12 m (40 ft) and 110 m (355 ft) W of IL 78, 1430 m (4685 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Conyza canadensis	horseweed	herb	FAC-	0
Laportea canadensis	wood nettle	herb	FACW	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Rhamnus cathartica	common buckthorn	shrub	FACU	*
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sambucus canadensis	common elder	herb	FACW-	2
Scirpus fluviatilis	river bulrush	herb	OBL	3
Toxicodendron radicans	poison ivy	herb	FAC+	1
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervian	herb	FAC+	3
Vernonia fasciculata	common ironweed	herb	FACW	5
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 27/12 = 2.3$
$FQI = R/(\sqrt{N}) = 27/(\sqrt{12}) = 7.8$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 48 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NE ¼, NW ¼, NE ¼; NW ¼, NE ¼, NE ¼; SE ¼, NW ¼, NE ¼; and SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 60 m (195 ft) W of IL 78, 1380 m (4530 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: NRCS mapped as Otter silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/6
Redox Depletions? Yes: No: X
Matrix color: 10YR 3/1 over 3/1 and 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 48 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NE ¼, NW ¼, NE ¼; NW ¼, NE ¼, NE ¼; SE ¼, NW ¼, NE ¼; and SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 60 m (195 ft) W of IL 78, 1380 m (4530 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.76 m (30 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies in a relatively low position in the landscape and likely receives water from surrounding land.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 48 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NE ¼, NW ¼, NE ¼; NW ¼, NE ¼, NE ¼; SE ¼, NW ¼, NE ¼; and SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 60 m (195 ft) W of IL 78, 1380 m (4530 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Angelica atropurpurea	angelica	herb	OBL	6
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Carex grayi	bur sedge	herb	FACW+	6
Carex sp.	sedge	herb	---	-
Cinna arundinacea	stout wood reed	herb	FACW	5
Crataegus mollis	downy hawthorn	shrub	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Geum canadense	white avens	herb	FAC	2
Hackelia virginiana	stickseed	herb	FAC-	1
Juglans nigra	black walnut	shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Lysimachia nummularia	moneywort	herb	FACW+	*
Morus alba	white mulberry	herb	FAC	*
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ptelea trifoliata	wafer ash	shrub	FACU+	4
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix exigua	sandbar willow	tree	OBL	1
Salix nigra	black willow	tree	OBL	3
Sanicula gregaria	common snakeroot	herb	FAC+	2
Sicyos angulatus	bur cucumber	vine	FACW-	3
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Toxicodendron radicans	poison ivy	herb	FAC+	1

Species list continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 48 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: NE ¼, NW ¼, NE ¼; NW ¼, NE ¼, NE ¼; SE ¼, NW ¼, NE ¼; and SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 60 m (195 ft) W of IL 78, 1380 m (4530 ft) N of Bunker Hill Rd.

SPECIES LIST, cont.

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ulmus americana	American elm	tree	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	woody vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 82/30 = 2.7$
$FQI = R/(\sqrt{N}) = 82/(\sqrt{30}) = 15.0$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 49 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NE ¼, NE ¼, NW ¼, Sec 30, RSE, T21N
Location: Approx. 575 m (1890 ft) W of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree
Juglans nigra	FACU	tree
Elymus virginicus	FACW-	herb
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 75%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson and Wakeland silt loams; revised to Wakeland silt loam (Aeric Fluvaquent)
On county hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 5/6 (few)
Redox Depletions? Yes: X No: Color: N 5/ (few)
Matrix color: 10YR 3/2 over strata of 10YR 4/3 and 3/1
Other indicators: None
Hydric soils? Yes: No: X
Rationale: The Natural Resources Conservation Service defines Wakeland as an Aeric Fluvaquent which is somewhat poorly drained. Presence of few redox concentrations within a low to medium chroma matrix indicates that this site is saturated or inundated for a brief duration during the growing season. Therefore, this soil does not meet the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 49 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NE ¼, NE ¼, NW ¼, Sec 30, RSE, T21N
Location: Approx. 575 m (1890 ft) W of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: >0.71 cm (28 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and likely receives water from surrounding land and occasional flooding of the nearby creek.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although this site has dominant hydrophytic vegetation and wetland hydrology, it lacks hydric soils. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PFO1A.

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 49 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: NE ¼, NE ¼, NW ¼, Sec 30, RSE, T21N
Location: Approx. 575 m (1890 ft) W of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Celtis occidentalis	hackberry	tree	FAC-	3
Crataegus mollis	downy hawthorn	tree	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Gleditsia triacanthos	honey locust	tree	FAC	2
Hackelia virginiana	stickseed	herb	FAC-	1
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Pilea pumila	Canada clearweed	herb	FACW	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sanicula gregaria	common snakeroot	herb	FAC+	2
Ulmus americana	American elm	tree	FACW-	5
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	woody vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 42/17 = 2.5$
$FQI = R/(\sqrt{N}) = 42/(\sqrt{17}) = 10.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 50 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 1465 m (4805 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer saccharinum	FACW	tree
Populus deltoides	FAC+	tree
Elymus virginicus	FACW-	herb
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson silt loam; revised to Birds silt loam (Typic Fluvaquent)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X
Matrix color: 10YR 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service identifies Birds silt loam as a Typic Fluvaquent which is poorly drained. This soil possesses redox concentrations within a low chroma matrix, which indicates saturated or reduced conditions for extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 50 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 1465 m (4805 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: From surface to 0.30 m (12 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: The site appears to be an old oxbow. There is evidence of standing water, such as barren ground and buttressing and water marks on trees.

Wetland hydrology: Yes:X No:
Rationale: This site lies in a depression, and field evidence cited above indicates it receives and retains a significant amount of water.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PFO1C.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 50 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 1465 m (4805 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Carex sp.	sedge	herb	---	-
Cirsium arvense	Canada thistle	herb	FACU	*
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Fraxinus pennsylvanica	green ash	tree	FACW	2
Glechoma hederacea	ground ivy	herb	FACU	*
Impatiens capensis	jewelweed	herb	FACW	2
Juglans nigra	black walnut	shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Morus alba	white mulberry	herb	FAC	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	tree	FAC+	2
Quercus bicolor	swamp white oak	tree	FACW+	7
Quercus palustris	pin oak	shrub, tree	FACW	4
Setaria faberi	giant foxtail	herb	FACU+	*
Sicyos angulatus	bur cucumber	vine	FACW-	3
Smilax hispida	bristly greenbrier	vine	FAC	3
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Urtica dioica	stinging nettle	herb	FAC+	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 47/18 = 2.6$
$FQI = R/(\sqrt{N}) = 47/(\sqrt{18}) = 11.1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 51 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: sedge meadow
Legal Description: SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 10 m (40 ft) E of IL 78, 1370 m (4490 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Salix nigra	OBL	tree
Agrostis alba	FACW	herb
Carex stricta	OBL	herb
Leersia oryzoides	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Elvers silt loam (Thapto-Histic Fluvaquent)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: N/A
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over muck over peat
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Elvers as a Thapto-Histic Fluvaquent which is very poorly drained. Presence of redox concentrations within a gleyed matrix overlying muck and peat indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 51 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: sedge meadow
Legal Description: SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 10 m (40 ft) E of IL 78, 1370 m (4490 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.48 m (19 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: The site contains sedge tussocks.

Wetland hydrology: Yes:X No:
Rationale: This site lies low in the landscape, and it has wetland microtopography, indicating it receives and retains a significant amount of water.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 51 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: sedge meadow
Legal Description: SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 10 m (40 ft) E of IL 78, 1370 m (4490 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Agrostis alba	red top	herb	FACW	0
Angelica atropurpurea	angelica	herb	OBL	6
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster simplex	panicled aster	herb	FACW	3
Carex stricta	tussock sedge	herb	OBL	5
Carex sp. 1	sedge	herb	---	-
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium vulgare	bull thistle	herb	FACU-	*
Echinochloa muricata	barnyard grass	herb	OBL	0
Echinochloa walteri	salt-marsh cockspur grass	herb	OBL	5
Eleocharis erythropoda	red-rooted spike rush	herb	OBL	3
Erigeron annuus	annual fleabane	herb	FAC-	1
Fraxinus pennsylvanica	green ash	tree	FACW	2
Fraxinus pennsylvanica	green ash	tree	FACW	2
Hordeum jubatum	squirrel-tail	herb	FAC+	*
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lemna minor	common duckweed	herb	OBL	3
Lycopus americanus	common water horehound	herb	OBL	3
Lycopus virginicus	bugle weed	herb	OBL	5
Mentha arvensis villosa	field mint	herb	FACW	4
Mimulus alatus	winged monkey flower	herb	OBL	6
Phleum pratense	timothy	herb	FACU	*
Phyla lanceolata	fog-fruit	herb	OBL	1
Pilea pumila	Canada clearweed	herb	FACW	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Prunella vulgaris	self-heal	herb	FAC	*
Rumex crispus	curly dock	herb	FAC+	*
Sagittaria latifolia	arrowhead	herb	OBL	4
Salix nigra	black willow	tree	OBL	3
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4

Species list continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 51 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: sedge meadow
Legal Description: SW ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 10 m (40 ft) E of IL 78, 1370 m (4490 ft) N of Bunker Hill Rd.

SPECIES LIST, cont.

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Stellaria media	common chickweed	herb	FACU	*
Taraxacum officinale	common dandelion	herb	FACU	*
Trifolium pratense	red clover	herb	FACU+	*
Verbena hastata	blue vervain	herb	FACW+	3
Vernonia fasciculata	common ironweed	herb	FACW	5
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 91/30 = 3.0$
$FQI = R/(\sqrt{N}) = 91/(\sqrt{30}) = 16.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 52 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NE ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 120 m (395 ft) E of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree
Populus deltoides	FAC+	tree
Salix nigra	OBL	tree, shrub
Ambrosia trifida	FAC+	herb
Aster lateriflorus	FACW-	herb
Carex trichocarpa	OBL	herb
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Otter silt loam; revised to Elvers silt loam (Thapto-Histic Fluvaquent)

On county hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: N/A
Redox Depletions?	Yes:	No: X	Color: N/A

Matrix color: N 2.5/ over muck over peat
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Elvers as a Thapto-Histic Fluvaquent which is very poorly drained. Presence of redox concentrations within a gleyed matrix overlying muck and peat indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 52 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NE ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 120 m (395 ft) E of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: 0.48 m (19 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and stream overflow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies low in the landscape and likely receives water from surrounding land and from the stream that runs through it.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 52 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NE ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 120 m (395 ft) E of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	shrub, tree	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Apios americana	groundnut	herb	FACW	4
Arctium minus	common burdock	herb	UPL	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Calystegia sepium	American bindweed	herb	FAC	1
Carex sp.	sedge	herb	---	-
Carex trichocarpa	sedge	herb	OBL	6
Celtis occidentalis	hackberry	shrub	FAC-	3
Cinna arundinacea	stout wood reed	herb	FACW	5
Cornus obliqua	pale dogwood	herb, shrub	FACW+	4
Cryptotaenia canadensis	honewort	herb	FAC	1
Cyperus strigosus	straw-colored flatsedge	herb	FACW	0
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Equisetum arvense	common horsetail	herb	FAC	0
Eupatorium maculatum	spotted joe pye weed	herb	OBL	5
Eupatorium perfoliatum	common boneset	herb	FACW+	4
Fraxinus pennsylvanica	green ash	tree	FACW	2
Geum canadense	white avens	herb	FAC	2
Glechoma hederacea	ground ivy	herb	FACU	*
Hackelia virginiana	stickseed	herb	FAC-	1
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Impatiens capensis	jewelweed	herb	FACW	2
Iris shrevei	southern blue flag	herb	OBL	5
Lactuca floridana	blue lettuce	herb	FAC-	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia virginica	white grass	herb	FACW	4
Lycopus virginicus	bugle weed	herb	OBL	5
Mimulus alatus	winged monkey flower	herb	OBL	6
Morus alba	white mulberry	tree	FAC	*
Polygonum amphibium	water smartweed	herb	OBL	3

Species list continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 52 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NE ¼, NE ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 120 m (395 ft) E of IL 78, 1415 m (4645 ft) N of Bunker Hill Rd.

SPECIES LIST, cont.

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rhamnus cathartica	common buckthorn	shrub	FACU	*
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix amygdaloides	peach-leaved willow	shrub	FACW	4
Salix nigra	black willow	shrub, tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	vine	FAC	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Stellaria media	common chickweed	herb	FACU	*
Toxicodendron radicans	poison ivy	herb	FAC+	1
Ulmus americana	American elm	shrub, tree	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervian	herb	FAC+	3
Viburnum opulus	European high-bush cranberry	shrub	UPL	*
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 123/45 = 2.7$
$FQI = R/(\sqrt{N}) = 123/(\sqrt{45}) = 18.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 53 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pond
Legal Description: SE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 85 m (275 ft) W of IL 78, 1320 m (4330 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum

No dominant vegetation

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: N/A

Hydrophytic vegetation: Yes: No:X
Rationale: There is no dominant vegetation.

SOILS

Series and phase: NRCS mapped as Lamont loam; revised to Water

On county hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox Concentrations?	Yes:	No: X
Redox Depletions?	Yes:	No: X

Matrix color: Undetermined
Other indicators: This site was completely inundated.
Hydric soils? Yes: X No:
Rationale: This site is a constructed pond that is inundated for long or very long duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 53 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pond
Legal Description: SE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 85 m (275 ft) W of IL 78, 1320 m (4330 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: X No: Depth of standing water: <2.0 m (79 in)
Depth to saturated soil: Surface
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration, soil infiltration, and possibly overflow.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site was completely inundated at the time of this survey.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although this site has hydric soils and wetland hydrology, it is an open-water habitat with no dominant hydrophytic vegetation. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PUBGX.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 53 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: pond
Legal Description: SE ¼, NW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 85 m (275 ft) W of IL 78, 1320 m (4330 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Bidens frondosa	common beggar's ticks	herb	FACW	1
Lemna minor	common duckweed	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum amphibium	water smartweed	herb	OBL	3
Sagittaria latifolia	arrowhead	herb	OBL	4
Verbena urticifolia	white vervian	herb	FAC+	3

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 17/6 = 2.8$
$FQI = R/(\sqrt{N}) = 17/(\sqrt{6}) = 6.9$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 54 (page 1 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, SW ¼, NE ¼, SW ¼, SW ¼, NE ¼, and NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 755 m (2480 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Gleditsia triacanthos	FAC	tree
Salix nigra	OBL	tree
Populus deltoides	FAC+	tree
Toxicodendron radicans	FAC+	shrub
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Orion silt loam; revised to Blackoar silt loam (Fluvaquentic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 5/4 and 7.5YR 5/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 3/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Blackoar as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 54 (page 2 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, SW ¼, NE ¼, SW ¼, SW ¼, NE ¼, and NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 755 m (2480 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No: X Depth of standing water: N/A
Depth to saturated soil: >0.76 cm (30 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site lies relatively low in the landscape and likely collects drainage from surrounding uplands.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site as a wetland.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 54 (page 3 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, SW ¼, NE ¼, SW ¼, SW ¼, NE ¼, and NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 755 m (2480 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer saccharinum	silver maple	herb	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Aster ontarionis	ontario aster	herb	FAC	4
Bidens frondosa	common beggar's ticks	herb	FACW	1
Calystegia sepium	American bindweed	herb	FAC	1
Carex grayi	bur sedge	herb	FACW+	6
Carex sp. 1	sedge	herb	---	-
Carex sp. 2	sedge	herb	---	-
Crataegus mollis	downy hawthorn	tree, sapling	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Fraxinus pennsylvanica	green ash	herb	FACW	2
Geum canadense	white avens	herb	FAC	2
Glechoma hederacea	ground ivy	herb	FACU	*
Gleditsia triacanthos	honey locust	tree, sapling, shrub	FAC	2
Impatiens capensis	jewelweed	herb	FACW	2
Iris shrevei	southern blue flag	herb	OBL	5
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia virginica	white grass	herb	FACW	4
Lycopus virginicus	bugle weed	herb	OBL	5
Lysimachia nummularia	moneywort	herb	FACW+	*
Morus alba	white mulberry	tree, shrub, sapling	FAC	*
Parthenocissus quinquefolia	Virginia creeper	vine	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum punctatum	dotted smartweed	herb	OBL	3
Polygonum scandens	climbing buckwheat	herb	FAC	2
Polygonum virginianum	Virginia knotweed	herb	FAC	3
Populus deltoides	eastern cottonwood	tree, shrub, sapling	FAC+	2
Rhamnus cathartica	common buckthorn	herb	FACU	*
Ribes missouriense	Missouri gooseberry	shrub	UPL	2

Species list continues on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 54 (page 4 of 4)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: floodplain forest
Legal Description: NW ¼, SW ¼, NE ¼, SW ¼, SW ¼, NE ¼, and NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 300 m (985 ft) W of IL 78, 755 m (2480 ft) N of Bunker Hill Rd.

SPECIES LIST, cont.

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Rubus laciniatus	cut-leaved blackberry	herb	UPL	*
Rudbeckia triloba	brown-eyed susan	herb	FAC-	3
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree, sapling	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	vine	FAC	3
Teucrium canadense	American germander	herb	FACW-	3
Toxicodendron radicans	poison ivy	herb, shrub	FAC+	1
Ulmus americana	American elm	tree, shrub	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 95/39 = 2.4$
$FQI = R/(\sqrt{N}) = 95/(\sqrt{39}) = 15.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 55 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 290 m (945 ft) W of IL 78, 805 m (2640 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Ambrosia trifida	FAC+	herb
Echinocystis lobata	FACW-	herb
Phalaris arundinacea	FACW+	herb
Polygonum amphibium	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Orion silt loam; revised to Blackoar silt loam (Fluvaquentic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 5/4 and 7.5YR 5/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 3/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Blackoar as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 55 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 290 m (945 ft) W of IL 78, 805 m (2640 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No: X Depth of standing water: N/A
Depth to saturated soil: >0.76 cm (30 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes:X No:
Rationale: This site is a low, open area in a floodplain forest. It likely collects water from surrounding uplands.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes:X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMF.

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 55 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: wet meadow
Legal Description: SW ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 290 m (945 ft) W of IL 78, 805 m (2640 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer saccharinum	silver maple	tree, shrub	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Echinochloa muricata	barnyard grass	herb	OBL	0
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Morus alba	white mulberry	tree	FAC	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Polygonum scandens	climbing buckwheat	herb	FAC	2
Salix exigua	sandbar willow	shrub, tree	OBL	1
Salix nigra	black willow	tree	OBL	3
Sicyos angulatus	bur cucumber	vine	FACW-	3
Ulmus americana	American elm	tree, shrub	FACW-	5
Xanthium strumarium	cocklebur	herb	FAC	0

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 27/14 = 1.9$
$FQI = R/(\sqrt{N}) = 27/(\sqrt{14}) = 7.2$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 56 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Mesic floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 360 m (1180 ft) W of IL 78, 720 m (2360 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree, shrub, sapling
Acer saccharinum	FACW	tree, shrub, sapling
Elymus virginicus	FACW-	herb
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: Orion silt loam (Aquic Udifluvent)
On county hydric soils list? Yes: No: X
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: No: X Color: N/A
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 3/2 and 4/2 over 3/1
Other indicators: None

Hydric soils? Yes: No: X

Rationale: The Natural Resources Conservation Service identifies Orion silt loam as an Aquic Udifluvent which is somewhat poorly drained. This soil possesses no redox concentrations within a low to medium chroma matrix, which does not indicate saturated or reduced conditions during the growing season. Therefore, the soil at this site does not meet the hydric soil criterion. This soil meets none of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 56 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Mesic floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 360 m (1180 ft) W of IL 78, 720 m (2360 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No:X Depth of standing water: NA
Depth to saturated soil: >1.02 m (40 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration, soil infiltration, and sheet flow.
Other field evidence observed: This site lies slightly higher than surrounding land.

Wetland hydrology: Yes: No:X
Rationale: The relatively high position of this site in the landscape makes it unlikely to collect or hold significant water. There is no field evidence to indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: This site has hydrophytic vegetation, but lacks hydric soils and wetland hydrology. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PFO1A.

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 56 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Mesic floodplain forest
Legal Description: NW ¼, NW ¼, SE ¼, Sec 30, RSE, T21N
Location: Approx. 360 m (1180 ft) W of IL 78, 720 m (2360 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Acer negundo	box elder	tree, shrub, sapling	FACW-	1
Acer saccharinum	silver maple	tree, shrub, sapling	FACW	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Angelica atropurpurea	angelica	herb	OBL	6
Campanula americana	American bellflower	herb	FAC	4
Cirsium arvense	Canada thistle	herb	FACU	*
Echinocystis lobata	wild balsam-apple	vine	FACW-	4
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Gleditsia triacanthos	honey locust	tree, shrub, sapling	FAC	2
Juglans nigra	black walnut	shrub	FACU	4
Morus alba	white mulberry	tree, shrub, sapling	FAC	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Populus deltoides	eastern cottonwood	tree, shrub, sapling	FAC+	2
Prunus americana	American plum	tree, shrub, sapling	UPL	3
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix exigua	sandbar willow	tree, shrub, sapling	OBL	1
Salix nigra	black willow	tree, shrub, sapling	OBL	3
Sambucus canadensis	common elder	herb	FACW-	2
Setaria faberi	giant foxtail	herb	FACU+	*
Solidago canadensis	Canada goldenrod	herb	FACU	1
Ulmus americana	American elm	tree, shrub, sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 53/21 = 2.5$
$FQI = R/(\sqrt{N}) = 53/(\sqrt{21}) = 11.6$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 57 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: SE ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 215 m (710 ft) W of IL 78, 865 m (2835 ft) N of Bunker Hill Rd.

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Acer negundo	FACW-	tree
Juglans nigra	FACU	tree
Ulmus americana	FACW-	tree
Ribes missouriense	UPL	shrub
Elymus virginicus	FACW-	herb
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 66%

Hydrophytic vegetation: Yes:X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Lawson and Wakeland silt loams; revised to Wakeland silt loam (Aeric Fluvaquent)

On county hydric soils list?	Yes:	No: X	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox Concentrations	Yes: X	No:	Color: 10YR 5/6 (few)
Redox Depletions?	Yes: X	No:	Color: N 5/ (few)

Matrix color: 10YR 3/2 over strata of 10YR 4/3 and 3/1
Other indicators: None
Hydric soils? Yes: No: X
Rationale: The Natural Resources Conservation Service defines Wakeland as an Aeric Fluvaquent which is somewhat poorly drained. Presence of few redox concentrations within a low to medium chroma matrix indicates that this site is saturated or inundated for a brief duration during the growing season. Therefore, this soil does not meet the hydric soil criterion. This soil does not meet any of the NRCS hydric soil indicators.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 57 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: SE ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 215 m (710 ft) W of IL 78, 865 m (2835 ft) N of Bunker Hill Rd.

HYDROLOGY

Inundated: Yes: No: X Depth of standing water: N/A
Depth to saturated soil: >0.71 cm (28 in)
Overview of hydrological flow through the system: Water enters this site through precipitation and sheet flow. Water exits the site through evapotranspiration and drainage into the creek just to its west.
Other field evidence observed: None

Wetland hydrology: Yes: No:X
Rationale: This site sits high above the adjacent creek and likely drains into it quickly. There is no evidence to suggest the site receives or retains sufficient water to meet the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: Although this site has dominant hydrophytic vegetation, it lacks hydric soils and wetland hydrology. Therefore, we determined that this site is not a wetland. The NWI coded this site as a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland).

Determined by: Jason Zylka, Brian Wilm, and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 57 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 12 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: mesic floodplain forest
Legal Description: SE ¼, SW ¼, NE ¼, Sec 30, RSE, T21N
Location: Approx. 215 m (710 ft) W of IL 78, 865 m (2835 ft) N of Bunker Hill Rd.

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Aster ontarionis	ontario aster	herb	FAC	4
Campanula americana	American bellflower	herb	FAC	4
Celtis occidentalis	hackberry	tree	FAC-	3
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Glechoma hederacea	ground ivy	herb	FACU	*
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Morus alba	white mulberry	shrub, tree	FAC	*
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ptelea trifoliata	wafer ash	shrub	FACU+	4
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sambucus canadensis	common elder	herb	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	herb, woody vine	FAC	3
Ulmus americana	American elm	tree	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 54/20 = 2.7$
$FQI = R/(\sqrt{N}) = 54/(\sqrt{20}) = 12.1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 58 (page 1 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 240 m (787 ft) south of US30 and 435 m (1427 ft) east of Sawyer Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: NRCS mapped as Lawson silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 4/4
Redox depletions:	Yes:	No: X	

Matrix color: 2.5Y 3/2
Other indicators: This site is located in a low spot along a drainageway and French Creek.

Hydric soils: Yes: X No:
Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F6 – Redox Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 58 (page 2 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 240 m (787 ft) south of US30 and 435 m (1427 ft) east of Sawyer Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A Depth to saturated soil: 0.33 m (13 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and occasional overflow from the adjacent ditch. Water leaves this site through evapotranspiration, soil infiltration, and flow back into the adjacent ditch.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site is a flat area along the edge of a ditch where water is likely to sit for extended periods of time. Hydric soils and a low landscape position make it likely that this site holds water for a sufficient duration to meet the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 58 (page 3 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 240 m (787 ft) south of US30 and 435 m (1427 ft) east of Sawyer Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Aster simplex	panicled aster	herb	FACW	3
Carex sp.	sedge	herb	------	--
Daucus carota	Queen Anne's lace	herb	UPL	*
Oenothera biennis	evening primrose	herb	FACU	1
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Rumex crispus	curly dock	herb	FAC+	*
Setaria faberi	giant foxtail	herb	FACU+	*
Verbascum thapsus	woolly mullein	herb	UPL	*

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 4/2 = 2$
$FQI = R/(\sqrt{N}) = 4/(\sqrt{2}) = 2.8$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 59 (page 1 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 216 m (708 ft) south of US30 and 483 m (1584 ft) east of Sawyer Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Prunus serotina	FACU	tree
Laportea canadensis	FACW	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 50%

Hydrophytic vegetation: Yes: No: X
Rationale: Less than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: Mapped as Lawson silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 2.5Y 4/2
Other indicators: N/A

Hydric soils: Yes: No: X
Rationale: The NRCS classifies Lawson silt loam as an Aquic Cumulic Hapludoll that is somewhat poorly drained. This soil has a low chroma matrix, but it lacks redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 59 (page 2 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 216 m (708 ft) south of US30 and 483 m (1584 ft) east of Sawyer Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A Depth to saturated soil: >0.91 m (>36 in)
Overview of hydrological flow through the system: Water enters this site through precipitation. Water leaves this site through evapotranspiration, soil infiltration, and runoff to the adjacent ditch.
Other field evidence observed: None

Wetland hydrology: Yes: No: X
Rationale: This site is on high ground and is surrounded by a deeply incised stream. This probably results in the site draining very rapidly, thus this site is unlikely to be inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: This site is lacking dominant hydrophytic vegetation, hydric soils, and wetland hydrology, therefore it is not a wetland. The NWI coded this site as a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION

Site 59 (page 3 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: SW ¼, SE ¼, SE ¼, Sec 17, R5E, T21N
Location: 216 m (708 ft) south of US30 and 483 m (1584 ft) east of Sawyer Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Alliaria petiolata	garlic mustard	herb	FAC	*
Carex sp.	sedge	herb	------	--
Fraxinus pennsylvanica	green ash	tree	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Lonicera tatarica	Tartarian honeysuckle	shrub	FACU	*
Ludwigia alternifolia	seedbox	herb	OBL	5
Morus alba	white mulberry	tree	FAC	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Prunus serotina	wild black cherry	tree/sapling	FACU	1
Toxicodendron radicans	poison ivy	shrub	FAC+	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 13/6 = 2.2$
$FQI = R/(\sqrt{N}) = 13/(\sqrt{6}) = 5.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 60 (page 1 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, Sec 21, R5E, T21N
Location: Directly south of US30 and 370 m (1213 ft) west of Lyndon Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: Mapped as Prophetstown silt loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 2.5Y 5/4
Redox depletions:	Yes:	No: X	

Matrix color: 2.5Y 4/2
Other indicators: This site is located in a depressional area along a drainageway.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Prophetstown silt loam as a Typic Calciaquoll that is poorly drained. This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 60 (page 2 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, Sec 21, R5E, T21N
Location: Directly south of US30 and 370 m (1213 ft) west of Lyndon Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A Depth to saturated soil: At or near surface
Overview of hydrological flow through the system: Water enters this site through precipitation, runoff from adjacent impervious surfaces, and sheetflow. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMCD (a partially drained/ditched, seasonally flooded, emergent, palustrine wetland).

Determined by: Jason Zylka (vegetation, GPS, and hydrology)
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 60 (page 3 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NW ¼, NE ¼, Sec 21, R5E, T21N
Location: Directly south of US30 and 370 m (1213 ft) west of Lyndon Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	sapling	FACW-	1
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias syriaca	common milkweed	herb	UPL	0
Aster simplex	panicled aster	herb	FACW	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Scirpus fluviatilis	river bulrush	herb	OBL	3
Typha latifolia	cattail	herb	OBL	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 13/9 = 1.4$
$FQI = R/(\sqrt{N}) = 13/(\sqrt{9}) = 4.3$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 61 (page 1 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2008 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, SW ¼, SW ¼, Sec 16, R5E, T21N
Location: At the intersection of US30 and Bishop Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Have the vegetation, soils, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Acer negundo	FACW-	tree/sapling
Fraxinus pennsylvanica	FACW	tree/sapling

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS
Series and phase: Mapped as Elburn silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 2.5Y 4/3
Other indicators: N/A

Hydric soils: Yes: No: X
Rationale: The NRCS classifies Elburn silt loam as an Aquic Argiudoll that is somewhat poorly drained. This soil has neither a low chroma matrix nor any redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 61 (page 2 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2008 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, SW ¼, SW ¼, Sec 16, R5E, T21N
Location: At the intersection of US30 and Bishop Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A Depth to saturated soil: >0.91 m (>36 in)
Overview of hydrological flow through the system: This site is a ditch and receives water from the north and it flows to the south. This site also receives water from precipitation and sheetflow, and loses water through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No: X
Rationale: This site is a ditch and receives water year round and will likely be inundated for a sufficient period to satisfy the wetland hydrology criteria.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: No: X
Rationale for decision: This site does not qualify as a wetland because it is a man made feature excavated for drainage purposes. It is also lacking hydric soils. The NWI coded this site as a PEMC (a seasonally flooded, emergent, palustrine wetland) and a PFO1A (a temporarily flooded, broad leaved deciduous, forested wetland).

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ROUTINE ON-SITE WETLAND DETERMINATION
Site 61 (page 3 of 3)

Field Investigators: Zylka and Draheim
Project Name: U.S. 30
Date: 14 January, 2008 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Forest
Legal Description: NW ¼, SW ¼, SW ¼, Sec 16, R5E, T21N
Location: At the intersection of US30 and Bishop Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree/sapling	FACW-	1
Fraxinus pennsylvanica	green ash	tree /sapling	FACW	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 3/2 = 1.5$
$FQI = R/(\sqrt{N}) = 3/(\sqrt{2}) = 2.1$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 62 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SE/4, Section 19 & SW/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 171 m (563 ft) south of US 30 and about 1486 m (4875 ft) west of Matznick Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Juglans nigra*	FACU	tree
2. *Ulmus Americana*	FACW-	tree
3. *Ulmus americana*	FACW-	sapling
4. *Cryptotaenia canadensis*	FAC	herb
5. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 80%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 62 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SE/4, Section 19 & SW/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 171 m (563 ft) south of US 30 and about 1486 m (4875 ft) west of Matznick Road

SOILS

Series and phase: NRCS mapped as Seaton silt loam, revised to Sawmill silty clay loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 7.5YR 3/4
Redox depletions:	Yes:	No: X	

Matrix color: 10YR 4/1
Other indicators: This site is located in a low-lying area along Deer Creek.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Sawmill as a Cumulic Endoaquolls that is poorly drained. This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 62 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SE/4, Section 19 & SW/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 171 m (563 ft) south of US 30 and about 1486 m (4875 ft) west of Matznick Road

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: About 1.0 m (40 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site occupies a low landscape position adjacent to a stream.

Wetland hydrology: Yes: X No:
Rationale: A low landscape position adjacent to a stream and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 62 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SE/4, Section 19 & SW/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 171 m (563 ft) south of US 30 and about 1486 m (4875 ft) west of Matznick Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
Division of Ecology & Conservation Science
1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Campanula americana	American bellflower	herb	FAC	4
Carya cordiformis	bitternut hickory	sapling	FAC	4
Celtis occidentalis	hackberry	tree, sapling	FAC-	3
Crataegus mollis	downy hawthorn	tree, sapling	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Fraxinus pennsylvanica	green ash	tree, sapling, shrub	FACW	2
Galium aparine	annual bedstraw	herb	FACU	0
Geum canadense	white avens	herb	FAC	2
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Osmorhiza longistylis	anise-root	herb	FACU-	3
Parthenocissus quinquefolia	Virginia creeper	vine, herb	FAC-	2
Phlox divaricata	blue phlox	herb	FACU	5
Prunus serotina	wild black cherry	tree	FACU	1

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 62 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SE/4, Section 19 & SW/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 171 m (563 ft) south of US 30 and about 1486 m (4875 ft) west of Matznick Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Ribes americanum	wild black currant	shrub	FACW	5
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sanicula gregaria	common snakeroot	herb	FAC+	2
Tilia americana	basswood	tree	FACU	5
Ulmus americana	American elm	tree, sapling	FACW-	5
Verbesina alternifolia	wingstem	herb	FACW	4
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 66/√23 = 13.8
mean C = R/N = 66/23 = 2.9

ROUTINE ON-SITE WETLAND DETERMINATION
Site 63 (page 1 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Drained Pond)
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 200 m (656 ft) south of US 30 and about 972 m (3188 ft) west of Matznick Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Echinochloa muricata*	OBL	herb
2. *Echinochloa walteri*	OBL	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Seaton silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 4/4
Redox depletions:	Yes:	No: X	

Matrix color: 10 Y 4/0
Other indicators: This site is located where a pond once existed.

Hydric soils: Yes: X No:

Rationale: This soil contains redoximorphic concentrations within a gleyed matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F2 – Loamy Gleyed Matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 63 (page 2 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Drained Pond)
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 200 m (656 ft) south of US 30 and about 972 m (3188 ft) west of Matznick Road

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: 0.25 m (10 in)

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff. Hydrologic outputs include evapotranspiration and soil infiltration. Other field evidence observed: The site is an excavated and impounded pond that has been drained.

Wetland hydrology: Yes: X No:
Rationale: This drained pond still collects and holds significant amounts of water for extended periods of time. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is identified in the National Wetlands Inventory as diked or impounded, intermittently exposed, unconsolidated bottom, palustrine wetland (PUBGh).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 63 (page 3 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Drained Pond)
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 200 m (656 ft) south of US 30 and about 972 m (3188 ft) west of Matznick Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
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wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Ambrosia trifida	giant ragweed	herb	FAC+	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Carex spp.	sedges	herb	-----	--
Echinochloa muricata	barnyard grass	herb	OBL	0
Echinochloa walteri	salt-marsh cockspur grass	herb	OBL	5
Glechoma hederacea	ground ivy	herb	FACU	*
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lobelia siphilitica	blue cardinal-flower	herb	FACW+	4
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Polygonum persicaria	spotted lady's thumb	herb	FACW	*
Rumex crispus	curly dock	herb	FAC+	*

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 63 (page 4 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Drained Pond)
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 200 m (656 ft) south of US 30 and about 972 m (3188 ft) west of Matznick Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Scirpus fluviatilis	river bulrush	herb	OBL	3
Setaria faberi	giant foxtail	herb	FACU+	*
Solanum carolinense	horse nettle	herb	FACU-	0
Solanum dulcamara	false bittersweet	herb	FAC	*
Solanum ptycanthum	black nightshade	herb	FACU-	0

*Species not native to Illinois

FQI = R/√N = 21/√14 = 3.7
mean C = R/N = 21/14 = 1.5

ROUTINE ON-SITE WETLAND DETERMINATION
Site 64 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 267 m (875 ft) south of US 30 and about 914 m (3000 ft) west of Matznick Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Populus deltoides*	FAC+	tree
2. *Ulmus americana*	FACW-	tree
3. *Glyceria striata*	OBL	herb
4. *Laportea canadensis*	FACW	herb
5. *Leersia oryzoides*	OBL	herb
6. *Pilea pumila*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 64 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 267 m (875 ft) south of US 30 and about 914 m (3000 ft) west of Matznick Road

SOILS

Series and phase: NRCS mapped as Fayette silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 4/4
Redox depletions:	Yes:	No: X	

Matrix color: 10 YR 3/2
Other indicators: This site is located in a low-lying area along a drainageway.

Hydric soils: Yes: X No:
Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Thick Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 64 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 267 m (875 ft) south of US 30 and about 914 m (3000 ft) west of Matznick Road

HYDROLOGY

Inundated: Yes (partially) Depth of standing water: < 0.15 m (< 6 in)

Depth to saturated soil: Surface to about 0.41 m (16 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent stream drainage. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the drainage.
Other field evidence observed: The site occupies a low landscape position adjacent to a small stream drainage.

Wetland hydrology: Yes: X No:
Rationale: A low landscape position adjacent to a small stream drainage and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 64 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 267 m (875 ft) south of US 30 and about 914 m (3000 ft) west of Matznick Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
Division of Ecology & Conservation Science
1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling	FACW-	1
Arisaema triphyllum	Jack-in-the-pulpit	herb	FACW-	4
Bidens frondosa	common beggar's ticks	herb	FACW	1
Carex spp.	sedges	herb	-----	--
Cirsium vulgare	bull thistle	herb	FACU-	*
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium maculatum	spotted Joe Pye weed	herb	OBL	5
Eupatorium serotinum	late boneset	herb	FAC+	1
Fraxinus pennsylvanica	green ash	tree, sapling	FACW	2
Geum canadense	white avens	herb	FAC	2
Glyceria striata	fowl manna grass	herb	OBL	4
Hydrophyllum virginianum	Virginia waterleaf	herb	FACW-	5
Impatiens capensis	jewelweed	herb	FACW	2
Juglans nigra	black walnut	tree	FACU	4
Lactuca floridana	blue lettuce	herb	FAC-	4
Laportea canadensis	wood nettle	herb	FACW	2

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 64 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, SW/4, Section 20, T 21 N, R 6 E
Location: Approximately 267 m (875 ft) south of US 30 and about 914 m (3000 ft) west of Matznick Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lobelia siphilitica	blue cardinal-flower	herb	FACW+	4
Mimulus ringens	monkey flower	herb	OBL	5
Morus alba	white mulberry	sapling, shrub	FAC	*
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Parthenocissus quinquefolia	Virginia creeper	herb	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum persicaria	spotted lady's thumb	herb	FACW	*
Polygonum virginianum	Virginia knotweed	herb	FAC	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Potentilla simplex	common cinquefoil	herb	FACU-	3
Quercus rubra	northern red oak	tree	FACU	5
Ribes americanum	wild black currant	shrub	FACW	5
Rosa multiflora	multiflora rose	shrub	FACU	*
Rubus occidentalis	black raspberry	shrub	UPL	2
Teucrium canadense	American germander	herb	FACW-	3
Toxicodendron radicans	poison ivy	herb	FAC+	1
Ulmus americana	American elm	tree	FACW-	5
Viola pratincola	common blue violet	herb	FAC	1

*Species not native to Illinois

FQI = R/√N = 85/√30 = 15.5
mean C = R/N = 85/30 = 2.8

ROUTINE ON-SITE WETLAND DETERMINATION
Site 65 (page 1 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, NW/4, Section 32, T 21 N, R 6 E
Location: Approximately 198 m (650 ft) north of I-88 and about 823 m (2700 ft) west of Matznick Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Leersia oryzoides*	OBL	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: No: X

Rationale: Less than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

SOILS

Series and phase: Mapped as Prophetstown silt loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 3/6
Redox depletions:	Yes:	No: X	

Matrix color: N 4/0
Other indicators: This site is located in a low-lying area along a drainageway.

Hydric soils: Yes: X No:

Rationale: The NRCS classifies Prophetstown as a Typic Calciaquolls that is poorly drained. This soil contains redoximorphic concentrations within a gleyed matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION

Site 65 (page 2 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, NW/4, Section 32, T 21 N, R 6 E
Location: Approximately 198 m (650 ft) north of I-88 and about 823 m (2700 ft) west of Matznick Road

HYDROLOGY

Inundated: Yes (partially) Depth of standing water: < 0.15 m (< 6 in)

Depth to saturated soil: At or near the surface to about 0.25 m (10 in)

Overview of hydrological flow through the system: Water appears to enter primarily from a broken, underground field tile; precipitation and surface runoff also contribute. Hydrologic outputs include evapotranspiration and soil infiltration.
Other field evidence observed: The site occupies a somewhat low position in the landscape.

Wetland hydrology: Yes: X No:
Rationale: Inundation and surface saturation, along with the presence of hydric soils, indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 65 (page 3 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, NW/4, Section 32, T 21 N, R 6 E
Location: Approximately 198 m (650 ft) north of I-88 and about 823 m (2700 ft) west of Matznick Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
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Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Aster pilosus	hairy aster	herb	FACU+	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Hordeum jubatum	squirrel-tail	herb	FAC+	*
Juncus dudleyi	Dudley's rush	herb	FAC	4
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lythrum alatum	winged loosestrife	herb	OBL	5
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	herb	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub, herb	OBL	1
Salix nigra	black willow	shrub	OBL	3
Solidago canadensis	Canada goldenrod	herb	FACU	1
Xanthium strumarium	cocklebur	herb	FAC	0

*Species not native to Illinois

FQI = R/√N = 24/√13 = 6.7
mean C = R/N = 24/13 = 1.8

ROUTINE ON-SITE WETLAND DETERMINATION
Site 66 (page 1 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 38 m (125 ft) east of Matznick Rd. and 29 m (94 ft) north of I-88

Do normal environmental conditions exist at this site?	Yes: X	No:
Has the vegetation, soil, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

No dominant vegetation exists at this excavated, man-made pond. Vegetation exists as only a very narrow, incomplete fringe around its periphery.

Hydrophytic vegetation: Yes: No: X
Rationale: No dominant vegetation exists at this site.

SOILS

Series and phase: NRCS mapped as a perennial pond.

On Whiteside County hydric soils list?	Yes:	No:	Undetermined: X
Is the soil a histosol?	Yes:	No:	Undetermined: X
Histic epipedon present?	Yes:	No:	Undetermined: X
Redox concentrations:	Yes:	No:	Undetermined: X
Redox depletions:	Yes:	No:	Undetermined: X

Matrix color: Undetermined
Other indicators: A soil sample was not taken at this site as it was completely inundated at the time of the field visit.

Hydric soils: Yes: X No:
Rationale: It is our belief that this site experiences saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 66 (page 2 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 38 m (125 ft) east of Matznick Rd. and 29 m (94 ft) north of I-88

HYDROLOGY

Inundated: Yes Depth of standing water: Less than 2 m (6.6 ft) for most of the site

Depth to saturated soil: Inundated

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff. Hydrologic outputs include evapotranspiration and soil infiltration. Other field evidence observed: The site consists of two excavated and impounded ponds that appear to hold water continually.

Wetland hydrology: Yes: X No:
Rationale: These excavated and impounded ponds appear to hold water principally to a depth under 2 meters on a continual basis. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although hydric soils and wetland hydrology are present, dominant hydrophytic vegetation is absent. These ponds are identified in the National Wetlands Inventory as diked/impounded, permanently flooded, unconsolidated bottom, palustrine wetland (PUBHh).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 66 (page 3 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Pond
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 38 m (125 ft) east of Matznick Rd. and 29 m (94 ft) north of I-88

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Agrostis alba	red top	herb	FACW	0
Asclepias incarnata	swamp milkweed	herb	OBL	4
Aster pilosus	hairy aster	herb	FACU+	0
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Coronilla varia	crown vetch	herb	UPL	*
Eleocharis erythropoda	spike rush	herb	OBL	3
Lonicera maackii	Amur honeysuckle	shrub	UPL	*
Lycopus americanus	common water horehound	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Populus deltoides	eastern cottonwood	tree	FAC+	2
Potamogeton nodosus	leafy pondweed	herb	OBL	7
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree, sapling	OBL	3
Typha latifolia	cattail	herb	OBL	1
Verbena hastata	blue vervain	herb	FACW+	3
Vitis riparia	riverbank grape	vine	FACW-	2

*Species not native to Illinois

FQI = R/√N = 31/√13 = 8.6
mean C = R/N = 31/13 = 2.4

ROUTINE ON-SITE WETLAND DETERMINATION
Site 67 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Shrubland/Forested Wetland
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 210 m (688 ft) east of Matznick Rd. and 19 m (63 ft) north of I-88, between the two ponds that comprise Site 66

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Populus deltoides*	FAC+	tree
2. *Salix nigra*	OBL	tree
3. *Salix nigra*	OBL	sapling
4. *Salix exigua*	OBL	shrub
5. *Phalaris arundinacea*	FACW+	herb
6. *Typha angustifolia*	OBL	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 67 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Shrubland/Forested Wetland
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 210 m (688 ft) east of Matznick Rd. and 19 m (63 ft) north of I-88, between the two ponds that comprise Site 66

SOILS

Series and phase: Mapped as Drummer silty clay loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 2.5Y 5/4
Redox depletions:	Yes:	No: X	

Matrix color: 5Y 5/1
Other indicators: This site is located in a low-lying area adjacent to two ponds.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Drummer as a Typic Endoaquolls that is poorly drained. This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted Below Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 67 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Shrubland/Forested Wetland
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 210 m (688 ft) east of Matznick Rd. and 19 m (63 ft) north of I-88, between the two ponds that comprise Site 66

HYDROLOGY

Inundated: Yes (mostly) Depth of standing water: To 0.15 m (6 in)

Depth to saturated soil: Inundated or saturated at the surface

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff. Hydrologic outputs include evapotranspiration and soil infiltration.
Other field evidence observed: The site occupies a low position in the landscape and was inundated at the time of survey.

Wetland hydrology: Yes: X No:
Rationale: A low landscape position and inundation indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is identified in the National Wetlands Inventory as diked/impounded, seasonally flooded, emergent, palustrine wetland (PEMCh).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 67 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Shrubland/Forested Wetland
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 210 m (688 ft) east of Matznick Rd. and 19 m (63 ft) north of I-88, between the two ponds that comprise Site 66

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer saccharinum	silver maple	tree, sapl, shrub, herb	FACW	1
Alisma plantago-aquatica	broad-leaf water-plantain	herb	OBL	2
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Apocynum sibiricum	Indian hemp	herb	FAC+	2
Asclepias incarnata	swamp milkweed	herb	OBL	4
Aster pilosus	hairy aster	herb	FACU+	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Carex sp.	sedge	herb	-----	--
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium discolor	pasture thistle	herb	UPL	3
Cornus drummondii	rough-leaved dogwood	shrub	FAC	2
Cornus racemosa	gray dogwood	shrub	FACW-	2
Daucus carota	Queen Anne's lace	herb	UPL	*
Geum canadense	white avens	herb	FAC	2

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 67 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Shrubland/Forested Wetland
Legal Description: NW/4, Section 33, T 21 N, R 6 E
Location: About 210 m (688 ft) east of Matznick Rd. and 19 m (63 ft) north of I-88, between the two ponds that comprise Site 66

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Impatiens capensis	jewelweed	herb	FACW	2
Lemna minor	common duckweed	herb	OBL	3
Lemna trisulca	ivy-leaved duckweed	herb	OBL	8
Mimulus ringens	monkey flower	herb	OBL	5
Myriophyllum sp.	milfoil	herb	OBL	--
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Phyla lanceolata	fog-fruit	herb	OBL	1
Pilea pumila	Canada clearweed	herb	FACW	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	sapling, shrub	OBL	1
Salix nigra	black willow	tree, sapling, shrub	OBL	3
Solanum dulcamara	false bittersweet	herb	FAC	*
Solidago canadensis	Canada goldenrod	herb	FACU	1
Toxicodendron radicans	poison ivy	vine, herb	FAC+	1
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Typha latifolia	cattail	herb	OBL	1
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 58/√27 = 11.2
mean C = R/N = 58/27 = 2.1

ROUTINE ON-SITE WETLAND DETERMINATION
Site 68 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Marsh/Wet Meadow
Legal Description: NW/4, SW/4, Section 28, T 21 N, R 6 E
Location: Immediately north and south of Matthew Road, approximately 190 m (625 ft) east of Matznick Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
1. *Agropyron repens*	FACU	herb
2. *Cyperus esculentus*	FACW	herb
3. *Polygonum amphibium*	OBL	herb
4. *Typha latifolia*	OBL	herb
5. *Vernonia fasciculata*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 80%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 68 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Marsh/Wet Meadow
Legal Description: NW/4, SW/4, Section 28, T 21 N, R 6 E
Location: Immediately north and south of Matthew Road, approximately 190 m (625 ft) east of Matznick Road

SOILS

Series and phase: NRCS mapped as a Seaton-Timula silt loam complex, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 3/6
Redox depletions:	Yes:	No: X	

Matrix color: 2.5Y 4/2
Other indicators: This site is located in a depressional area along a drainageway.

Hydric soils: Yes: X No:
Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted Matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 68 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Marsh/Wet Meadow
Legal Description: NW/4, SW/4, Section 28, T 21 N, R 6 E
Location: Immediately north and south of Matthew Road, approximately 190 m (625 ft) east of Matznick Road

HYDROLOGY

Inundated: Yes (partially) Depth of standing water: Less than 0.15 m (6 in)

Depth to saturated soil: Inundated or saturated at the surface

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff, principally directed via a small drainageway. Hydrologic outputs include evapotranspiration and soil infiltration.

Other field evidence observed: The site occupies a low landscape position and is fed by a small drainageway. The site was inundated or saturated to the surface at the time of survey.

Wetland hydrology: Yes: X No:

Rationale: A low landscape position fed by a drainageway, in combination with inundation and surface saturation, indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:

Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 68 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Marsh/Wet Meadow
Legal Description: NW/4, SW/4, Section 28, T 21 N, R 6 E
Location: Immediately north and south of Matthew Road, approximately 190 m (625 ft) east of Matznick Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Agropyron repens	quack grass	herb	FACU	*
Agrostis alba	red top	herb	FACW	0
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Ambrosia trifida	giant ragweed	herb	FAC+	0
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster simplex	panicled aster	herb	FACW	3
Bromus inermis	awnless brome grass	herb	UPL	*
Calystegia sepium	American bindweed	herb	FAC	1
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium discolor	pasture thistle	herb	UPL	3
Cyperus esculentus	yellow nut-sedge	herb	FACW	0

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 68 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Marsh/Wet Meadow
Legal Description: NW/4, SW/4, Section 28, T 21 N, R 6 E
Location: Immediately north and south of Matthew Road, approximately 190 m (625 ft) east of Matznick Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Echinochloa muricata	barnyard grass	herb	OBL	0
Equisetum arvense	common horsetail	herb	FAC	0
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Lactuca serriola	prickly lettuce	herb	FAC	*
Plantago rugelii	red-stalked plantain	herb	FAC	0
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum hydropiper	common smartweed	herb	OBL	*
Polygonum persicaria	spotted lady's thumb	herb	FACW	*
Rumex crispus	curly dock	herb	FAC+	*
Salix nigra	black willow	shrub, herb	OBL	3
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Typha latifolia	cattail	herb	OBL	1
Urtica dioica	stinging nettle	herb	FAC+	2
Vernonia fasciculata	common ironweed	herb	FACW	5
Vitis riparia	riverbank grape	herb	FACW-	2
Xanthium strumarium	cocklebur	herb	FAC	0

*Species not native to Illinois

FQI = R/√N = 35/√24 = 7.1
mean C = R/N = 35/24 = 1.5

ROUTINE ON-SITE WETLAND DETERMINATION
Site 69 (page 1 of 2)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Developed Land (Gravel)
Legal Description: NE/4, SE/4, Section 28, T 21 N, R 6 E
Location: Approximately 343 m (1125 ft) south of Matthew Road and about 1333 m (4375 ft) east of Matznick Road

Do normal environmental conditions exist at this site?	Yes: X	No:
Has the vegetation, soil, or hydrology been significantly disturbed?	Yes:	No: X

VEGETATION

This site has been developed and covered with gravel; it is essentially unvegetated.

Hydrophytic vegetation: Yes: No: X
Rationale: No dominant vegetation exists at this site.

SOILS

Series and phase: NRCS mapped as Lawson silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undetermined: X
Is the soil a histosol?	Yes:	No:	Undetetmined: X
Histic epipedon present?	Yes:	No:	Undetermined: X
Redox concentrations:	Yes:	No:	Undetermined: X
Redox depletions:	Yes:	No:	Undetermined: X

Matrix color: Undetermined

Other indicators: This site has been developed and is covered with hard surfaces. No soil sample could be obtained.

Hydric soils: Yes: No: X
Rationale: As stated above, this site has been developed. No soils exist at the surface of this site.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 69 (page 2 of 2)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Developed Land (Gravel)
Legal Description: NE/4, SE/4, Section 28, T 21 N, R 6 E
Location: Approximately 343 m (1125 ft) south of Matthew Road and about 1333 m (4375 ft) east of Matznick Road

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: Undetermined

Overview of hydrological flow through the system: Water enters the site as precipitation and very limited surface runoff. Hydrologic outputs include evapotranspiration and soil infiltration.

Other field evidence observed: None

Wetland hydrology: Yes: No: X

Rationale: No indicators of wetland hydrology were observed. The site is not inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X

Rationale for decision: Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all absent. The site is identified in the National Wetlands Inventory as excavated, intermittently exposed, unconsolidated bottom, palustrine wetland (PUBGx).

Determined by:

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Jason Zylka
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 70 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NE/4 & NW/4, SE/4, Section 21, T 21 N, R 6 E
Location: Approximately 305 m (1000 ft) east of Emerson Road and about 30 m (100 ft) north of US 30

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Polygonum pensylvanicum*	FACW+	herb
2. *Typha angustifolia*	OBL	herb
3. *Urtica dioica*	FAC+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 70 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NE/4 & NW/4, SE/4, Section 21, T 21 N, R 6 E
Location: Approximately 305 m (1000 ft) east of Emerson Road and about 30 m (100 ft) north of US 30

SOILS

Series and phase: NRCS mapped as Elburn silt loam, revised to Drummer silt loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 3/6
Redox depletions:	Yes: X	No:	Color: N 4/0

Matrix color: 2.5Y 6/2
Other indicators: This site is located in a low-lying area along a drainageway.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Drummer as a Typic Endoaquolls that is poorly drained. This soil contains redoximorphic concentrations within a gleyed matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator F3 – Depleted Matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 70 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NE/4 & NW/4, SE/4, Section 21, T 21 N, R 6 E
Location: Approximately 305 m (1000 ft) east of Emerson Road and about 30 m (100 ft) north of US 30

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: About 0.23 m (9 in)

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff, partially via an adjacent drainageway. Hydrologic outputs include evapotranspiration and soil infiltration.

Other field evidence observed: The site occupies a low landscape position adjacent to a small stream/drainageway.

Wetland hydrology: Yes: X No:

Rationale: A low landscape position adjacent to a small stream/drainageway and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:

Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 70 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NE/4 & NW/4, SE/4, Section 21, T 21 N, R 6 E
Location: Approximately 305 m (1000 ft) east of Emerson Road and about 30 m (100 ft) north of US 30

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
Division of Ecology & Conservation Science
1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Agropyron repens	quack grass	herb	FACU	*
Apocynum cannabinum	dogbane	herb	FAC	2
Arctium minus	common burdock	herb	UPL	*
Asclepias syriaca	common milkweed	herb	UPL	0
Bromus inermis	awnless brome grass	herb	UPL	*
Carex sp.	sedge	herb	-----	--
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium vulgare	bull thistle	herb	FACU-	*
Conium maculatum	poison hemlock	herb	FACW	*
Conyza canadensis	horseweed	herb	FAC-	0
Daucus carota	Queen Anne's lace	herb	UPL	*
Echinochloa muricata	barnyard grass	herb	OBL	0
Erigeron annuus	annual fleabane	herb	FAC-	1
Lactuca serriola	prickly lettuce	herb	FAC	*
Morus alba	white mulberry	shrub	FAC	*

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 70 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: NE/4 & NW/4, SE/4, Section 21, T 21 N, R 6 E
Location: Approximately 305 m (1000 ft) east of Emerson Road and about 30 m (100 ft) north of US 30

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Potentilla norvegica	rough cinquefoil	herb	FAC	0
Rumex crispus	curly dock	herb	FAC+	*
Sambucus canadensis	common elder	shrub	FACW-	2
Sonchus arvensis	field sowthistle	herb	FAC-	*
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Urtica dioica	stinging nettle	herb	FAC+	2

*Species not native to Illinois

FQI = R/√N = 7/√9 = 2.3
mean C = R/N = 7/9 = 0.8

ROUTINE ON-SITE WETLAND DETERMINATION
Site 71 (page 1 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, SW/4 & SW/4, SE/4, Section 22, T 21 N, R 6 E
Location: Approximately 38 m (125 ft) north of Harvey Road and about 133 m (438 ft) east of US 30

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Phalaris arundinacea*	FACW+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Richwood silt loam, revised to Drummer silt loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 4/6
Redox depletions:	Yes: X	No:	Color: 5G 4/0

Matrix color: 2.5Y 5/2
Other indicators: This site is located in a low-lying area along a drainageway.

Hydric soils: Yes: X No:

Rationale: The NRCS classifies Drummer as a Typic Endoaquolls that is poorly drained. This soil contains redoximorphic concentrations within a gleyed matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 71 (page 2 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, SW/4 & SW/4, SE/4, Section 22, T 21 N, R 6 E
Location: Approximately 38 m (125 ft) north of Harvey Road and about 133 m (438 ft) east of US 30

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: 0.46 m (18 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent stream/drainageway. Primary hydrologic outputs include evapotranspiration and soil infiltration.
Other field evidence observed: The site occupies a low landscape position adjacent to a stream/drainageway.

Wetland hydrology: Yes: X No:
Rationale: Location adjacent to a stream drainage and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 71 (page 3 of 3)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SE/4, SW/4 & SW/4, SE/4, Section 22, T 21 N, R 6 E
Location: Approximately 38 m (125 ft) north of Harvey Road and about 133 m (438 ft) east of US 30

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	shrub	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Angelica atropurpurea	angelica	herb	OBL	6
Asclepias syriaca	common milkweed	herb	UPL	0
Calystegia sepium	American bindweed	herb	FAC	1
Cirsium arvense	Canada thistle	herb	FACU	*
Conium maculatum	poison hemlock	herb	FACW	*
Parthenocissus quinquefolia	Virginia creeper	herb	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Salix nigra	black willow	tree, sapling, shrub	OBL	3
Sambucus canadensis	common elder	shrub, herb	FACW-	2
Urtica dioica	stinging nettle	herb	FAC+	2
Vernonia gigantea	tall iron weed	herb	FAC	4
Vitis riparia	riverbank grape	herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 25/√11 = 7.5
mean C = R/N = 25/11 = 2.3

ROUTINE ON-SITE WETLAND DETERMINATION
Site 72 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Vegetated Gravel Bar)
Legal Description: SE/4, NW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 533 m (1750 ft) south of US 30 and about 800 m (2625 ft) north of I-88

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Phalaris arundinacea*	FACW+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 72 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Vegetated Gravel Bar)
Legal Description: SE/4, NW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 533 m (1750 ft) south of US 30 and about 800 m (2625 ft) north of I-88

SOILS

Series and phase: NRCS mapped as Coffeen silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes:	No: X	
Redox depletions:	Yes:	No: X	

Matrix color: N 4/0
Other indicators: Dark vertical streaking of organic matter in the subsoil.

Hydric soils: Yes: X No:
Rationale: This soil contains organic matter streaks within a gleyed matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator S4 – Sandy Gleyed Matrix.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 72 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Vegetated Gravel Bar)
Legal Description: SE/4, NW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 533 m (1750 ft) south of US 30 and about 800 m (2625 ft) north of I-88

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: At the surface

Overview of hydrological flow through the system: Water enters the site principally as overflow from Elkhorn Creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to Elkhorn Creek.

Wetland hydrology: Yes: X No:
Rationale: A location adjacent to Elkhorn Creek, along with soil saturation at the surface, indicates that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 72 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Vegetated Gravel Bar)
Legal Description: SE/4, NW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 533 m (1750 ft) south of US 30 and about 800 m (2625 ft) north of I-88

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
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1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Abutilon theophrasti	velvet-leaf	herb	FACU-	*
Acer saccharinum	silver maple	herb	FACW	1
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Asclepias syriaca	common milkweed	herb	UPL	0
Bidens frondosa	common beggar's ticks	herb	FACW	1
Brassica kaber	charlock	herb	UPL	0
Calystegia sepium	American bindweed	herb	FAC	1
Echinochloa muricata	barnyard grass	herb	OBL	0
Eleocharis erythropoda	spike rush	herb	OBL	3
Eragrostis hypnoides	creeping love grass	herb	OBL	5
Helianthus tuberosus	Jerusalem artichoke	herb	FAC	3
Laportea canadensis	wood nettle	herb	FACW	2
Leersia oryzoides	rice cutgrass	herb	OBL	3
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Plantago rugelii	red-stalked plantain	herb	FAC	0

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 72 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow (Vegetated Gravel Bar)
Legal Description: SE/4, NW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 533 m (1750 ft) south of US 30 and about 800 m (2625 ft) north of I-88

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Polygonum lapathifolium	curttop lady's thumb	herb	FACW+	0
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	herb	FAC+	2
Rumex altissimus	pale dock	herb	FACW-	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub, herb	OBL	1
Setaria faberi	giant foxtail	herb	FACU+	*
Taraxacum officinale	common dandelion	herb	FACU	*
Verbena hastata	blue vervain	herb	FACW+	3
Xanthium strumarium	cocklebur	herb	FAC	0

*Species not native to Illinois

FQI = R/√N = 29/√20 = 6.5
mean C = R/N = 29/20 = 1.5

ROUTINE ON-SITE WETLAND DETERMINATION
Site 73 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
1. *Acer negundo*	FACW-	tree
2. *Populus deltoides*	FAC+	tree
3. *Salix nigra*	OBL	tree
4. *Ulmus americana*	FACW-	tree
5. *Elymus virginicus*	FACW-	herb
6. *Glechoma hederacea*	FACU	herb
7. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 86%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 73 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

SOILS

Series and phase: NRCS mapped as Coffeen silt loam, revised to Birds silt loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 7.5YR 4/6
Redox depletions:	Yes:	No: X	

Matrix color: 10YR 3/2
Other indicators: This site is located in low spots within the floodplain of Elkhorn Creek.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Birds as a Typic Fluvaquents that is poorly and very poorly drained. This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted Below Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 73 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: Approximately 0.51 m (20 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the Elkhorn Creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to Elkhorn Creek; some wetland drainage patterns were also observed.

Wetland hydrology: Yes: X No:
Rationale: Location adjacent Elkhorn Creek and the presence of wetland drainage patterns indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all present. Part of the site is identified in the National Wetlands Inventory as seasonally flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1C).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 73 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Acer saccharinum	silver maple	tree, sapling	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Ambrosia trifida	giant ragweed	herb	FAC+	0
Arctium minus	common burdock	herb	UPL	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Boehmeria cylindrica	false nettle	herb	OBL	3
Calystegia sepium	American bindweed	herb	FAC	1
Campanula americana	American bellflower	herb	FAC	4
Carex sp.	sedge	herb	-----	--
Conium maculatum	poison hemlock	herb	FACW	*
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Eupatorium serotinum	late boneset	herb	FAC+	1
Festuca obtusa	nodding fescue	herb	FACU+	5

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 73 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Glechoma hederacea	ground ivy	herb	FACU	*
Humulus japonicus	Japanese hops	herb	FACU	*
Impatiens capensis	jewelweed	herb	FACW	2
Juglans nigra	black walnut	shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia virginica	white grass	herb	FACW	4
Lysimachia nummularia	moneywort	herb	FACW+	*
Morus alba	white mulberry	tree, sapling, shrub	FAC	*
Parthenocissus quinquefolia	Virginia creeper	vine, herb	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Platanus occidentalis	sycamore	tree	FACW	3
Polygonum scandens	climbing buckwheat	herb	FAC	2
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ribes americanum	wild black currant	shrub	FACW	5
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Stellaria media	common chickweed	herb	FACU	*
Ulmus americana	American elm	tree, sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervain	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 77/√31 = 13.8
mean C = R/N = 77/31 = 2.5

ROUTINE ON-SITE WETLAND DETERMINATION
Site 74 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SW/4, SW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 305 m (1000 ft) east of Moline Road and about 95 m (313 ft) north of I-88

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Phalaris arundinacea*	FACW+	herb
2. *Polygonum lapathifolium*	FACW+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 74 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SW/4, SW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 305 m (1000 ft) east of Moline Road and about 95 m (313 ft) north of I-88

SOILS

Series and phase: NRCS mapped as Coffeen silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 3/4
Redox depletions:	Yes:	No: X	

Matrix color: 2.5Y 3/2

Other indicators: This site is located in a low-lying area along the floodplain of Elkhorn Creek.

Hydric soils: Yes: X No:

Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted Below Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 74 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SW/4, SW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 305 m (1000 ft) east of Moline Road and about 95 m (313 ft) north of I-88

HYDROLOGY

Inundated: Yes (partially) Depth of standing water: Up to 0.33 m (13 in)

Depth to saturated soil: Inundated or saturated at the surface

Overview of hydrological flow through the system: Water enters the site principally as overflow from Elkhorn Creek and as directed surface runoff, via an above-ground culvert. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.

Other field evidence observed: The site is located adjacent to Elkhorn Creek.

Wetland hydrology: Yes: X No:

Rationale: A location adjacent to Elkhorn Creek, along with inundation and soil saturation at the surface, indicates that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:

Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is not identified in the National Wetlands Inventory.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 74 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SW/4, SW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 305 m (1000 ft) east of Moline Road and about 95 m (313 ft) north of I-88

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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1816 S. Oak Street
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	shrub, herb	FACW-	1
Amaranthus tuberculatus	tall waterhemp	herb	OBL	1
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Daucus carota	Queen Anne's lace	herb	UPL	*
Echinochloa muricata	barnyard grass	herb	OBL	0
Erigeron annuus	annual fleabane	herb	FAC-	1
Humulus japonicus	Japanese hops	herb	FACU	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 74 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Wet Meadow
Legal Description: SW/4, SW/4, Section 35, T 21 N, R 6 E
Location: Along Elkhorn Creek, approximately 305 m (1000 ft) east of Moline Road and about 95 m (313 ft) north of I-88

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum lapathifolium	curttop lady's thumb	herb	FACW+	0
Polygonum pensylvanicum	giant smartweed	herb	FACW+	1
Populus deltoides	eastern cottonwood	shrub, herb	FAC+	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub, herb	OBL	1
Setaria faberi	giant foxtail	herb	FACU+	*
Xanthium strumarium	cocklebur	herb	FAC	0

*Species not native to Illinois

FQI = R/√N = 16/√14 = 4.3
mean C = R/N = 16/14 = 1.1

ROUTINE ON-SITE WETLAND DETERMINATION
Site 75 (page 1 of 2)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Non-native Grassland (Lawn)
Legal Description: SE/4, SE/4, Section 34, T 21 N, R 6 E
Location: Approximately 48 m (156 ft) east of Moline Road and about 57 m (188 ft) north of I-88

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Poa pratensis*	FAC-	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 0%

Hydrophytic vegetation: Yes: No: X

Rationale: Less than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

SOILS

Series and phase: Mapped as Lawson silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 10YR 3/1
Other indicators: N/A

Hydric soils: Yes: No: X

Rationale: The NRCS classifies Lawson silt loam as an Aquic Cumulic Hapludoll that is somewhat poorly drained. This soil has a low chroma matrix, but it lacks redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION

Site 75 (page 2 of 2)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 11 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Non-native Grassland (Lawn)
Legal Description: SE/4, SE/4, Section 34, T 21 N, R 6 E
Location: Approximately 48 m (156 ft) east of Moline Road and about 57 m (188 ft) north of I-88

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: Greater than 0.91 m (36 in)

Overview of hydrological flow through the system: Water enters the site as precipitation and surface runoff. Hydrologic outputs include evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: No: X
Rationale: No indicators of wetland hydrology were observed. The site, therefore, is not inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are all absent. The site is identified in the National Wetlands Inventory as seasonally flooded, emergent, palustrine wetland (PEMC).

Determined by: Brian Wilm and Valerie Sivicek
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 76 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Acer negundo*	FACW-	tree
2. *Populus deltoides*	FAC+	tree
3. *Ulmus americana*	FACW-	tree
4. *Elymus virginicus*	FACW-	herb
5. *Glechoma hederacea*	FACU	herb
6. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 83%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 76 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

SOILS

Series and phase: Mapped as Coffeen silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 2.5Y 4/2

Other indicators: This site is located in higher landscape positions adjacent to Site 73 along Elkhorn Creek.

Hydric soils: Yes: No: X

Rationale: The NRCS classifies Coffeen as a Fluvaquentic Hapludolls that is somewhat poorly drained. Though this soil has a low chroma matrix, it lacks redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 76 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: Greater than 0.76 m (30 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from Elkhorn Creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to Elkhorn Creek.

Wetland hydrology: Yes: No: X
Rationale: Although located adjacent to Elkhorn Creek, this site occupies a higher landscape position than the adjacent Site 73, thereby indicating that wetland hydrology is likely not present. The site, therefore, is not inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. Part of the site is identified in the National Wetlands Inventory as seasonally flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1C).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 76 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Acer saccharinum	silver maple	tree, sapling	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Ambrosia trifida	giant ragweed	herb	FAC+	0
Arctium minus	common burdock	herb	UPL	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Bromus inermis	awnless brome grass	herb	UPL	*
Calystegia sepium	American bindweed	herb	FAC	1
Campanula americana	American bellflower	herb	FAC	4
Carex sp.	sedge	herb	-----	--
Chenopodium album	lamb's quarters	herb	FAC-	*
Conium maculatum	poison hemlock	herb	FACW	*
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4

*Species not native to Illinois

(Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 76 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4 and SW/4, Section 35, T 21 N, R 6 E
Location: North of I-88, between the entrance ramp to I-88 and Moline Road, both east and west of Elkhorn Creek

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Eupatorium serotinum	late boneset	herb	FAC+	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Festuca obtusa	nodding fescue	herb	FACU+	5
Glechoma hederacea	ground ivy	herb	FACU	*
Hemerocallis fulva	day lily	herb	UPL	*
Impatiens capensis	jewelweed	herb	FACW	2
Juglans nigra	black walnut	tree, sapling, shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia virginica	white grass	herb	FACW	4
Lonicera maackii	Amur honeysuckle	shrub	UPL	*
Lysimachia nummularia	moneywort	herb	FACW+	*
Morus alba	white mulberry	tree, sapling, shrub	FAC	*
Parthenocissus quinquefolia	Virginia creeper	vine, herb	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Platanus occidentalis	sycamore	tree	FACW	3
Polygonatum commutatum	great Solomon seal	herb	FACU	4
Polygonum scandens	climbing buckwheat	herb	FAC	2
Populus deltoides	eastern cottonwood	tree	FAC+	2
Ptelea trifoliata	wafer ash	shrub	FACU+	4
Ribes americanum	wild black currant	shrub	FACW	5
Robinia pseudoacacia	black locust	tree, sapling, shrub	FACU-	1
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	tree	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Stellaria media	common chickweed	herb	FACU	*
Teucrium canadense	germander	herb	FACW-	3
Ulmus americana	American elm	tree, sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervain	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 88/√35 = 14.9
mean C = R/N = 88/35 = 2.5

ROUTINE ON-SITE WETLAND DETERMINATION
Site 77 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4, NE/4, Section 35, T 21 N, R 6 E
Location: Immediately west of Elkhorn Creek and south of US 30

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Fraxinus pennsylvanica*	FACW	tree
2. *Elymus virginicus*	FACW-	herb
3. *Glechoma hederacea*	FACU	herb
4. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 75%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 77 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4, NE/4, Section 35, T 21 N, R 6 E
Location: Immediately west of Elkhorn Creek and south of US 30

SOILS

Series and phase: Mapped as Coffeen silt loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 2.5Y 4/2
Other indicators: N/A

Hydric soils: Yes: No: X
Rationale: The NRCS classifies Coffeen as a Fluvaquentic Hapludolls that is somewhat poorly drained. Though this soil has a low chroma matrix, it lacks redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 77 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4, NE/4, Section 35, T 21 N, R 6 E
Location: Immediately west of Elkhorn Creek and south of US 30

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: Greater than 0.76 m (30 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from Elkhorn Creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to and in the floodplain of Elkhorn Creek.

Wetland hydrology: Yes: No: X
Rationale: Although this site is located adjacent to Elkhorn Creek, streambanks are greatly elevated; flood events appear rare and short-lived. The site, therefore, is not inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although dominant hydrophytic vegetation is present, hydric soils and wetland hydrology are absent. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 77 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4, NE/4, Section 35, T 21 N, R 6 E
Location: Immediately west of Elkhorn Creek and south of US 30

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Ambrosia artemisiifolia	common ragweed	herb	FACU	0
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Campanula americana	American bellflower	herb	FAC	4
Celtis occidentalis	hackberry	tree, sapling, shrub	FAC-	3
Chaerophyllum procumbens	wild chervil	herb	FAC+	1
Conium maculatum	poison hemlock	herb	FACW	*
Crataegus mollis	downy hawthorn	tree, sapling, shrub	FACW-	2
Cryptotaenia canadensis	honewort	herb	FAC	1
Cynanchum laeve	blue vine	herb	FAC	1
Dactylis glomerata	orchard grass	herb	FACU	*

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 77 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NW/4, NE/4, Section 35, T 21 N, R 6 E
Location: Immediately west of Elkhorn Creek and south of US 30

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Eupatorium rugosum	white snakeroot	herb	FACU	2
Eupatorium serotinum	late boneset	herb	FAC+	1
Festuca obtusa	nodding fescue	herb	FACU+	5
Fraxinus pennsylvanica	green ash	tree, sapling, shrub	FACW	2
Geum canadense	white avens	herb	FAC	2
Glechoma hederacea	ground ivy	herb	FACU	*
Gleditsia triacanthos	honey locust	tree	FAC	2
Helianthus tuberosus	Jerusalem artichoke	herb	FAC	3
Impatiens capensis	jewelweed	herb	FACW	2
Juglans nigra	black walnut	tree	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Menispermum canadense	moonseed	herb	FAC	4
Morus alba	white mulberry	tree, sapling, shrub	FAC	*
Parthenocissus quinquefolia	Virginia creeper	vine, herb	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum scandens	climbing buckwheat	herb	FAC	2
Ptelea trifoliata	wafer ash	shrub	FACU+	4
Ribes americanum	wild black currant	shrub	FACW	5
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sambucus canadensis	common elder	shrub	FACW-	2
Sanicula gregaria	common snakeroot	herb	FAC+	2
Smilax hispida	bristly greenbrier	vine, herb	FAC	3
Ulmus americana	American elm	tree, sapling, shrub	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbesina alternifolia	wingstem	herb	FACW	4
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 89/√37 = 14.6
mean C = R/N = 89/37 = 2.4

ROUTINE ON-SITE WETLAND DETERMINATION
Site 78 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: Adjacent to the west edge of the Rock River and immediately north of US 30, both east and west of Site 79

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
1. *Acer saccharinum*	FACW	tree
2. *Pilea pumila*	FACW	herb
3. *Phalaris arundinacea*	FACW+	herb
4. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 78 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: Adjacent to the west edge of the Rock River and immediately north of US 30, both east and west of Site 79

SOILS

Series and phase: Mapped as Craigmile fine sandy loam.

On Whiteside County hydric soils list?	Yes: X	No:	
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 4/4
Redox depletions:	Yes:	No: X	

Matrix color: 10YR 3/1
Other indicators: This site is located within the immediate floodplain of the Rock River.

Hydric soils: Yes: X No:
Rationale: The NRCS classifies Craigmile as a Fluvaquentic Endoaquolls that is very poorly drained. This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted Below Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 78 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: Adjacent to the west edge of the Rock River and immediately north of US 30, both east and west of Site 79

HYDROLOGY

Inundated: No Depth of standing water: None
Depth to saturated soil: 0.71 m (28 in)
Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the Rock River. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the river.
Other field evidence observed: The site is located adjacent to and in the floodplain of the Rock River.

Wetland hydrology: Yes: X No:
Rationale: Location adjacent to the river (within its floodplain) indicates that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A) and permanently flooded, unconsolidated bottom, palustrine wetland (PUBH).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 78 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: Adjacent to the west edge of the Rock River and immediately north of US 30, both east and west of Site 79

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree, sapl, shrub, herb	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Bidens frondosa	common beggar's ticks	herb	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Campanula americana	American bellflower	herb	FAC	4
Carex sp.	sedge	herb	-----	--
Celtis occidentalis	hackberry	herb	FAC-	3
Cirsium arvense	Canada thistle	herb	FACU	*
Eleocharis erythropoda	spike rush	herb	OBL	3
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Fraxinus pennsylvanica	green ash	tree, sapl, shrub, herb	FACW	2
Glechoma hederacea	ground ivy	herb	FACU	*
Gleditsia triacanthos	honey locust	tree, sapling, herb	FAC	2
Hydrophyllum virginianum	Virginia waterleaf	herb	FACW-	5

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 78 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: Adjacent to the west edge of the Rock River and immediately north of US 30, both east and west of Site 79

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Leersia oryzoides	rice cutgrass	herb	OBL	3
Leersia virginica	white grass	herb	FACW	4
Lemna minor	common duckweed	herb	OBL	3
Leonurus cardiaca	motherwort	herb	UPL	*
Lycopus americanus	common water horehound	herb	OBL	3
Mimulus ringens	monkey flower	herb	OBL	5
Morus alba	white mulberry	tree, sapl, shrub, herb	FAC	*
Myriophyllum sp.	water milfoil	herb	OBL	--
Oxalis stricta	yellow wood sorrel	herb	FACU	0
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Physostegia virginiana	false dragonhead	herb	FACW	6
Pilea pumila	Canada clearweed	herb	FACW	3
Polygonum amphibium	water smartweed	herb	OBL	3
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Sagittaria latifolia	arrowhead	herb	OBL	4
Scirpus tabernaemontanii	great bulrush	herb	OBL	4
Scrophularia marilandica	late figwort	herb	FACU-	4
Sicyos angulatus	bur cucumber	herb	FACW-	3
Smilax hispida	bristly greenbrier	vine, herb	FAC	3
Solanum dulcamara	false bittersweet	herb	FAC	*
Stachys tenuifolia	slenderleaf betony	herb	OBL	5
Stellaria media	common chickweed	herb	FACU	*
Toxicodendron radicans	poison ivy	vine, herb	FAC+	1
Triosteum illinoense	illinois horse gentian	herb	UPL	5
Verbena urticifolia	white vervain	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4
Vitis riparia	riverbank grape	vine	FACW-	2
Xanthium strumarium	cocklebur	herb	FAC	0

*Species not native to Illinois

FQI = R/√N = 109/√38 = 17.7
mean C = R/N = 109/38 = 2.9

ROUTINE ON-SITE WETLAND DETERMINATION
Site 79 (page 1 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: North of US 30 and west of the Rock River, surrounded on the east and west by Site 78

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Celtis occidentalis*	FAC-	tree
2. *Juglans nigra*	FACU	tree
3. *Laportea canadensis*	FACW	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 33%

Hydrophytic vegetation: Yes: No: X

Rationale: Less than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 79 (page 2 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: North of US 30 and west of the Rock River, surrounded on the east and west by Site 78

SOILS

Series and phase: NRCS mapped as Craigmile fine sandy loam, revised Zumbro sandy loam.

On Whiteside County hydric soils list?	Yes:	No: X
Is the soil a histosol?	Yes:	No: X
Histic epipedon present?	Yes:	No: X
Redox concentrations:	Yes:	No: X
Redox depletions:	Yes:	No: X

Matrix color: 10YR 4/3
Other indicators: This site is located above the immediate floodplain of the Rock River.

Hydric soils: Yes: No: X
Rationale: The NRCS classifies Zumbro as an Entic Hapludolls that is well drained. This soil has neither a low chroma matrix nor any redoximorphic features to define it as hydric.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 79 (page 3 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: North of US 30 and west of the Rock River, surrounded on the east and west by Site 78

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: 0.76 m (30 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the Rock River. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the river.
Other field evidence observed: The site is located in the floodplain of the Rock River.

Wetland hydrology: Yes: X No:
Rationale: Location adjacent to the river (within its floodplain) indicates that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although hydric soils and wetland hydrology are present, dominant hydrophytic vegetation is absent. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 79 (page 4 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: SE/4, Section 25, T 21 N, R 7 E
Location: North of US 30 and west of the Rock River, surrounded on the east and west by Site 78

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
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wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Asarum canadense	Canada wild ginger	herb	UPL	5
Carya illinoensis	pecan	tree	FACW	6
Celtis occidentalis	hackberry	tree, sapling	FAC-	3
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Glechoma hederacea	ground ivy	herb	FACU	*
Gleditsia triacanthos	honey locust	tree	FAC	2
Hydrophyllum virginianum	Virginia waterleaf	herb	FACW-	5
Juglans nigra	black walnut	tree, sapling	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Pilea pumila	Canada clearweed	herb	FACW	3
Ribes americanum	wild black currant	shrub	FACW	5
Smilax hispida	bristly greenbrier	vine, herb	FAC	3
Ulmus americana	American elm	tree, sapling	FACW-	5
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 51/√15 = 13.2
mean C = R/N = 51/15 = 3.4

ROUTINE ON-SITE WETLAND DETERMINATION
Site 80 (page 1 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4, NW/4, Sect. 32 & SE/4, SW/4, Sect. 29, T 21 N, R 7 E
Location: Surrounding a stream drainage, both north and south of US 30, approximately 457 m (1500 ft) west of Prophet Road

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
1. *Acer saccharinum*	FACW	tree
2. *Celtis occidentalis*	FAC-	tree
3. *Glechoma hederacea*	FACU	herb
4. *Plantago rugelii*	FAC	herb
5. *Poa pratensis*	FAC-	herb
6. *Taraxacum officinale*	FACU	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 33%

Hydrophytic vegetation: Yes: No: X

Rationale: Less than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 80 (page 2 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4, NW/4, Sect. 32 & SE/4, SW/4, Sect. 29, T 21 N, R 7 E
Location: Surrounding a stream drainage, both north and south of US 30, approximately 457 m (1500 ft) west of Prophet Road

SOILS

Series and phase: NRCS mapped as Richwood silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undetermined: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 3/4
Redox depletions:	Yes:	No: X	

Matrix color: 2.5Y 3/1
Other indicators: This site is located in a low-lying area along a small stream.

Hydric soils: Yes: X No:
Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Depleted Below Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 80 (page 3 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4, NW/4, Sect. 32 & SE/4, SW/4, Sect. 29, T 21 N, R 7 E
Location: Surrounding a stream drainage, both north and south of US 30, approximately 457 m (1500 ft) west of Prophet Road

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: 0.25 m (10 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site is located adjacent to a small stream.

Wetland hydrology: Yes: X No:
Rationale: Location adjacent to a stream drainage and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: No: X
Rationale for decision: Although hydric soils and wetland hydrology are present, dominant hydrophytic vegetation is absent. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 80 (page 4 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4, NW/4, Sect. 32 & SE/4, SW/4, Sect. 29, T 21 N, R 7 E
Location: Surrounding a stream drainage, both north and south of US 30, approximately 457 m (1500 ft) west of Prophet Road

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
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Champaign, Illinois 61820
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SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acalypha rhomboidea	three-seeded mercury	herb	FACU	0
Acer negundo	box elder	tree	FACW-	1
Acer saccharinum	silver maple	tree	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Aster lateriflorus	side-flowered aster	herb	FACW-	2
Bidens frondosa	common beggar's ticks	herb	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Carex sp.	sedge	herb	-----	--
Celtis occidentalis	hackberry	tree	FAC-	3
Commelina communis	common day flower	herb	FAC	*
Elymus virginicus	Virginia wild rye	herb	FACW-	4
Erigeron annuus	annual fleabane	herb	FAC-	1
Eupatorium rugosum	white snakeroot	herb	FACU	2
Glechoma hederacea	ground ivy	herb	FACU	*
Impatiens capensis	jewelweed	herb	FACW	2
Oxalis stricta	yellow wood sorrel	herb	FACU	0

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 80 (page 5 of 5)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 10 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4, NW/4, Sect. 32 & SE/4, SW/4, Sect. 29, T 21 N, R 7 E
Location: Surrounding a stream drainage, both north and south of US 30, approximately 457 m (1500 ft) west of Prophet Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Parthenocissus quinquefolia	Virginia creeper	vine	FAC-	2
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Pilea pumila	Canada clearweed	herb	FACW	3
Plantago rugelii	red-stalked plantain	herb	FAC	0
Plantago lanceolata	narrow-leaved plantain	herb	FAC	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Polygonum persicaria	spotted lady's thumb	herb	FACW	*
Taraxacum officinale	common dandelion	herb	FACU	*
Trifolium repens	white clover	herb	FACU+	*
Ulmus americana	American elm	tree	FACW-	5
Verbena urticifolia	white vervain	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4

*Species not native to Illinois

FQI = R/√N = 37/√18 = 8.7
mean C = R/N = 37/18 = 2.1

ROUTINE ON-SITE WETLAND DETERMINATION
Site 81 (page 1 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½ , NW ¼, Sec 14, R4E, T21N
Location: 745 m (2444 ft) south of Garden Plain Road and 1300 m (4265 ft) west of Henry Road

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
Imaptiens capensis	FACW	herb
Leersia oryzoides	FACW	herb
Phalaris arundinacea	FACW+	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 100%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Riley loam, rarely flooded;
revised to Ambraw clay loam (Fluvaquentic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations Yes: X No: Color: 10YR 4/6 and 2.5Y 5/6
Redox Depletions? Yes: X No: Color: 10YR 6/1
Matrix color: 10YR 2/1 over 3/1 and 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Ambraw as a Fluvaquentic Endoaquoll which is poorly drained. Presence of redox concentrations and depletions within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicators A11 – Depleted below dark surface, F3 – Depleted matrix, and F6 – Redox Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 81 (page 2 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½ , NW ¼, Sec 14, R4E, T21N
Location: 745 m (2444 ft) south of Garden Plain Road and 1300 m (4265 ft) west of Henry Road

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: From 0.15 -0.51 m (6-20 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheet flow, and possibly as ground water. Water leaves this site through evapotranspiration and soil infiltration.
Other field evidence observed: None

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI did not recognize this site.

Determined by: Jason Zylka Brian Wilm, and Allen Plocher
(vegetation, GPS and hydrology)
Scott Wiesbrook (soils and hydrology)
Brad Zercher (GIS)
Illinois Natural History Survey
1816 S. Oak Street
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ROUTINE ON-SITE WETLAND DETERMINATION

Site 81 (page 3 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½ , NW ¼, Sec 14, R4E, T21N
Location: 745 m (2444 ft) south of Garden Plain Road and 1300 m (4265 ft) west of Henry Road

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Acer negundo	box elder	tree/shrub	FACW-	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Amphicarpa bracteata	hog peanut	herb	FAC	4
Angelica atropurpurea	angelica	herb	OBL	6
Asclepias incarnata	swamp milkweed	herb	OBL	4
Aster lateriflorus	side flowered aster	herb	FACW-	2
Aster ontarionis	Ontario aster	herb	FAC	4
Aster simplex	panicled aster	herb	FACW	3
Athyrium filix femina	lady fern	herb	FAC	6
Bidens cernua	beggar's ticks	herb	OBL	2
Bidens frondosa	beggar's ticks	herb	FACW	1
Boehmeria cylindrica	false nettle	herb	OBL	3
Carex trichocarpa	sedge	herb	OBL	6
Chelone glabra	white turtle head	herb	OBL	7
Cicuta maculata	water hemlock	herb	OBL	4
Cinna arundinacea	stout wood reed	herb	FACW	5
Cirsium discolor	field thistle	herb	UPL	3
Cryptotaenia canadensis	honewort	herb	FAC	1
Elymus canadensis	Canada wild rye	herb	FAC-	4
Epilobium coloratum	cinnamon willow herb	herb	OBL	3
Equisetum arvense	horsetail	herb	FAC	0
Eupatorium maculatum	Joe Pye weed	herb	OBL	5
Eupatorium serotinum	late flowering thoroughwort	herb	FAC+	1
Fraxinus pennsylvanica	green ash	tree	FACW	2
Galium aparine	annual bedstraw	herb	FACU	0
Galium tinctorium	stiff bedstraw	herb	OBL	6
Geum canadense	white avens	herb	FAC	2
Glyceria striata	fowl manna grass	herb	OBL	4
Hackelia virginiana	stickseed	herb	FAC-	1
Helenium autumnale	sneezeweed	herb	FACW+	3
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Hydrophyllum virginianum	Virginia waterleaf	herb	FACW-	5
Impatiens capensis	jewel weed	herb	FACW	2

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 81 (page 4 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½ , NW ¼, Sec 14, R4E, T21N
Location: 745 m (2444 ft) south of Garden Plain Road and 1300 m (4265 ft) west of Henry Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Juglans nigra	black walnut	tree/shrub	FACU	4
Laportea canadensis	wood nettle	herb	FACW	2
Leersia oryzoides	rice cutgrass	herb	OBL	3
Leersia virginica	white grass	herb	FACW	4
Lobelia siphilitica	blue lobelia	herb	FACW+	4
Lonicera tatarica	Tartarian honeysuckle	shrub	FACU	*
Maclura pomifera	Osage orange	tree	FACU	*
Mentha arvensis	field mint	herb	FACW	4
Myosoton aquaticum	giant chickweed	herb	FAC+	*
Onoclea sensibilis	sensitive fern	herb	FACW	5
Osmorhiza longistylis	anise root	herb	FACU-	3
Parthenocissus quinquefolia	Virginia creeper	herb/woody vine	FAC-	2
Phalaris arundinacea	reed canarygrass	herb	FACW+	*
Pilea pumila	clearweed	herb	FACW	3
Polygonum amphibium	water smartweed	herb	OBL	3
Polygonum punctatum	dotted smartweed	herb	OBL	3
Polygonum sagittatum	arrow leaf tearthumb	herb	OBL	5
Polygonum virginianum	Virginia knotweed	herb	FAC	3
Prunella vulgaris elongata	self heal	herb	FAC	1
Prunus serotina	black cherry	tree	FACU	1
Quercus macrocarpa	bur oak	sapling	FAC-	5
Ranunculus septentrionalis	swamp buttercup	herb	FACW+	4
Ribes missouriense	Missouri gooseberry	shrub	UPL	2
Rosa multiflora	multiflora rose	shrub	FACU	*
Rubus occidentalis	black raspberry	shrub	OBL	2
Rumex altissimus	pale dock	herb	FACW-	2
Rumex crispus	curly dock	herb	FAC+	*
Salix exigua	sandbar willow	shrub	OBL	1
Salix nigra	black willow	tree	OBL	3
Sanicula gregaria	common snakeroot	herb	FAC+	2
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Sicyos angulatus	bur cucumber	herb	FACW-	3
Silphium perfoliatum	cup plant	herb	FACW-	4
Smilax hispida	bristly greenbriar	woody vine	FAC	3

Continued on next page

ROUTINE ON-SITE WETLAND DETERMINATION
Site 81 (page 5 of 5)

Field Investigators: Zylka, Wilm, Wiesbrook, and Plocher
Project Name: U.S. 30
Date: 10 September, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: S ½ , NW ¼, Sec 14, R4E, T21N
Location: 745 m (2444 ft) south of Garden Plain Road and 1300 m (4265 ft) west of Henry Road

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Solanum dulcamara	climbing nightshade	herb	FAC	*
Solidago gigantea	late goldenrod	herb	FACW	3
Thalictrum dasycarpum	meadow rue	herb	FACW-	5
Tilia americana	American basswood	tree	FACU	5
Toxicodendron radicans	poison ivy	herb/woody vine	FAC+	1
Ulmus americana	American elm	sapling	FACW-	5
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervain	herb	FAC+	3
Viburnum opulus	high bush cranberry	shrub	UPL	*
Viola pratincola	common blue violet	herb	FAC	1
Vitis riparia	riverbank grape	herb/woody vine	FACW-	2

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 211/67 = 3.15$
$FQI = R/(\sqrt{N}) = 211/(\sqrt{67}) = 25.8$

ROUTINE ON-SITE WETLAND DETERMINATION
Site 82 (page 1 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4 and SE/4, Section 31, T 21 N, R 6 E
Location: Along Deer Creek, beginning about 76 m (250 ft) north of I-88 and extending northward

Do normal environmental conditions exist at this site? Yes: X No:
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	Indicator Status	Stratum
1. *Acer negundo*	FACW-	tree
2. *Helianthus tuberosus*	FAC	herb
3. *Phalaris arundinacea*	FACW+	herb

Percentage of dominant species that are OBL, FACW, FACW+, FACW-, FAC+ or FAC: 100%

Hydrophytic vegetation: Yes: X No:

Rationale: More than 50% of the dominants are OBL, FACW, FACW-, FACW+, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Wakeland silt loam, revised to undetermined.

On Whiteside County hydric soils list?	Yes:	No:	Undet.: X
Is the soil a histosol?	Yes:	No: X	
Histic epipedon present?	Yes:	No: X	
Redox concentrations:	Yes: X	No:	Color: 10YR 5/4
Redox depletions:	Yes:	No: X	

Matrix color: 2.5 Y 3/2
Other indicators: This site is located in a low-lying area along Deer Creek.

Hydric soils: Yes: X No:

Rationale: This soil contains redoximorphic concentrations within a low chroma matrix, which indicates saturated or reduced conditions for an extended duration during the growing season. Therefore, the soil at this site meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A11 – Thick Dark Surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 82 (page 2 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4 and SE/4, Section 31, T 21 N, R 6 E
Location: Along Deer Creek, beginning about 76 m (250 ft) north of I-88 and extending northward

HYDROLOGY

Inundated: No Depth of standing water: None

Depth to saturated soil: 0.25 m (10 in)

Overview of hydrological flow through the system: Water enters the site as precipitation, surface runoff, and overflow from the adjacent creek. Hydrologic outputs include evapotranspiration, soil infiltration, and sheet flow back into the stream.
Other field evidence observed: The site occupies a somewhat low position in the landscape along a stream.

Wetland hydrology: Yes: X No:
Rationale: Low landscape position along a stream drainage and the presence of hydric soils indicate that wetland hydrology is likely present. The site, therefore, is inundated or saturated long enough during the growing season to meet the wetland hydrology criterion.

WETLAND DETERMINATION AND RATIONALE:

Is the site a wetland?: Yes: X No:
Rationale for decision: Dominant hydrophytic vegetation, hydric soils and wetland hydrology are all present. The site is identified in the National Wetlands Inventory as temporarily flooded, broad-leaved deciduous, forested, palustrine wetland (PFO1A).

ROUTINE ON-SITE WETLAND DETERMINATION
Site 82 (page 3 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4 and SE/4, Section 31, T 21 N, R 6 E
Location: Along Deer Creek, beginning about 76 m (250 ft) north of I-88 and extending northward

Determined by: Brian Wilm and Valerie Sivicek
(vegetation and hydrology)
Jason Zylka
(vegetation, hydrology, and GIS/GPS support)
Ian Draheim (soils and hydrology)
Illinois Natural History Survey
Division of Ecology & Conservation Science
1816 S. Oak Street
Champaign, Illinois 61820
(217) 244-2176 (Wilm)
wilm@uiuc.edu

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Acer negundo	box elder	tree, sapling, shrub	FACW-	1
Acer saccharinum	silver maple	tree, sapl, shrub, herb	FACW	1
Alliaria petiolata	garlic mustard	herb	FAC	*
Ambrosia trifida	giant ragweed	herb	FAC+	0
Brassica kaber	charlock	herb	UPL	0
Calystegia sepium	American bindweed	herb	FAC	1
Campanula americana	American bellflower	herb	FAC	4
Cirsium vulgare	bull thistle	herb	FACU-	*
Cryptotaenia canadensis	honewort	herb	FAC	1
Erigeron philadelphicus	marsh fleabane	herb	FACW	3
Eupatorium rugosum	white snakeroot	herb	FACU	2
Helianthus tuberosus	Jerusalem artichoke	herb	FAC	3
Impatiens capensis	jewelweed	herb	FACW	2
Laportea canadensis	wood nettle	herb	FACW	2
Leersia oryzoides	rice cutgrass	herb	OBL	3
Lonicera maackii	Amur honeysuckle	shrub	UPL	*

*Species not native to Illinois (Species list continues on following page.)

ROUTINE ON-SITE WETLAND DETERMINATION
Site 82 (page 4 of 4)

Field Investigators: Wilm, Zylka, Draheim, and Sivicek
Project Name: U.S. 30
Date: 12 July, 2007 **IDOT District:** 2
Sequence No.: **Section:**
State: Illinois **County:** Whiteside
Site Name: Floodplain Forest
Legal Description: NE/4 and SE/4, Section 31, T 21 N, R 6 E
Location: Along Deer Creek, beginning about 76 m (250 ft) north of I-88 and extending northward

SPECIES LIST (continued)

Scientific name	Common name	Stratum	Wetland indicator Status	Coefficient of Conservatism
Morus alba	white mulberry	tree, sapling, shrub	FAC	*
Pastinaca sativa	parsnip	herb	UPL	*
Phalaris arundinacea	reed canary grass	herb	FACW+	*
Polygonum amphibium	water smartweed	herb	OBL	3
Populus deltoides	eastern cottonwood	tree	FAC+	2
Rudbeckia laciniata	cutleaf coneflower	herb	FACW+	3
Salix nigra	black willow	tree, sapling, shrub	OBL	3
Sambucus canadensis	common elder	shrub	FACW-	2
Solidago canadensis	Canada goldenrod	herb	FACU	1
Urtica dioica	stinging nettle	herb	FAC+	2
Verbena urticifolia	white vervain	herb	FAC+	3
Verbesina alternifolia	wingstem	herb	FACW	4
Vitis riparia	riverbank grape	vine, herb	FACW-	2

*Species not native to Illinois

FQI = R/√N = 48/√23 = 10.0
mean C = R/N = 48/23 = 2.1

ROUTINE ON-SITE WETLAND DETERMINATION
Site 83 (page 1 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, SW ¼, SW ¼, Sec 12, R4E, T21N
Location: 800 m (2624 ft) south of US30 and 3437 m (11,276 ft) east of CR-19

Do normal environmental conditions exist at this site? Yes: X No:
Have the vegetation, soils, or hydrology been significantly disturbed? Yes: No: X

VEGETATION

Dominant Plant Species	**Indicator Status**	**Stratum**
Carex languinosa	OBL	herb
Helianthus grosseserratus	FACW-	herb
Solidago canadensis	FACU	herb
Typha angustifolia	OBL	herb

Percentage of dominant species that are OBL, FACW, FAC+, or FAC: 75%

Hydrophytic vegetation: Yes: X No:
Rationale: More than 50% of the dominants are OBL, FACW, FAC+, or FAC.

SOILS

Series and phase: NRCS mapped as Elburn silt loam; revised to Drummer silt loam (Typic Endoaquoll)
On county hydric soils list? Yes: X No:
Is the soil a histosol? Yes: No: X
Histic epipedon present? Yes: No: X
Redox Concentrations? Yes: X No: Color: 10YR 4/4 and 7.5YR 4/4
Redox Depletions? Yes: No: X Color: N/A
Matrix color: 10YR 3/1 over 2/1 over 4/1
Other indicators: None
Hydric soils? Yes: X No:
Rationale: The Natural Resources Conservation Service defines Drummer as a Typic Endoaquoll which is poorly drained. Presence of redox concentrations within a low chroma matrix indicates that this site is saturated or inundated for a significant duration during the growing season. Therefore, this soil meets the hydric soil criterion. This soil meets NRCS hydric soil indicator A12 – Thick dark surface.

ROUTINE ON-SITE WETLAND DETERMINATION
Site 83 (page 2 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, SW ¼, SW ¼, Sec 12, R4E, T21N
Location: 800 m (2624 ft) south of US30 and 3437 m (11,276 ft) east of CR-19

HYDROLOGY

Inundated: Yes: No: X
Depth of standing water: N/A
Depth to saturated soil: >0.20 m (8 in)
Overview of hydrological flow through the system: Water enters this site through precipitation, sheetflow, and runoff from adjacent impervious surfaces. Water exits this site through soil infiltration and evapotranspiration.
Other field evidence observed: None.

Wetland hydrology: Yes: X No:
Rationale: This site occupies a low spot in the landscape, has hydric soils, and no visible hydrologic outputs. These factors indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

DETERMINATION AND RATIONALE:

Is the site a wetland? Yes: X No:
Rationale for decision: Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, we determined that this site is a wetland. The NWI coded this site as a PEMA (a temporarily flooded emergent palustrine wetland).

Determined by: Jason Zylka Brian Wilm, and Valerie Sivicek
(vegetation, GPS and hydrology)
Scott Wiesbrook (soils and hydrology)
Brad Zercher (GIS)
Illinois Natural History Survey
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ROUTINE ON-SITE WETLAND DETERMINATION
Site 83 (page 3 of 3)

Field Investigators: Zylka, Wilm, Wiesbrook, and Sivicek
Project Name: U.S. 30
Date: 14 June, 2007 **IDOT District:** 2
State: Illinois **County:** Whiteside
Site Name: Wet meadow
Legal Description: NE ¼, SW ¼, SW ¼, Sec 12, R4E, T21N
Location: 800 m (2624 ft) south of US30 and 3437 m (11,276 ft) east of CR-19

SPECIES LIST

Scientific name	Common name	Stratum	Wetland indicator status	CC†
Ambrosia trifida	giant ragweed	herb	FAC+	0
Andropogon gerardii	big bluestem	herb	FAC-	5
Asclepias syriaca	common milkweed	herb	UPL	0
Aster novae-angliae	New England aster	herb	FACW	4
Aster pilosus	hairy aster	herb	FACU+	0
Aster simplex	panicled aster	herb	FACW	3
Calystegia sepium	American bindweed	herb	FAC	1
Carex lanuginosa	wooly sedge	herb	OBL	4
Carex stipata	prickly sedge	herb	OBL	2
Carex vulpinoidea	fox sedge	herb	OBL	3
Cirsium arvense	Canada thistle	herb	FACU	*
Cirsium discolor	pasture thistle	herb	UPL	3
Equisetum arvense	common horsetail	herb	FAC	0
Eupatorium rugosum	white snakeroot	herb	FACU	2
Galium aparine	annual bedstraw	herb	FACU	0
Helianthus grosseserratus	sawtooth sunflower	herb	FACW-	2
Heliopsis helianthoides	false sunflower	herb	UPL	4
Monarda fistulosa	wild bergamot	herb	FACU	4
Morus alba	white mulberry	tree	FAC	*
Pastinaca sativa	parsnip	herb	UPL	*
Poa pratensis	Kentucky bluegrass	herb	FAC-	*
Scirpus atrovirens	dark green bulrush	herb	OBL	4
Silphium integrifolium	wholeleaf rosinweed	herb	UPL	5
Silphium laciniatum	compass-plant	herb	FACU-	5
Solidago canadensis	Canada goldenrod	herb	FACU	1
Tradescantia virginiana	Virginia spiderwort	herb	UPL	7
Typha angustifolia	narrow-leaved cattail	herb	OBL	*
Typha latifolia	cattail	herb	OBL	1

†Coefficient of Conservatism (Taft *et al.* 1997)
*Non-native species

$mCv = R/N = 60/23 = 2.6$
$FQI = R/(\sqrt{N}) = 60/(\sqrt{23}) = 12.5$

Appendix 6-1
Element of Occurrence Records

Pages 709 through 736 have been removed to protect confidentiality.

Appendix 7-1

Floristic Quality Data

Appendix 7-1

Site: Route 30
Locale: Tree Savanna/Dry to dry-mesic sand savanna
By: William C. Handel/John Taft

FLORISTIC QUALITY DATA	Native	127	86.4%	Adventive	20	13.6%
127 NATIVE SPECIES	Tree	9	6.1%	Tree	1	0.7%
147 Total Species	Shrub	14	9.5%	Shrub	3	2.0%
4.3 NATIVE MEAN C	W-Vine	4	2.7%	W-Vine	0	0.0%
3.7 W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
48.1 NATIVE FQI	P-Forb	45	30.6%	P-Forb	4	2.7%
44.7 W/Adventives	B-Forb	7	4.8%	B-Forb	4	2.7%
3.7 NATIVE MEAN W	A-Forb	18	12.2%	A-Forb	4	2.7%
3.6 W/Adventives	P-Grass	16	10.9%	P-Grass	3	2.0%
AVG: Fac. Upland (-)	A-Grass	3	2.0%	A-Grass	1	0.7%
	P-Sedge	7	4.8%	P-Sedge	0	0.0%
	A-Sedge	0	0.0%	Sedge	0	0.0%
	Fern	4	2.7%			

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
1	Acer negundo	-2	FACW-	Nt Tree	BOXELDER
0	ACHILLEA MILLEFOLIUM	3	FACU	Ad P-Forb	COMMON MILFOIL
4	Agastache nepetoides	3	FACU	Nt P-Forb	YELLOW GIANT HYSSOP
0	AGROPYRON SMITHII	4	FACU-	Ad P-Grass	COLORADO BLUESTEM
0	ALLIARIA PETIOLATA	0	FAC	Ad B-Forb	GARLIC MUSTARD
0	Ambrosia artemisiifolia	3	FACU	Nt A-Forb	COMMON RAGWEED
2	Ambrosia psilostachya	1	FAC-	Nt P-Forb	WESTERN RAGWEED
8	Amorpha canescens	5	UPL	Nt Shrub	LEAD PLANT
4	Androsace occidentalis	4	FACU-	Nt A-Forb	ANDROSACE
9	Anemone caroliniana	5	UPL	Nt P-Forb	CAROLINA ANEMONE
4	Antennaria neglecta	5	UPL	Nt P-Forb	CAT'S FOOT
6	Arabis glabra	5	UPL	Nt B-Forb	TOWER MUSTARD
7	Arabis lyrata	4	FACU-	Nt B-Forb	LYRE-LEAVED ROCK CRESS
9	Aristida tuberculosa	5	UPL	Nt A-Grass	BEACH THREE AWN GRASS
4	Artemisia campestris	5	UPL	Nt B-Forb	BEACH WORMWOOD
2	Artemisia ludoviciana	5	UPL	Nt P-Forb	WHITE SAGE
7	Asclepias amplexicaulis	5	UPL	Nt P-Forb	SAND MILKWEED
0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
1	Asclepias verticillata	5	UPL	Nt P-Forb	HORSETAIL MILKWEED
9	Asclepias viridiflora	5	UPL	Nt P-Forb	GREEN MILKWEED
4	Asplenium platyneuron	3	FACU	Nt Fern	EBONY SPLEENWORT
0	Aster pilosus	4	FACU-	Nt P-Forb	HAIRY ASTER
7	Astragalus canadensis	-1	FAC+	Nt P-Forb	CANADIAN MILK VETCH
9	Bouteloua hirsuta	5	UPL	Nt P-Grass	HAIRY GRAMA
0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
0	BROMUS TECTORUM	5	UPL	Ad A-Grass	CHEAT GRASS
9	Callirhoe triangulata	5	UPL	Nt P-Forb	CLUSTERED POPPY MALLOW
4	Carex brevior	0	FAC	Nt P-Sedge	PLAINS OVAL SEDGE
6	Carex meadii	4	FACU-	Nt P-Sedge	MEAD'S STIFF SEDGE
5	Carex muhlenbergii	5	UPL	Nt P-Sedge	SAND BRACTED SEDGE
5	Carex pensylvanica	5	UPL	Nt P-Sedge	PENNSYLVANIA OAK SEDGE
8	Carex tonsa	5	UPL	Nt P-Sedge	SMOOTH-FRUITED OAK SEDGE
4	Carya cordiformis	0	FAC	Nt Tree	BITTERNUT HICKORY
1	Cassia fasciculata	4	FACU-	Nt A-Forb	GOLDEN CASSIA
8	Ceanothus americanus	5	UPL	Nt Shrub	NEW JERSEY TEA
2	Celastrus scandens	3	FACU	Nt W-Vine	CLIMBING BITTERSWEET
10	Chamaesyce geyeri	5	UPL	Nt A-Forb	GYERE'S SPURGE
0	Chamaesyce maculata	4	FACU-	Nt A-Forb	NODDING SPURGE
3	Cirsium discolor	5	UPL	Nt B-Forb	PASTURE THISTLE
5	Commelina erecta	5	UPL	Nt P-Forb	DAY FLOWER
0	Conyza canadensis	1	FAC-	Nt A-Forb	HORSEWEED
2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
1	Croton glandulosus v. septentrionalis	5	UPL	Nt A-Forb	SAND CROTON
3	Cycloloma atriplicifolium	3	FACU	Nt A-Forb	WINGED PIGWEED
5	Cyperus filiculmis	4	FACU-	Nt P-Sedge	SLENDER SAND SEDGE
8	Cyperus grayioides	5	UPL	Nt P-Sedge	GRAY'S SEDGE

Locale: Tree Savanna/Dry to dry-mesic sand savanna cont.

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
5	Cyperus schweinitzii	2	FACU+	Nt P-Sedge	ROUGH SAND SEDGE
7	Descurainia pinnata	5	UPL	Nt A-Forb	TANSY MUSTARD
5	Desmodium canadense	1	FAC-	Nt P-Forb	SHOWY TICK TREFOIL
3	Draba reptans	5	UPL	Nt A-Forb	COMMON WHITLOW GRASS
0	ELAEAGNUS UMBELLATA	5	UPL	Ad Shrub	AUTUMN OLIVE
4	Elymus canadensis	1	FAC-	Nt P-Grass	CANADA WILD RYE

0	Equisetum arvense	0	FAC	Nt Fern	COMMON HORSETAIL
3	Eragrostis spectabilis	5	UPL	Nt P-Grass	PURPLE LOVE GRASS
2	Erigeron strigosus	1	FAC-	Nt P-Forb	DAISY FLEABANE
1	Eupatorium serotinum	-1	FAC+	Nt P-Forb	LATE BONESET
3	Euphorbia corollata	5	UPL	Nt P-Forb	FLOWERING SPURGE
2	Fragaria virginiana	1	FAC-	Nt P-Forb	WILD STRAWBERRY
5	Froelichia floridana v. campestris	5	UPL	Nt A-Forb	COTTONWEED
0	FROELICHIA GRACILIS	5	UPL	Ad A-Forb	COTTONWEED
0	Galium aparine	3	FACU	Nt A-Forb	ANNUAL BEDSTRAW
2	Gnaphalium obtusifolium	5	UPL	Nt B-Forb	OLD-FIELD BALSAM
1	Hackelia virginiana	1	FAC-	Nt P-Forb	STICKSEED
7	Helianthemum canadense	5	UPL	Nt P-Forb	COMMON ROCKROSE
7	Helianthus occidentalis	4	FACU-	Nt P-Forb	WESTERN SUNFLOWER
5	Heterotheca camporum	5	UPL	Nt P-Forb	GOLDEN ASTER
6	Hieracium longipilum	5	UPL	Nt P-Forb	LONG-BEARDED HAWKWEED
9	Hudsonia tomentosa	5	UPL	Nt Shrub	FALSE HEATHER
1	Juniperus virginiana	3	FACU	Nt Tree	EASTERN RED CEDAR
0	KOCHIA SCOPARIA	4	FACU-	Ad A-Forb	BELVEDERE SUMMER CYPRESS
7	Koeleria macrantha	5	UPL	Nt P-Grass	JUNE GRASS
4	Krigia virginica	5	UPL	Nt A-Forb	DWARF DANDELION
4	Leptoloma cognatum	5	UPL	Nt P-Grass	FALL WITCH GRASS
4	Lespedeza capitata	3	FACU	Nt P-Forb	ROUND-HEADED BUSH CLOVER
7	Liatris aspera	5	UPL	Nt P-Forb	ROUGH BLAZING STAR
4	Linaria canadensis	5	UPL	Nt A-Forb	BLUE TOADFLAX
6	Lithospermum canescens	5	UPL	Nt P-Forb	HOARY PUCCOON
7	Lithospermum caroliniense	5	UPL	Nt P-Forb	HAIRY PUCCOON
0	LONICERA MORROWI	5	UPL	Ad Shrub	MORROW'S HONEYSUCKLE
0	MELILOTUS ALBA	3	FACU	Ad B-Forb	WHITE SWEET CLOVER
0	MELILOTUS OFFICINALIS	3	FACU	Ad B-Forb	YELLOW SWEET CLOVER
0	MIRABILIS NYCTAGINEA	5	UPL	Ad P-Forb	WILD FOUR O'CLOCK
0	MOLLUGO VERTICILLATA	0	FAC	Ad A-Forb	CARPET WEED
4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
5	Monarda punctata	5	UPL	Nt P-Forb	HORSEMINT
0	MORUS ALBA	0	FAC	Ad Tree	WHITE MULBERRY
0	NEPETA CATARIA	1	FAC-	Ad P-Forb	CATNIP
5	Oenothera rhombipetala	3	FACU	Nt B-Forb	SAND PRIMROSE
8	Opuntia macrorhiza	5	UPL	Nt Shrub	PLAINS PRICKLY-PEAR
7	Panicum depauperatum	5	UPL	Nt P-Grass	STARVED PANIC GRASS
7	Panicum linearifolium	5	UPL	Nt P-Grass	SLENDER-LEAVED PANIC GRASS
3	Panicum oligosanthes v. scribnerianum	3	FACU	Nt P-Grass	SCRIBNER'S PANIC GRASS
5	Panicum villosissimum	5	UPL	Nt P-Grass	WHITE-HAIRED PANIC GRASS
2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
4	Paspalum bushii	5	UPL	Nt P-Grass	HAIRY BEAD GRASS
8	Penstemon grandiflorus	5	UPL	Nt P-Forb	LARGE-FLOWERED BEARD TONGUE
6	Penstemon pallidus	5	UPL	Nt P-Forb	PALE BEARD TONGUE
7	Phlox bifida	5	UPL	Nt P-Forb	CLEFF PHLOX
2	Physalis heterophylla	5	UPL	Nt P-Forb	CLAMMY GROUND CHERRY
0	Physalis subglabrata	5	UPL	Nt P-Forb	SMOOTH GROUND CHERRY
1	Phytolacca americana	1	FAC-	Nt P-Forb	POKEWEED
9	Pinus strobus	3	FACU	Nt Tree	WHITE PINE
0	PLANTAGO PATAGONICA v. BREVICARPA	5	UPL	Ad A-Forb	WOOLLY PLANTAIN
0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
0	Poinsettia dentata	5	UPL	Nt A-Forb	TOOTHED SPURGE
7	Polygala polygama v. obtusata	4	FACU-	Nt B-Forb	PURPLE MILKWORT
4	Populus grandidentata	3	FACU	Nt Tree	BIG-TOOTH ASPEN
3	Prunus americana	5	UPL	Nt Tree	AMERICAN PLUM
8	Prunus nigra	4	FACU-	Nt Tree	CANADA PLUM
1	Prunus serotina	3	FACU	Nt Tree	WILD BLACK CHERRY
3	Prunus virginiana	1	FAC-	Nt Shrub	COMMON CHOKE CHERRY
4	Ptelea trifoliata	2	FACU+	Nt Shrub	WAFER ASH
5	Pteridium aquilinum	3	FACU	Nt Fern	BRACKEN FERN
5	Quercus velutina	5	UPL	Nt Tree	BLACK OAK
5	Ranunculus fascicularis	3	FACU	Nt P-Forb	EARLY BUTTERCUP
4	Rhus aromatica	5	UPL	Nt Shrub	AROMATIC SUMAC
1	Rhus glabra	5	UPL	Nt Shrub	SMOOTH SUMAC

Locale: Tree Savanna/Dry to dry-mesic sand savanna cont.

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
2	Ribes missouriense	5	UPL	Nt Shrub	MISSOURI GOOSEBERRY
4	Rosa carolina	4	FACU-	Nt Shrub	PASTURE ROSE
0	ROSA MULTIFLORA	3	FACU	Ad Shrub	JAPANESE ROSE
2	Rubus flagellaris	4	FACU-	Nt Shrub	COMMON DEWBERRY
2	Rubus occidentalis	3	FACU	Nt Shrub	BLACK RASPBERRY
0	RUMEX ACETOSELLA	0	FAC	Ad P-Forb	FIELD SORREL
5	Schizachyrium scoparium	4	FACU-	Nt P-Grass	LITTLE BLUESTEM
5	Scrophularia lanceolata	2	FACU+	Nt P-Forb	EARLY FIGWORT
8	Selaginella rupestris	5	UPL	Nt Fern	ROCK SELAGINELLA
1	Silene antirrhina	5	UPL	Nt A-Forb	SLEEPY CATCHFLY
6	Sisyrinchium campestre	5	UPL	Nt P-Forb	PRAIRIE BLUE-EYED GRASS
4	Smilacina racemosa	3	FACU	Nt P-Forb	FEATHERY FALSE SOLOMON SEAL
3	Smilax hispida	0	FAC	Nt W-Vine	BRISTLY GREEN BRIER
3	Solidago nemoralis	5	UPL	Nt P-Forb	OLD FIELD GOLDENROD

4	Sorghastrum nutans	2	FACU+	Nt	P-Grass	INDIAN GRASS
4	Spermolepis inermis	5	UPL	Nt	A-Forb	SMOOTH SCALESEED
3	Sporobolus asper	5	UPL	Nt	P-Grass	ROUGH DROPSEED
4	Sporobolus cryptandrus	4	FACU-	Nt	P-Grass	SAND DROPSEED
6	Stipa spartea	5	UPL	Nt	P-Grass	PORCUPINE GRASS
9	Talinum rugospermum	5	UPL	Nt	P-Forb	FAME FLOWER
7	Tephrosia virginiana	5	UPL	Nt	P-Forb	GOAT'S RUE
1	Toxicodendron radicans	3	FACU	Nt	W-Vine	POISON IVY
3	Tradescantia ohiensis	2	FACU+	Nt	P-Forb	COMMON SPIDERWORT
1	Tridens flavus	5	UPL	Nt	P-Grass	COMMON PURPLETOP
2	Triodanis perfoliata	0	FAC	Nt	A-Forb	VENUS'S LOOKING GLASS
6	Triplasis purpurea	5	UPL	Nt	A-Grass	PURPLE SANDGRASS
0	VERBASCUM THAPSUS	5	UPL	Ad	B-Forb	WOOLLY MULLEIN
2	Verbena stricta	5	UPL	Nt	P-Forb	HOARY VERVAIN
7	Viola pedata	5	UPL	Nt	P-Forb	BIRD'S FOOT VIOLET
2	Vulpia octoflora	-2	FACW-	Nt	A-Grass	SIX WEEKS FESCUE
4	Zanthoxylum americanum	5	UPL	Nt	Shrub	PRICKLY ASH

Site: Route 30
Locale: Hill Prairie North
By: William C. Handel/John Taft

FLORISTIC QUALITY DATA		Native	67	94.4%	Adventive	4	5.6%
67	NATIVE SPECIES	Tree	4	5.6%	Tree	0	0.0%
71	Total Species	Shrub	7	9.9%	Shrub	0	0.0%
4.9	NATIVE MEAN C	W-Vine	2	2.8%	W-Vine	0	0.0%
4.6	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
39.8	NATIVE FQI	P-Forb	38	53.5%	P-Forb	2	2.8%
38.7	W/Adventives	B-Forb	2	2.8%	B-Forb	0	0.0%
3.5	NATIVE MEAN W	A-Forb	2	2.8%	A-Forb	0	0.0%
3.4	W/Adventives	P-Grass	7	9.9%	P-Grass	1	1.4%
AVG: Fac. Upland		A-Grass	1	1.4%	A-Grass	1	1.4%
		P-Sedge	3	4.2%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge	0	0.0%
		Fern	1	1.4%			

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
0	ACHILLEA MILLEFOLIUM	3	FACU	Ad P-Forb	COMMON MILFOIL
2	Ambrosia psilostachya	1	FAC-	Nt P-Forb	WESTERN RAGWEED
8	Amorpha canescens	5	UPL	Nt Shrub	LEAD PLANT
5	Andropogon gerardii	1	FAC-	Nt P-Grass	BIG BLUESTEM
4	Anemone canadensis	-3	FACW	Nt P-Forb	MEADOW ANEMONE
8	Anemone cylindrica	5	UPL	Nt P-Forb	CANDLE ANEMONE
4	Antennaria neglecta	5	UPL	Nt P-Forb	CAT'S FOOT
4	Antennaria plantaginifolia	5	UPL	Nt P-Forb	PUSSY TOES
7	Arabis lyrata	4	FACU-	Nt B-Forb	LYRE-LEAVED ROCK CRESS
0	Asclepias syriaca	5	UPL	Nt P-Forb	COMMON MILKWEED
1	Asclepias verticillata	5	UPL	Nt P-Forb	HORSETAIL MILKWEED
8	Besseya bullii	5	UPL	Nt P-Forb	KITTEN TAILS
0	BROMUS TECTORUM	5	UPL	Ad A-Grass	CHEAT GRASS
9	Callirhoe triangulata	5	UPL	Nt P-Forb	CLUSTERED POPPY MALLOW
6	Carex meadii	4	FACU-	Nt P-Sedge	MEAD'S STIFF SEDGE
5	Carex muhlenbergii	5	UPL	Nt P-Sedge	SAND BRACTED SEDGE
5	Carex pensylvanica	5	UPL	Nt P-Sedge	PENNSYLVANIA OAK SEDGE
7	Cirsium pumilum	5	UPL	Nt P-Forb	HILL'S THISTLE
2	Cornus racemosa	-2	FACW-	Nt Shrub	GRAY DOGWOOD
9	Dalea candida	5	UPL	Nt P-Forb	WHITE PRAIRIE CLOVER
8	Dalea purpurea	5	UPL	Nt P-Forb	PURPLE PRAIRIE CLOVER
2	Equisetum hyemale affine	-2	FACW-	Nt Fern	TALL SCOURING RUSH
2	Erigeron strigosus	1	FAC-	Nt P-Forb	DAISY FLEABANE
2	Fragaria virginiana	1	FAC-	Nt P-Forb	WILD STRAWBERRY
7	Helianthemum bicknellii	5	UPL	Nt P-Forb	ROCKROSE
5	Heterotheca camporum	5	UPL	Nt P-Forb	GOLDEN ASTER
7	Heuchera richardsonii v. grayana	1	FAC-	Nt P-Forb	PRAIRIE ALUMROOT
6	Hieracium longipilum	5	UPL	Nt P-Forb	LONG-BEARDED HAWKWEED
3	Juncus interior	-1	FAC+	Nt P-Forb	INLAND RUSH
1	Juniperus virginiana	3	FACU	Nt Tree	EASTERN RED CEDAR
7	Koeleria macrantha	5	UPL	Nt P-Grass	JUNE GRASS
4	Krigia virginica	5	UPL	Nt A-Forb	DWARF DANDELION
4	Lespedeza capitata	3	FACU	Nt P-Forb	ROUND-HEADED BUSH CLOVER
7	Liatris aspera	5	UPL	Nt P-Forb	ROUGH BLAZING STAR
7	Lithospermum caroliniense	5	UPL	Nt P-Forb	HAIRY PUCCOON
8	Lithospermum incisum	5	UPL	Nt P-Forb	FRINGED PUCCOON
5	Monarda punctata	5	UPL	Nt P-Forb	HORSEMINT
9	Nothocalais cuspidata	5	UPL	Nt P-Forb	PRAIRIE DANDELION
5	Oenothera rhombipetala	3	FACU	Nt B-Forb	SAND PRIMROSE
10	Orobanche ludoviciana	5	UPL	Nt P-Forb	SOUTHERN BROOM RAPE
7	Panicum depauperatum	5	UPL	Nt P-Grass	STARVED PANIC GRASS
3	Panicum oligosanthes v. scribnerianum	3	FACU	Nt P-Grass	SCRIBNER'S PANIC GRASS
4	Panicum virgatum	-1	FAC+	Nt P-Grass	PRAIRIE SWITCH GRASS
2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
6	Penstemon pallidus	5	UPL	Nt P-Forb	PALE BEARD TONGUE
0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
10	Potentilla arguta	4	FACU-	Nt P-Forb	PRAIRIE CINQUEFOIL

Locale: Hill Prairie North cont.

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
3	Prunus americana	5	UPL	Nt Tree	AMERICAN PLUM
5	Quercus velutina	5	UPL	Nt Tree	BLACK OAK
5	Ranunculus fascicularis	3	FACU	Nt P-Forb	EARLY BUTTERCUP
4	Rhus aromatica	5	UPL	Nt Shrub	AROMATIC SUMAC
1	Rhus glabra	5	UPL	Nt Shrub	SMOOTH SUMAC
1	Robinia pseudo-acacia	4	FACU-	Nt Tree	BLACK LOCUST

4	Rosa carolina	4	FACU-	Nt Shrub	PASTURE ROSE
2	Rubus allegheniensis	2	FACU+	Nt Shrub	COMMON BLACKBERRY
2	Rubus occidentalis	3	FACU	Nt Shrub	BLACK RASPBERRY
0	RUMEX ACETOSELLA	0	FAC	Ad P-Forb	FIELD SORREL
5	Schizachyrium scoparium	4	FACU-	Nt P-Grass	LITTLE BLUESTEM
3	Senecio pauperculus	-1	FAC+	Nt P-Forb	BALSAM RAGWORT
6	Silene stellata	5	UPL	Nt P-Forb	STARRY CAMPION
6	Sisyrinchium campestre	5	UPL	Nt P-Forb	PRAIRIE BLUE-EYED GRASS
4	Smilacina racemosa	3	FACU	Nt P-Forb	FEATHERY FALSE SOLOMON SEAL
5	Smilacina stellata	1	FAC-	Nt P-Forb	STARRY FALSE SOLOMON SEAL
4	Sorghastrum nutans	2	FACU+	Nt P-Grass	INDIAN GRASS
7	Tephrosia virginiana	5	UPL	Nt P-Forb	GOAT'S RUE
1	Toxicodendron radicans	3	FACU	Nt W-Vine	POISON IVY
7	Tradescantia virginiana	5	UPL	Nt P-Forb	VIRGINIA SPIDERWORT
7	Trichostema brachiatum	5	UPL	Nt A-Forb	FALSE PENNYROYAL
5	Triosteum perfoliatum	5	UPL	Nt P-Forb	LATE HORSE GENTIAN
2	Verbena stricta	5	UPL	Nt P-Forb	HOARY VERVAIN
2	Vulpia octoflora	-2	FACW-	Nt A-Grass	SIX WEEKS FESCUE

Site: Route 30
Locale: Dry-mesic gravel prairie (limestone substrate)
By: William C. Handel/John Taft

FLORISTIC QUALITY DATA		Native	54	79.4%	Adventive	14	20.6%
54	NATIVE SPECIES	Tree	2	2.9%	Tree	2	2.9%
68	Total Species	Shrub	3	4.4%	Shrub	1	1.5%
5.4	NATIVE MEAN C	W-Vine	2	2.9%	W-Vine	0	0.0%
4.3	W/Adventives	H-Vine	0	0.0%	H-Vine	0	0.0%
39.3	NATIVE FQI	P-Forb	33	48.5%	P-Forb	3	4.4%
35.0	W/Adventives	B-Forb	2	2.9%	B-Forb	4	5.9%
3.5	NATIVE MEAN W	A-Forb	1	1.5%	A-Forb	1	0.5%
3.6	W/Adventives	P-Grass	9	13.2%	P-Grass	3	4.4%
AVG:	Fac. Upland	A-Grass	0	0.0%	A-Grass	0	0.0%
		P-Sedge	2	2.9%	P-Sedge	0	0.0%
		A-Sedge	0	0.0%	A-Sedge		0.0%
		Fern	0	0.0%			

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
0	ACHILLEA MILLEFOLIUM	3	FACU	Ad P-Forb	COMMON MILFOIL
4	Agrimonia pubescens	5	UPL	Nt P-Forb	SOFT AGRIMONY
8	Amorpha canescens	5	UPL	Nt Shrub	LEAD PLANT
8	Anemone cylindrica	5	UPL	Nt P-Forb	CANDLE ANEMONE
4	Antennaria neglecta	5	UPL	Nt P-Forb	CAT'S FOOT
5	Aquilegia canadensis	1	FAC-	Nt P-Forb	COLUMBINE
7	Arabis lyrata	4	FACU-	Nt B-Forb	LYRE-LEAVED ROCK CRESS
1	Asclepias verticillata	5	UPL	Nt P-Forb	HORSETAIL MILKWEED
7	Aster azureus	5	UPL	Nt P-Forb	SKY-BLUE ASTER
7	Aster oblongifolius	5	UPL	Nt P-Forb	AROMATIC ASTER
8	Besseya bullii	5	UPL	Nt P-Forb	KITTEN TAILS
7	Bouteloua curtipendula	5	UPL	Nt P-Grass	SIDE-OATS GRAMA
9	Bouteloua hirsuta	5	UPL	Nt P-Grass	HAIRY GRAMA
0	BROMUS INERMIS	5	UPL	Ad P-Grass	HUNGARIAN BROME
0	CARDUUS NUTANS	5	UPL	Ad B-Forb	MUSK BRISTLE THISTLE
6	Carex meadii	4	FACU-	Nt P-Sedge	MEAD'S STIFF SEDGE
6	Carex umbellata	5	UPL	Nt P-Sedge	EARLY OAK SEDGE
9	Dalea candida	5	UPL	Nt P-Forb	WHITE PRAIRIE CLOVER
8	Dalea purpurea	5	UPL	Nt P-Forb	PURPLE PRAIRIE CLOVER
0	DAUCUS CAROTA	4	FACU-	Ad B-Forb	QUEEN ANNE'S LACE
5	Desmodium illinoense	5	UPL	Nt P-Forb	ILLINOIS TICK TREFOIL
6	Dodecatheon meadia	3	FACU	Nt P-Forb	SHOOTING STAR
2	Erigeron strigosus	1	FAC-	Nt P-Forb	DAISY FLEABANE
2	Eupatorium altissimum	3	FACU	Nt P-Forb	TALL BONESET
0	GALIUM MOLLUGO	5	UPL	Ad P-Forb	WHITE BEDSTRAW
9	Gentiana puberulenta	3	FACU	Nt P-Forb	DOWNY GENTIAN
2	Gleditsia triacanthos	0	FAC	Nt Tree	HONEY LOCUST
0	HESPERIS MATRONALIS	5	UPL	Ad P-Forb	DAME'S ROCKET
1	Juniperus virginiana	3	FACU	Nt Tree	EASTERN RED CEDAR
7	Linum medium texanum	3	FACU	Nt P-Forb	SMALL YELLOW FLAX
8	Lithospermum incisum	5	UPL	Nt P-Forb	FRINGED PUCCOON
4	Lobelia spicata	0	FAC	Nt P-Forb	PALE SPIKED LOBELIA
0	LONICERA MAACKII	5	UPL	Ad Shrub	AMUR HONEYSUCKLE
6	Lysimachia lanceolata	0	FAC	Nt P-Forb	LANCE-LEAVED LOOSESTRIFE
0	MACLURA POMIFERA	3	FACU	Ad Tree	HEDGE APPLE
0	MEDICAGO LUPULINA	1	FAC-	Ad A-Forb	BLACK MEDICK
10	Minuartia stricta	5	UPL	Nt P-Forb	ROCK SANDWORT
4	Monarda fistulosa	3	FACU	Nt P-Forb	WILD BERGAMOT
5	Monarda punctata	5	UPL	Nt P-Forb	HORSEMINT
5	Oenothera rhombipetala	3	FACU	Nt B-Forb	SAND PRIMROSE
3	Panicum oligosanthes v. scribnerian	3	FACU	Nt P-Grass	SCRIBNER'S PANIC GRASS
9	Panicum perlongum	5	UPL	Nt P-Grass	LONG-STALKED PANIC GRASS
4	Panicum virgatum	-1	FAC+	Nt P-Grass	PRAIRIE SWITCH GRASS
2	Parthenocissus quinquefolia	1	FAC-	Nt W-Vine	VIRGINIA CREEPER
6	Penstemon pallidus	5	UPL	Nt P-Forb	PALE BEARD TONGUE
0	POA COMPRESSA	2	FACU+	Ad P-Grass	CANADIAN BLUE GRASS
0	POA PRATENSIS	1	FAC-	Ad P-Grass	KENTUCKY BLUE GRASS
9	Polygonella articulata	5	UPL	Nt A-Forb	JOINTWEED

Locale: Dry-mesic gravel prairie (limestone substrate)cont.

C	SCIENTIFIC NAME	W	WETNESS	PHYSIOGNOMY	COMMON NAME
4	Ptelea trifoliata	2	FACU+	Nt Shrub	WAFER ASH
5	Ranunculus fascicularis	3	FACU	Nt P-Forb	EARLY BUTTERCUP
4	Ratibida pinnata	5	UPL	Nt P-Forb	YELLOW CONEFLOWER
4	Rhus aromatica	5	UPL	Nt Shrub	AROMATIC SUMAC

3	Ruellia humilis	4	FACU-	Nt	P-Forb	HAIRY RUELLIA
5	Schizachyrium scoparium	4	FACU-	Nt	P-Grass	LITTLE BLUESTEM
5	Scutellaria leonardii	3	FACU	Nt	P-Forb	SMALL SKULLCAP
3	Senecio pauperculus	-1	FAC+	Nt	P-Forb	BALSAM RAGWORT
6	Sisyrinchium campestre	5	UPL	Nt	P-Forb	PRAIRIE BLUE-EYED GRASS
1	Solidago canadensis	3	FACU	Nt	P-Forb	CANADA GOLDENROD
3	Solidago nemoralis	5	UPL	Nt	P-Forb	OLD FIELD GOLDENROD
4	Sorghastrum nutans	2	FACU+	Nt	P-Grass	INDIAN GRASS
6	Spiranthes magnicamporum	-3	FACW	Nt	P-Forb	GREAT PLAINES LADIES' TRESSES
9	Sporobolus heterolepis	4	FACU-	Nt	P-Grass	NORTHERN DROP SEED
6	Stipa spartea	5	UPL	Nt	P-Grass	PORCUPINE GRASS
1	Toxicodendron radicans	3	FACU	Nt	W-Vine	POISON IVY
0	TRAGOPOGON DUBIUS	5	UPL	Ad	B-Forb	SAND GOAT'S BEARD
0	ULMUS PUMILA	5	UPL	Ad	Tree	SIBERIAN ELM
0	VERBASCUM THAPSUS	5	UPL	Ad	B-Forb	WOOLLY MULLEIN
7	Viola pedata	5	UPL	Nt	P-Forb	BIRD'S FOOT VIOLET