

## TRANSMITTAL FORM

To: Bureau of Design and Environment  
Attn: Susan Dees  
From: Illinois Natural History Survey  
Re: Wetland Survey

### Route and Location

Route: FAP 880/FAP 2711 (IL 131)  
At: Sunset Ave. to Russel Rd.  
County: Lake  
Applicant: IDOT District 1  
Seq No: 14766

**Survey Conducted By:** Mary Ann Feist, Jesse Kurylo, Paul Marcum, Jason Zylka, Valerie Sivicek, and Brad Zercher (maps)  
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**Date Conducted:** 27-28 May, 29-30 June, and 31 August 2009

### Project Summary:

All potential wetlands within the project area were examined by evaluating features of vegetation, soils, topography, and hydrology. Fifty-six routine onsite wetland determinations were completed. Fifty-one sites were determined to be wetlands. The attached report includes an explanation of the methods and references used in completing these determinations. Results are summarized in the site summaries and are described in more detail on the accompanying forms. Site location, a brief functional assessment statement, and a description of the vegetation quality are included for each site. Printouts of the DOQs showing the locations of the determination sites are included with this report (Figures 1-8). GIS data have been uploaded to the IDOT extranet.

Signed:   
Dr. Allen E. Plocher  
INHS/IDOT Project Coordinator

Date: 10/19/2009

# Wetland Survey Report for FAP 880/FAP 2711 (IL 131) from Sunset Ave. to Russel Rd., Lake County, Illinois

## Introduction and Project Summary

A wetland survey for improvements on FAP 880/FAP 2711 (IL 131) in Lake County, Illinois was conducted on 27-28 May and 29-30 June 2009. The following sources were examined while surveying the project area to determine wetland locations and boundaries: United States Geological Survey topographic maps and National Wetland Inventory (NWI) maps (Wadsworth and Zion, Illinois 7.5 minute quadrangles); *Soil Survey of Lake County, Illinois* (Calsyn, 2005); aerial photographs, *National List of Plant Species that Occur in Wetlands: Illinois* (Reed, 1998); and the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987); *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Midwest Region* (U.S. Army Corps of Engineers, 2008). These materials were used during an onsite evaluation of vegetation, soils, and hydrology.

All potential wetlands within the project corridor were examined. Fifty-six routine onsite wetland determinations were completed. Fifty-one sites were determined to be wetlands. The attached report includes an explanation of the methods and references used in completing these determinations. Results are summarized in the site summaries and are described in more detail on the accompanying forms. Site location, a brief functional assessment statement, and a description of the vegetation quality are included for each site. Site locations and boundaries were recorded using a Trimble Global Positioning System. These were overlain on Digital Ortho Quads (DOQs). Printouts of these DOQs showing the locations of determination sites are included with this report (Figures 1-8). GIS data have been posted on the IDOT ftp web site ([http://frotycap.isgs.uiuc.edu/idot\\_extranet](http://frotycap.isgs.uiuc.edu/idot_extranet)). Adjacent uplands were examined, however forms are not provided for them.

In accordance with the FSA manual methodology, as stated in the Chicago ACOE District memo on agricultural wetlands, agricultural fields in the project corridor were examined for wetland signatures using aerial photographs obtained from the McHenry County NRCS office. Aerial photographs of five recent years of normal precipitation were examined and two persistent wetland signatures were found (Site 22 and Site 24). Printouts of these aerial photographs and a table summarizing the results of the determinations of wetland signatures (Table 1) are included with this report (Appendix 1).

A brief functional assessment of each site is provided with the wetland determinations. Included with this assessment is the Floristic Quality Index (FQI) (Swink and Wilhelm 1994, Taft et al. 1997). The FQI, although not a substitute for quantitative vegetation analysis in assessing plant communities, provides a measure of the floristic integrity or level of disturbance of a site. Plant species that are not native to Illinois are not included in the FQI. Each native plant identified to species has been assigned a coefficient of conservatism (C) ranging from 0 to 10. Lower numbers have been assigned to species that are more likely to tolerate disturbed conditions and higher numbers to species that are relatively rare and likely to require specific undisturbed habitats. The mean C value ( $\bar{c}$ ) is determined for each site using the equation  $\bar{c} = \sum C/N$ , where  $\sum C$  represents the sum of the coefficients of conservatism for all native species recorded at a site,

and N is the number of native plant species at a site. The FQI is determined by dividing the sum of the coefficients of conservatism ( $\sum C$ ) by the square root of N ( $\sum C/\sqrt{N}$ ). An FQI below 10 suggests a site of low natural quality; below 5, a highly disturbed site of very low natural quality. An FQI of 20 or more ( $\bar{c} > 3.0$ ) suggests that a site has some evidence of natural character and may be considered an environmental asset. An FQI of 35 or more ( $\bar{c} > 3.5$ ) indicates that a site has natural area quality.

### Site Summaries

Site 1: This wet meadow occurs approximately 27.4 m (90 ft) west of IL 131 and 256.0 m (840 ft) north of Russell Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.135 ha (0.334 ac). Of this, 0.031 ha (0.077 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 2.6 and the FQI is 10.5, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 2: This marsh occurs approximately 18.3 m (60 ft) west of IL 131 and 36.6 m (120 ft) north of Russell Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.206 ha (0.51 ac). Of this, 0.072 ha (0.179 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 2.5 and the FQI is 3.5, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 3: This non-native grassland occurs west of IL 131 and approximately 731.5 m (2400 ft) south of Russell Rd. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as a palustrine unconsolidated-bottom wetland (PUB). The mean C value ( $\bar{c}$ ) for this site is 1.3 and the FQI is 2.5, which indicates that this site is of poor natural quality.

Site 4: This marsh occurs approximately 11.9 m (39 ft) west of IL 131 and 640 m (2100 ft) north of W. 9<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.092 ha (0.227 ac). Of this, 0.089 ha (0.220 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 1.3 and the FQI is 2.3, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 5: This pond occurs 20.4 m (67 ft) east of IL 131 and 23.8 m (78 ft) north of W. 9<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as an excavated, palustrine wetland with an unconsolidated-bottom (PUBGx). The mean C value ( $\bar{c}$ ) for this site is 2.2 and the FQI is 4.9, which indicates that this site is of poor natural quality.

Site 6: This marsh occurs approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) north of W. 9<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.150 ha (0.371 ac). The mean C value ( $\bar{c}$ ) for this site is 1.3 and the FQI is 2.5, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 7: This wet meadow occurs approximately 4.6 m (15 ft) west of IL 131 and 634 m (2080 ft) south of W. 9<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.032 ha (0.080 ac). The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 4.6, which indicates that this site is of poor natural quality. This wetland is not isolated; it has a surface connection to waters of the U. S.

Site 8: This marsh occurs approximately 6.1 m (20 ft) west of IL 131 and 823 m (2700 ft) south of W. 9<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies an area of 0.058 ha (0.142 ac) within the project area. This site is part of a much larger wetland that extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 12.2, which indicates that this site is of fair natural quality. This wetland is not isolated; it has a surface connection to waters of the U. S.

Site 9: This wetland pond occurs approximately 24.4 m (80 ft) east of IL 131 and 122 m (400 ft) north of Stonebridge Dr. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.122 ha (0.301 ac). Of this, 0.103 ha (0.253 ac) is within the project area. This site extends out of the project corridor to the east. The mean C value ( $\bar{c}$ ) for this site is 3.0 and the FQI is 14.4, which indicates that this site is of fair natural quality. This wetland is not isolated; it has a surface connection to waters of the U. S.

Site 10: This wet meadow occurs approximately 4.6 m (15 ft) west of IL 131 and 43.9 m (144 ft) south of Stonebridge Dr. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.079 ha (0.196 ac) within the project corridor. The mean C value ( $\bar{c}$ ) for this site is 1.5 and the FQI is 5.6, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 11: This forested wetland occurs approximately 48.8 m (160 ft) west of IL 131 and 76.2 m (250 ft) south of Stonebridge Dr. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.015 ha (0.037 ac). Of this, just 0.002 ha (0.004 ac) are within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 1.2 and the FQI is 3.9, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 12: This wetland pond occurs approximately 22.9 m (75 ft) east of IL 131 and 49.1 m (161 ft) south of Stonebridge Dr. Dominant hydrophytic vegetation, hydric soils and wetland

hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.296 ha (0.73 ac). Of this, 0.203 ha (0.501 ac) is within the project area. This site extends out of the project corridor to the east. The mean C value ( $\bar{c}$ ) for this site is 3.1 and the FQI is 12.3, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 13: This marsh occurs approximately 143.3 m (470 ft) west of IL 131 and 15.5 m (51 ft) south of IL 173. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.101 ha (0.251 ac). Of this, 0.052 ha (0.130 ac) is within the project area. This site extends out of the project corridor to the south. The mean C value ( $\bar{c}$ ) for this site is 3.1 and the FQI is 12.3, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 14: This wet meadow occurs approximately 6.1 m (20 ft) west of IL 131 and 120.4 m (395 ft) north of Taylor Ln. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.106 ha (0.263 ac). Of this, 0.096 ha (0.238 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 2.2 and the FQI is 9.6, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 15: This forested wetland occurs approximately 47.2 m (155 ft) east of IL 131 and 35.1 m (115 ft) north of 21<sup>st</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.012 ha (0.030 ac) within the project corridor. The mean C value ( $\bar{c}$ ) for this site is 2.0 and the FQI is 4.0, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 16: This non-native grassland occurs just east of IL 131 and approximately 123.4 m (405 ft) south of 21<sup>st</sup> St. Although this site has hydric soils, dominant hydrophytic vegetation and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as excavated, intermittently exposed, palustrine, unconsolidated-bottom wetland (PUBGx). The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 9.5, which indicates that this site is of poor natural quality.

Site 17: This forested wetland occurs approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) south of Waverly St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.045 ha (0.111 ac). The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 9.1, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 18: This forested wetland occurs approximately 3.1 m (10 ft) west of IL 131 and 490.1 m (1610 ft) north of 28<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This

wetland occupies a total area of 0.114 ha (0.281 ac). The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 7.8, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 19: This forested wetland occurs approximately 3.1 m (10 ft) west of IL 131 and 12.2 m (40 ft) north of 28<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as unconsolidated-bottom palustrine wetland and a seasonally flooded, emergent vegetation, palustrine wetland (PUB/PEMC). This wetland occupies an area of 0.389 ha (0.961 ac) within the project corridor. It continues outside of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 3.2 and the FQI is 18.8, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 20: This pond occurs approximately 36.6 m (120 ft) west of IL 131 and 59.4 m (195 ft) north of 28<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as unconsolidated-bottom palustrine wetland and emergent vegetation palustrine wetland (PUB/PEMC). The mean C value ( $\bar{c}$ ) for this site is 2.2 and the FQI is 4.9, which indicates that this site is of poor natural quality.

Site 21: This marsh occurs approximately 36.6 m (120 ft) west of IL 131 and 27.4 m (90 ft) south of 28<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC). This wetland occupies a total area of 0.078 ha (0.194 ac). Of this, 0.030 ha (0.075 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 6.4, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 22: This farmed wetland occurs approximately 274.3 m (900 ft) east of IL 131 and 24.3 m (80 ft) south of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies an area of 0.274 ha (0.678 ac) within the project corridor and extends outside the corridor to the south and east. The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 9.1, which indicates that this site is of poor natural quality. This wetland is isolated. See Appendix 1 and Table 1 for the determination of wetland signatures for this site from FSA aerial photographs.

Site 23: This forested wetland occurs approximately 73.2 m (240 ft) east of IL 131, just south of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.034 ha (0.083 ac). The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 5.3, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 24: This farmed wetland occurs approximately 50.3 m (165 ft) east of IL 131 and 3.1 m (10 ft) south of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This

wetland occupies a total area of 0.180 ha (0.444 ac). The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 7.0, which indicates that this site is of poor natural quality. This wetland is isolated. See Appendix 1 and Table 1 for the determination of wetland signatures for this site from FSA aerial photographs.

Site 25: This forested wetland occurs on both sides of IL 131, 36.6 m (120 ft) south of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.693 ha (1.714 ac). Of this, 0.568 ha (1.404 ac) are within the project area. This site extends out of the project corridor to the east and west. The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 8.0, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 26: This wet meadow occurs just south of Van Ct., 40.2 m (132 ft) west of Kenosha Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.026 ha (0.064 ac). Of this, 0.019 ha (0.047 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 1.4 and the FQI is 3.1, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 27: This forested wetland occurs approximately 3.1 m (10 ft) west of Kenosha Rd. and 115.8 m (380 ft) south of Van Ct. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.041 ha (0.101 ac). The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 5.7, which indicates that this site is of poor natural quality. This wetland is isolated. This site requires IEPA case specific water quality certification.

Site 28: This marsh occurs approximately 155.5 m (510 ft) west of Kenosha Rd. and 670.6 m (2200 ft) south of 21<sup>st</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC). This wetland occupies a total area of 0.158 ha (0.391 ac). Of this, 0.056 ha (0.138 ac) is within the project area. This site extends out of the project corridor to the north. The mean C value ( $\bar{c}$ ) for this site is 2.6 and the FQI is 9.4, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 29: This forested wetland/wet meadow occurs approximately 216.4 m (710 ft) west of Kenosha Rd. and 685.8 m (2250 ft) south of 21<sup>st</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC). This wetland occupies a total area of 0.397 ha (0.955 ac). Of this, 0.358 ha (0.884 ac) is within the project area. This site extends out of the project corridor to the north. The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 12.8, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 30: This wet meadow occurs approximately 85.3 m (280 ft) west of Kenosha Rd. and 840.7 m (2640 ft) south of 21<sup>st</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland

hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.093 ha (0.229 ac). Of this, 0.012 ha (0.029 ac) is within the project area. This site extends out of the project corridor to the south. The mean C value ( $\bar{c}$ ) for this site is 2.0 and the FQI is 6.0, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 31: This marsh occurs approximately 7.6 m (25 ft) west of Kenosha Rd. and 164.6 m (540 ft) north of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.146 ha (0.360 ac). The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 7.6, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 32: This wet meadow (pasture) occurs approximately 30.5 m (100 ft) east of Kenosha Rd. and 198.1 m (650 ft) north of 29<sup>th</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.076 ha (0.188 ac). The mean C value ( $\bar{c}$ ) for this site is 1.8 and the FQI is 4.5, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 33: This forested wetland occurs approximately 4.6 m (15 ft) east of IL 131 and directly across from Major Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.098 ha (0.242 ac). The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 15.8, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 34: This wet meadow occurs just east of IL 131 and directly across from Major Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.178 ha (0.440 ac). Of this, 0.157 ha (0.389 ac) is within the project corridor. This site extends outside of the project corridor to the east. The mean C value ( $\bar{c}$ ) for this site is 2.7 and the FQI is 14.5, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 35: This marsh occurs approximately 7.6 m (25 ft) east of IL 131 and 161.5 m (530 ft) south of Major Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.227 ha (0.561 ac). The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 11.6, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 36: This forested wetland occurs approximately 71.6 m (235 ft) east of IL 131 and 12.2 m (40 ft) north of 33<sup>rd</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.034 ha (0.084 ac). The mean C value ( $\bar{c}$ ) for this site is 1.4

and the FQI is 3.1, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 37: This wet meadow occurs approximately 71.6 m (235 ft) east of IL 131 and 33.5 m (110 ft) north of 33<sup>rd</sup> St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.062 ha (0.153 ac). Of this, 0.054 ha (0.133 ac) is within the project area. This site extends out of the project corridor to the north. The mean C value ( $\bar{c}$ ) for this site is 2.1 and the FQI is 7.2, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 38: This marsh occurs approximately 6.1 m (20 ft) east of IL 131 and 146.3 m (480 ft) south of 33rd St. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.034 ha (0.083 ac). The mean C value ( $\bar{c}$ ) for this site is 2.6 and the FQI is 11.9, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 39: This forested wetland occurs approximately 9.1 m (30 ft) east of IL 131 and 71.6 m (235 ft) south of Waldo Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.369 ha (0.913 ac). Of this, 0.185 ha (0.458 ac) are within the project area. This site extends out of the project corridor to the east. The mean C value ( $\bar{c}$ ) for this site is 2.8 and the FQI is 18.8, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 40: This marsh/wet meadow occurs approximately 91.4 m (300 ft) west of IL 131 and 12.2 m (40 ft) south of Wadsworth Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as partially drained/ditched, temporarily flooded, emergent, palustrine wetland (PEMAd). This wetland occupies a total area of 0.783 ha (1.936 ac). Of this, 0.407 ha (1.006 ac) are within the project area. This site extends out of the project corridor to the south. The mean C value ( $\bar{c}$ ) for this site is 3.1 and the FQI is 19.6, which indicates that this site is of fair natural quality. This wetland is isolated; it has no surface connection to waters of the U. S.

Site 41: This forested wetland/marsh occurs approximately 57.9 m (190 ft) west of IL 131 and 219.5 m (720 ft) south of Wadsworth Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as partially drained/ditched, temporarily flooded, emergent, palustrine wetland (PEMAd). This wetland occurs just outside of the project corridor. It occupies an area of greater than 1.214 ha (3.0 ac). The mean C value ( $\bar{c}$ ) for this site is 3.1 and the FQI is 21.0, which indicates that this site is of good natural quality. This wetland is isolated; it has no surface connection to waters of the U. S.

Site 42: This forested wetland occurs approximately 3.1 m (10 ft) east of IL 131 and 15.2 m (50 ft) north of Aviation Dr. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This

wetland occupies a total area of 0.063 ha (0.154 ac). The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 10.4, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 43: This marsh occurs approximately 15.2 m (50 ft) west of IL 131 and 79.3 m (260 ft) south of Beach Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.028 ha (0.070 ac). The mean C value ( $\bar{c}$ ) for this site is 2.3 and the FQI is 7.0, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 44: This non-native grassland occurs just east of IL 131 and north of Suddard St. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as excavated, unconsolidated-bottom, intermittently exposed, palustrine wetland (PUBGx). The mean C value ( $\bar{c}$ ) for this site is 1.0 and the FQI is 1.0, which indicates that this site is of poor natural quality.

Site 45: This wet meadow occurs on both sides of IL 131, just north of Townline Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.094 ha (0.231 ac). The mean C value ( $\bar{c}$ ) for this site is 2.3 and the FQI is 9.3, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 46: This wet meadow occurs approximately 134.1 m (440 ft) east of IL 131 and 12.2 m (40 ft) south of Townline Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.133 ha (0.330 ac). The mean C value ( $\bar{c}$ ) for this site is 2.5 and the FQI is 12.5, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 47: This wet meadow occurs approximately 137.2 m (450 ft) east of IL 131 and 76.2 m (250 ft) south of Townline Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.162 ha (0.400 ac). The mean C value ( $\bar{c}$ ) for this site is 2.3 and the FQI is 9.9, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 48: This marsh occurs just east of IL 131 and directly across from Eastwood Rd. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.080 ha (0.198 ac). The mean C value ( $\bar{c}$ ) for this site is 2.4 and the FQI is 10.6, which indicates that this site is of fair natural quality. This wetland is isolated; there is no surface connection to waters of the US.

Site 49: This forested wetland occurs approximately 4.6 m (15 ft) west and directly across from Blossom Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are

present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.077 ha (0.190 ac). The mean C value ( $\bar{C}$ ) for this site is 2.1 and the FQI is 6.0, which indicates that this site is of poor natural quality. This wetland is isolated; there is no surface connection to waters of the US.

Site 50: This forested wetland/marsh occurs approximately 3.1 m (10 ft) west of IL 131 and 9.1 m (30 ft) north of Paddock Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as semipermanently flooded, aquatic bed, palustrine wetland (PABF). This wetland occupies a total area of 0.565 ha (1.396 ac). Of this, 0.347 ha (0.857 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{C}$ ) for this site is 3.2 and the FQI is 18.9, which indicates that this site is of fair natural quality. This wetland is isolated; there is no surface connection to waters of the US. This site requires IEPA case specific water quality certification.

Site 51: This wet meadow occurs approximately 3.7 m (12 ft) east of IL 131 and 50 m (164 ft) south of Graves Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.071 ha (0.176 ac). The mean C value ( $\bar{C}$ ) for this site is 3.0 and the FQI is 13.5, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 52: This forested wetland occurs approximately 3.7 m (12 ft) east of IL 131 and 73.2 m (240 ft) south of Graves Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.06 ha (0.015 ac). Of this, 0.054 ha (0.134 ac) is within the project area. This site extends out of the project corridor to the east. The mean C value ( $\bar{C}$ ) for this site is 2.3 and the FQI is 6.4, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 53: This wet meadow occurs approximately 30.5 m (100 ft) west of IL 131 and 73.2 m (240 ft) south of Graves Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.055 ha (0.134 ac). Of this, 0.015 ha (0.036 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{C}$ ) for this site is 2.6 and the FQI is 13.8, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 54: This marsh occurs just east of IL 131, both north and south of Audrey Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI did not identify this site as wetland. This wetland occupies a total area of 0.043 ha (0.106 ac). The mean C value ( $\bar{C}$ ) for this site is 2.9 and the FQI is 13.3, which indicates that this site is of fair natural quality. This wetland is isolated.

Site 55: This marsh occurs approximately 4.6 m (15 ft) east of IL 131 and 182.8 m (600 ft) north of Sunset Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are

present; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent, palustrine wetland (PEMC). This wetland occupies a total area of 0.023 ha (0.056 ac) within the project area. This site connects to a larger wetland that extends out of the project corridor to the southeast. The mean C value ( $\bar{c}$ ) for this site is 2.3 and the FQI is 9.3, which indicates that this site is of poor natural quality. This wetland is isolated.

Site 56: This marsh occurs approximately 50.3 m (165 ft) west of IL 131 and 135.6 m (445 ft) south of Sunset Ave. Dominant hydrophytic vegetation, hydric soils and wetland hydrology are present; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent, palustrine wetland (PEMC). This wetland occupies a total area of 0.298 ha (0.734 ac). Of this, just 0.004 ha (0.009 ac) is within the project area. This site extends out of the project corridor to the west. The mean C value ( $\bar{c}$ ) for this site is 1.6 and the FQI is 5.1, which indicates that this site is of poor natural quality. This wetland is isolated.

### **Stream Characteristics**

No permanent and/or named streams cross or are located within the project corridor. The project area is within the USGS Hydrologic Unit 4040002 (Lake Front).

### **References**

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**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 1 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4  
**Location:** Approximately 27.4 m (90 ft) west of IL 131 and 256.0 m (840 ft) north of Russell Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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, or FAC: 100%

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam and Ashkum silty clay loam, revised to undetermined.

Drainage Class: poorly      Taxonomy: undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|-------------------|--------------|----------------|---------|-----------|----------|---------|
|                   |              | Color          | Percent | Type      |          |         |
| 0-8               | 10YR 2/1     |                |         |           | SiL      |         |
| 8-20              | 10YR 4/2     | 10YR 4/6       | 40%     | prominent | SiL-SiCL |         |
| 20-30             | 2.5Y 6/2     | 10YR 5/6       | 40%     |           | SiL      |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 1 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4  
**Location:** Approximately 27.4 m (90 ft) west of IL 131 and 256.0 m (840 ft) north of Russell Rd.

### HYDROLOGY

Landform: Floodplain Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.10 m (4 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and occasional overflow from a small drainageway on the east border of the site. Evapotranspiration and movement of water into the small drainageway are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 1 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4  
**Location:** Approximately 27.4 m (90 ft) west of IL 131 and 256.0 m (840 ft) north of Russell Rd.

**SPECIES LIST**

| Scientific Name                    | Common Name            | Stratum              | Wetland indicator status | C <sup>†</sup> |
|------------------------------------|------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder              | tree, sapling, shrub | FACW-                    | 1              |
| <i>Alliaria petiolata</i>          | garlic mustard         | herb                 | FAC                      | *              |
| <i>Carex cristatella</i>           | sedge                  | herb                 | FACW+                    | 3              |
| <i>Carex vulpinoidea</i>           | fox sedge              | herb                 | OBL                      | 3              |
| <i>Cirsium arvense</i>             | Canada thistle         | herb                 | FACU                     | *              |
| <i>Cornus stolonifera</i>          | red osier dogwood      | shrub                | FACW                     | 4              |
| <i>Cryptotaenia canadensis</i>     | honestwort             | herb                 | FAC                      | 1              |
| <i>Eleocharis erythropoda</i>      | spike rush             | herb                 | OBL                      | 3              |
| <i>Euthamia graminifolia</i>       | grassleaf goldenrod    | herb                 | FACW-                    | 3              |
| <i>Galium aparine</i>              | annual bedstraw        | herb                 | FACU                     | 0              |
| <i>Hesperis matronalis</i>         | Dame's rocket          | herb                 | UPL                      | *              |
| <i>Lycopus americanus</i>          | common water horehound | herb                 | OBL                      | 3              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper       | woody vine           | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass      | herb                 | FACW+                    | *              |
| <i>Poa pratensis</i>               | Kentucky bluegrass     | herb                 | FAC-                     | *              |
| <i>Populus deltoides</i>           | eastern cottonwood     | tree                 | FAC+                     | 2              |
| <i>Prunus virginiana</i>           | common chokecherry     | shrub                | FAC-                     | 3              |
| <i>Ranunculus septentrionalis</i>  | swamp buttercup        | herb                 | FACW+                    | 4              |
| <i>Rhamnus cathartica</i>          | common buckthorn       | shrub                | FACU                     | *              |
| <i>Rosa palustris</i>              | swampy rose            | shrub                | OBL                      | 7              |
| <i>Solanum dulcamara</i>           | false bitterweet       | herb                 | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod       | herb                 | FACU                     | 1              |
| <i>Viburnum opulus</i>             | high-bush cranberry    | shrub                | UPL                      | *              |
| <i>Vitis riparia</i>               | riverbank grape        | woody vine, herb     | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 42/16 = 2.6$$

$$FQI = \sum C/\sqrt{N} = 42/\sqrt{16} = 10.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 2 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4  
**Location:** Approximately 18.3 m (60 ft) west of IL 131 and 36.6 m (120 ft) north of Russell Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 2. <i>Typha angustifolia</i>   | OBL              | herb    |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.

Drainage Class: poorly

Taxonomy: undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features         |         |           | Texture | Remarks |
|-------------------|--------------|------------------------|---------|-----------|---------|---------|
|                   |              | Color                  | Percent | Type      |         |         |
| 0-5               | 10YR 2/1     | 10YR 5/6<br>& 10YR 5/1 | 20%     | prominent | Sil     |         |

**Hydric soils:** Yes: X No:

**Rationale:** A deeper soil sample could not be obtained at any location across the site. This soil has a low chroma matrix with redox features. These characteristics are evidence of a hydric soil. This soil meets the F7 (depleted dark surface) and F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 2 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4  
**Location:** Approximately 18.3 m (60 ft) west of IL 131 and 36.6 m (120 ft) north of Russell Rd.

**HYDROLOGY**

Landform: Floodplain Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, stream flow from a culvert from the east side of IL 131, and occasional overflow from a small drainageway that runs through the site.  
Evapotranspiration and movement of water into the small drainageway are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 2 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Wisconsin **County:** Kenosha **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 1 N., R. 22 E., Sect. 34, SW/4

**Location:** Approximately 18.3 m (60 ft) west of IL 131 and 36.6 m (120 ft) north of Russell Rd.

**SPECIES LIST**

| Scientific name             | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-----------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Festuca pratensis</i>    | meadow fescue         | herb    | FACU-                    | *              |
| <i>Phalaris arundinacea</i> | reed canary grass     | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>        | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Rhamnus cathartica</i>   | common buckthorn      | shrub   | FACU                     | *              |
| <i>Rumex crispus</i>        | curly dock            | herb    | FAC+                     | *              |
| <i>Salix exigua</i>         | sandbar willow        | shrub   | OBL                      | 1              |
| <i>Scirpus atrovirens</i>   | dark green bulrush    | herb    | OBL                      | 4              |
| <i>Solidago canadensis</i>  | Canada goldenrod      | herb    | FACU                     | 1              |
| <i>Typha angustifolia</i>   | narrow-leaved cattail | herb    | OBL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 6/3 = 2.5$$

$$FQI = \sum C/\sqrt{N} = 6/\sqrt{3} = 3.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 3 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 11 E., Sect. 1, NE/4  
**Location:** West of IL 131 and approximately 731.5 m (2400 ft) south of Russell Rd.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species      | Indicator Status | Stratum |
|-----------------------------|------------------|---------|
| 1. <i>Festuca pratensis</i> | FACU-            | herb    |
| 2. <i>Poa pratensis</i>     | FAC-             | herb    |

Percentage of dominant species that are OBL, FACW, or FAC: 50%

**Hydrophytic vegetation:** Yes: No:   
**Rationale:** Not more than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as landfills, revised to orthents/landfill  
Drainage Class: undetermined Taxonomy: NA

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| 0-5               | 10YR 2/1     |                |         |      | Gr. L   |         |

**Hydric soils:** Yes: No:   
**Rationale:** Given the topographic position of these soils the development of hydric soils is unlikely. Deeper soil samples could not be taken due to a rocky sublayer.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 3 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 11 E., Sect. 1, NE/4  
**Location:** West of IL 131 and approximately 731.5 m (2400 ft) south of Russell Rd.

### HYDROLOGY

Landform: Field Local Relief: None  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.1 m (5 in)  
Overview of hydrological flow through the system: The primary hydrologic input to this site is precipitation. Evapotranspiration is the major output.  
Size of watershed: 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: None  
Secondary indicators: None

**Wetland hydrology:** Yes: No: X

**Rationale:** There is no field evidence to indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: No: X

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as a palustrine unconsolidated-bottom wetland (PUB).

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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 3 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Non-native Grassland

**Legal Description:** T. 46 N., R. 11 E., Sect. 1, NE/4

**Location:** West of IL 131 and approximately 731.5 m (2400 ft) south of Russell Rd.

**SPECIES LIST**

| Scientific name               | Common name         | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|---------------------|-------------|--------------------------|----------------|
| <i>Acer negundo</i>           | box elder           | herb        | FACW-                    | 1              |
| <i>Daucus carota</i>          | Queen-Anne's-lace   | herb        | UPL                      | *              |
| <i>Dipsacus sylvestris</i>    | common teasel       | herb        | UPL                      | *              |
| <i>Festuca pratensis</i>      | meadow fescue       | herb        | FACU-                    | *              |
| <i>Fraxinus pennsylvanica</i> | green ash           | tree        | FACW                     | 2              |
| <i>Melilotus officinalis</i>  | yellow sweet clover | herb        | FACU                     | *              |
| <i>Oenothera biennis</i>      | evening primrose    | herb        | FACU                     | 1              |
| <i>Phalaris arundinacea</i>   | reed canary grass   | herb        | FACW+                    | *              |
| <i>Poa pratensis</i>          | Kentucky bluegrass  | herb        | FAC-                     | *              |
| <i>Robinia pseudoacacia</i>   | black locust        | tree, shrub | FACU-                    | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod    | herb        | FACU                     | 1              |
| <i>Taraxacum officinale</i>   | dandelion           | herb        | FACU                     | *              |
| <i>Trifolium hybridum</i>     | alsike clover       | herb        | FAC-                     | *              |
| <i>Trifolium repens</i>       | white clover        | herb        | FACU+                    | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 5/4 = 1.3$$

$$FQI = \sum C/\sqrt{N} = 5/\sqrt{4} = 2.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 4 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 11.9 m (39 ft) west of IL 131 and 640 m (2100 ft) north of W. 9<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b> | <b>Indicator Status</b> | <b>Stratum</b> |
|-------------------------------|-------------------------|----------------|
| 1. <i>Typha angustifolia</i>  | OBL                     | herb           |

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

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

**SOILS**

Series and phase: Water  
Drainage Class: N/A Taxonomy: N/A

Profile Description:

| Depth    | Matrix Color | Redox Features |         |      | Texture | Remarks |
|----------|--------------|----------------|---------|------|---------|---------|
| (inches) |              | Color          | Percent | Type |         |         |
| <hr/>    |              |                |         |      |         |         |
| N/A      |              |                |         |      |         |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil is inundated and supporting rooted emergent vegetation. Prolonged inundation leads to the formation of hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 4 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 11.9 m (39 ft) west of IL 131 and 640 m (2100 ft) north of W. 9<sup>th</sup> St.

**HYDROLOGY**

Landform: Drainageway Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: This site is a wide vegetated drainageway that captures water from the adjacent landfill. Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a culvert from the east side of IL 131. Evapotranspiration and stream flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 4 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 11.9 m (39 ft) west of IL 131 and 640 m (2100 ft) north of W. 9<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum        | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|----------------|--------------------------|----------------|
| <i>Fraxinus pennsylvanica</i> | green ash             | sapling, shrub | FACW                     | 2              |
| <i>Lythrum salicaria</i>      | purple loosestrife    | herb           | OBL                      | *              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb           | FACW+                    | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb           | FACU                     | 1              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb           | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb           | OBL                      | 1              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 4/3 = 1.3$$

$$FQI = \sum C/\sqrt{N} = 4/\sqrt{3} = 2.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 5 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Pond  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 20.4 m (67 ft) east of IL 131 and 23.8 m (78 ft) north of W. 9<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**Dominant Plant Species      Indicator Status      Stratum**

**No dominant vegetation – INUNDATED**

Percentage of dominant species that are OBL, FACW, or FAC: NA

**Hydrophytic vegetation:** Yes: No:   
**Rationale:** There is no dominant vegetation.

**SOILS**

Series and phase: Water  
Drainage Class: N/A      Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| N/A               |              |                |         |      |         |         |

**Hydric soils:** Yes: No:   
**Rationale:** This soil is inundated to an undetermined depth and emergent vegetation is lacking, therefore this site does not contain hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 5 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Pond  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 20.4 m (67 ft) east of IL 131 and 23.8 m (78 ft) north of W. 9<sup>th</sup> St.

**HYDROLOGY**

Landform: Pond Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: Undetermined  
Depth to saturated soil: NA  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: None.  
Secondary indicators: Geomorphic Position (depression).

**Wetland hydrology:** Yes: No: X  
**Rationale:** The depth of the water is greater than 2.0 m (6.6 ft) and does not support rooted emergent vegetation.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: No: X  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as an excavated, palustrine wetland with an unconsolidated-bottom (PUBGx).

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 5 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Pond

**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4

**Location:** Approximately 20.4 m (67 ft) east of IL 131 and 23.8 m (78 ft) north of W. 9<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Acer negundo</i>           | box elder             | tree    | FACW-                    | 1              |
| <i>Dactylis glomerata</i>     | orchard grass         | herb    | FACU                     | *              |
| <i>Festuca pratensis</i>      | meadow fescue         | herb    | FACU-                    | *              |
| <i>Fraxinus pennsylvanica</i> | green ash             | tree    | FACW                     | 2              |
| <i>Lonicera tatarica</i>      | Tatarian honeysuckle  | shrub   | FACU                     | *              |
| <i>Poa pratensis</i>          | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow   | tree    | FACW                     | 4              |
| <i>Salix nigra</i>            | black willow          | tree    | OBL                      | 3              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb    | FACU                     | 1              |
| <i>Trifolium pratense</i>     | red clover            | herb    | FACU+                    | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb    | OBL                      | *              |
| <i>Ulmus pumila</i>           | Siberian elm          | tree    | UPL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 11/5 = 2.2$$

$$FQI = \sum C/\sqrt{N} = 11/\sqrt{5} = 4.9$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 6 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) north of W. 9<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
Do normal environmental conditions exist at this site? Yes: X No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Phalaris arundinacea</i> | FACW+                   | herb           |
| 2. <i>Phragmites australis</i> | FACW+                   | herb           |
| 3. <i>Typha angustifolia</i>   | OBL                     | herb           |

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

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

**SOILS**

Series and phase: Water  
Drainage Class: N/A Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| N/A               |              |                |         |      |         |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil is inundated and supporting rooted emergent vegetation. Prolonged inundation leads to the formation of hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 6 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) north of W. 9<sup>th</sup> St.

**HYDROLOGY**

Landform: Drainageway Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: This site is a wide vegetated drainageway that captures water from the adjacent landfill. Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a culvert from the east side of IL 131. Evapotranspiration and stream flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 6 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, NE/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) north of W. 9<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|----------------------|--------------------------|----------------|
| <i>Carex</i> sp.              | sedge                 | herb                 | ----                     | --             |
| <i>Cirsium arvense</i>        | Canada thistle        | herb                 | FACU                     | *              |
| <i>Festuca pratensis</i>      | meadow fescue         | herb                 | FACU-                    | *              |
| <i>Fraxinus pennsylvanica</i> | green ash             | tree, sapling, shrub | FACW                     | 2              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb                 | FACW+                    | *              |
| <i>Phragmites australis</i>   | common red reed       | herb                 | FACW+                    | 1              |
| <i>Poa pratensis</i>          | Kentucky bluegrass    | herb                 | FAC-                     | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb                 | FACU                     | 1              |
| <i>Sonchus arvensis</i>       | field sowthistle      | herb                 | FAC-                     | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb                 | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb                 | OBL                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{c} = \sum C/N = 5/4 = 1.3$$

$$FQI = \sum C/\sqrt{N} = 5/\sqrt{4} = 2.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 7 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, SE/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 634 m (2080 ft) south of W. 9<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Phalaris arundinacea</i> | FACW+                   | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to undetermined.  
 Drainage Class: Undetermined Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|-------------------|--------------|----------------|---------|-----------|----------|---------|
|                   |              | Color          | Percent | Type      |          |         |
| 0-6               | 7.5YR 2.5/1  |                |         |           | SiL      |         |
| 6-11              | 7.5YR 2.5/1  | 7.5YR 4/6      | 10%     | prominent | SiL-SiCL |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a dark colored matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 7 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, SE/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 634 m (2080 ft) south of W. 9<sup>th</sup> St.

**HYDROLOGY**

Landform: Floodplain Local Relief: Concave  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.3 m (11 in).  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a culvert from the east side of IL 131. Evapotranspiration and stream flow are the major outputs. This site is connected hydrologically to Site 8 by a small intermittent stream.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Saturation, Drift Deposits, Sediment Deposits  
Secondary indicators: Geomorphic Position (floodplain), Surface Soil Cracks

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 7 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 11 E., Sect. 12, SE/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 634 m (2080 ft) south of W. 9<sup>th</sup> St.

**SPECIES LIST**

| Scientific name             | Common name       | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-----------------------------|-------------------|---------|--------------------------|----------------|
| <i>Cirsium arvense</i>      | Canada thistle    | herb    | FACU                     | *              |
| <i>Erigeron annuus</i>      | annual fleabane   | herb    | FAC-                     | 1              |
| <i>Geum aleppicum</i>       | yellow avens      | herb    | FAC+                     | 6              |
| <i>Phalaris arundinacea</i> | reed canary grass | herb    | FACW+                    | *              |
| <i>Solidago canadensis</i>  | Canada goldenrod  | herb    | FACU                     | 1              |
| <i>Sonchus arvensis</i>     | field sowthistle  | herb    | FAC-                     | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 8/3 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 8/\sqrt{3} = 4.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 8 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 823 m (2700 ft) south of W. 9<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 2. <i>Typha angustifolia</i>   | OBL              | herb    |

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

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

**SOILS**

Series and phase: Pella silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|----------------|--------------|----------------|---------|-----------|----------|---------|
|                |              | Color          | Percent | Type      |          |         |
| 0-8            | 10YR 2/1     |                |         |           | SiL-SiCL |         |
| 8-15           | 10YR 2/1     | 10YR 4/6       | 20%     | prominent | SiCL     |         |
| 15-24          | 10YR 4/1     | 10YR 5/8       | 20%     | prominent | SiCL     |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma and depleted matrix with redox features. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 8 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 823 m (2700 ft) south of W. 9<sup>th</sup> St.

**HYDROLOGY**

Landform: Floodplain Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: up to 0.1 m (6 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, streamflow, and a culvert from the east side of IL 131. Evapotranspiration and sheet flow are the major outputs. This site is connected hydrologically to Site 7 by a small intermittent stream and to Site 9 by the culvert under IL 131. Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (along drainageway), Drainage Patterns

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S. It has a surface connection to an unnamed tributary of the Des Plaines River.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 8 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 823 m (2700 ft) south of W. 9<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                  | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Agrostis alba</i>             | red top               | herb    | FACW                     | 0              |
| <i>Alopecurus carolinianus</i>   | annual foxtail        | herb    | FACW                     | 0              |
| <i>Ambrosia trifida</i>          | giant ragweed         | herb    | FAC+                     | 0              |
| <i>Apocynum cannabinum</i>       | dogbane               | herb    | FAC                      | 2              |
| <i>Aster novae-angliae</i>       | New England aster     | herb    | FACW                     | 4              |
| <i>Aster simplex</i>             | panicked aster        | herb    | FACW                     | 3              |
| <i>Carex cristatella</i>         | sedge                 | herb    | FACW+                    | 3              |
| <i>Carex lanuginosa</i>          | wooly sedge           | herb    | OBL                      | 4              |
| <i>Carex stricta</i>             | tussock sedge         | herb    | OBL                      | 5              |
| <i>Eleocharis erythropoda</i>    | spike rush            | herb    | OBL                      | 3              |
| <i>Equisetum arvense</i>         | common horsetail      | herb    | FAC                      | 0              |
| <i>Erigeron annuus</i>           | annual fleabane       | herb    | FAC-                     | 1              |
| <i>Galium aparine</i>            | annual bedstraw       | herb    | FACU                     | 0              |
| <i>Geum laciniatum</i>           | rough avens           | herb    | FACW                     | 2              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower    | herb    | FACW-                    | 2              |
| <i>Juncus dudleyi</i>            | Dudley's rush         | herb    | FAC                      | 4              |
| <i>Phalaris arundinacea</i>      | reed canary grass     | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>             | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Populus deltoides</i>         | eastern cottonwood    | herb    | FAC+                     | 2              |
| <i>Potentilla anserina</i>       | silverweed            | herb    | FACW+                    | 6              |
| <i>Rhamnus cathartica</i>        | common buckthorn      | shrub   | FACU                     | *              |
| <i>Rorippa fernaldiana</i>       | marsh yellow cress    | herb    | OBL                      | 4              |
| <i>Rosa multiflora</i>           | multiflora rose       | shrub   | FACU                     | *              |
| <i>Rosa palustris</i>            | swampy rose           | shrub   | OBL                      | 7              |
| <i>Rubus occidentalis</i>        | black raspberry       | shrub   | UPL                      | 2              |
| <i>Rumex crispus</i>             | curly dock            | herb    | FAC+                     | *              |
| <i>Salix exigua</i>              | sandbar willow        | shrub   | OBL                      | 1              |
| <i>Scirpus tabernaemontanii</i>  | great bulrush         | herb    | OBL                      | 4              |
| <i>Solidago canadensis</i>       | Canada goldenrod      | herb    | FACU                     | 1              |
| <i>Sonchus arvensis</i>          | field sowthistle      | herb    | FAC-                     | *              |
| <i>Typha angustifolia</i>        | narrow-leaved cattail | herb    | OBL                      | *              |
| <i>Typha latifolia</i>           | cattail               | herb    | OBL                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 61/25 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 61/\sqrt{25} = 12.2$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 9 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 24.4 m (80 ft) east of IL 131 and 122 m (400 ft) north of Stonebridge Dr.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 2. <i>Typha angustifolia</i>   | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to water  
Drainage Class: N/A Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| N/A               |              |                |         |      |         |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil is inundated and supporting rooted emergent vegetation. Prolonged inundation leads to the formation of hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 9 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 24.4 m (80 ft) east of IL 131 and 122 m (400 ft) north of Stonebridge Dr.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 2.2 m (6 ft)  
Depth to saturated soil: NA  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands. Evapotranspiration and drainage into a culvert leading to the west side of IL 131 are the major outputs. It is hydrologically connected to Site 8 via the culvert under IL 131.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, True Aquatic Plants (*Lemna minor*, *Potamogeton* spp.)  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S. It has a surface connection to an unnamed tributary of the Des Plaines River.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 9 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 24.4 m (80 ft) east of IL 131 and 122 m (400 ft) north of Stonebridge Dr.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|------------|--------------------------|----------------|
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb       | OBL                      | 2              |
| <i>Ambrosia trifida</i>         | giant ragweed             | herb       | FAC+                     | 0              |
| <i>Aster simplex</i>            | panicled aster            | herb       | FACW                     | 3              |
| <i>Bidens frondosa</i>          | common beggar-ticks       | herb       | FACW                     | 1              |
| <i>Carex cristatella</i>        | sedge                     | herb       | FACW+                    | 3              |
| <i>Carex vulpinoidea</i>        | fox sedge                 | herb       | OBL                      | 3              |
| <i>Cirsium arvense</i>          | Canada thistle            | herb       | FACU                     | *              |
| <i>Daucus carota</i>            | Queen-Anne's-lace         | herb       | UPL                      | *              |
| <i>Eleocharis erythropoda</i>   | spike rush                | herb       | OBL                      | 3              |
| <i>Erigeron annuus</i>          | annual fleabane           | herb       | FAC-                     | 1              |
| <i>Geum aleppicum</i>           | yellow avens              | herb       | FAC+                     | 6              |
| <i>Juncus dudleyi</i>           | Dudley's rush             | herb       | FAC                      | 4              |
| <i>Leersia oryzoides</i>        | rice cutgrass             | herb       | OBL                      | 3              |
| <i>Lemna minor</i>              | common duckweed           | herb       | OBL                      | 3              |
| <i>Monarda fistulosa</i>        | wild bergamot             | herb       | FACU                     | 4              |
| <i>Oenothera biennis</i>        | evening primrose          | herb       | FACU                     | 1              |
| <i>Penstemon digitalis</i>      | foxglove beard-tongue     | herb       | FAC-                     | 4              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb       | FACW+                    | *              |
| <i>Potamogeton nodosus</i>      | American pondweed         | herb       | OBL                      | 7              |
| <i>Potamogeton pectinatus</i>   | comb pondweed             | herb       | OBL                      | 5              |
| <i>Rhamnus cathartica</i>       | common buckthorn          | shrub      | FACU                     | *              |
| <i>Rumex crispus</i>            | curly dock                | herb       | FAC+                     | *              |
| <i>Salix amygdaloides</i>       | peach-leaved willow       | herb       | FACW                     | 4              |
| <i>Salix discolor</i>           | pussy willow              | shrub      | FACW                     | 4              |
| <i>Salix exigua</i>             | sandbar willow            | shrub      | OBL                      | 1              |
| <i>Scirpus tabernaemontanii</i> | great bulrush             | herb       | OBL                      | 4              |
| <i>Solidago canadensis</i>      | Canada goldenrod          | herb       | FACU                     | 1              |
| <i>Typha angustifolia</i>       | narrow-leaved cattail     | herb       | OBL                      | *              |
| <i>Vitis riparia</i>            | riverbank grape           | woody vine | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{c} = \sum C/N = 69/23 = 3$$

$$FQI = \sum C/\sqrt{N} = 69/\sqrt{23} = 14.4$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 10 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 43.9 m (144 ft) south of Stonebridge Dr.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

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

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

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

**SOILS**

Series and phase: NRCS mapped as Mundelein and Markham silt loams, revised to Peotone silty clay loam.

Drainage Class: Very Poorly Drained Taxonomy: Cumulic Vertic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-18           | 10YR 2/1     |                |         |           |         |         |
| 18-30          | 10YR 2/1     | 10YR 4/6       | 20%     | prominent | SiCL    | pebbles |
| 30-40          | 10YR 4/1     | 10YR 5/8       | 20%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a deep, low chroma matrix. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 10 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 43.9 m (144 ft) south of Stonebridge Dr.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.5 m (18 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a culvert from the east side of IL 131 which connects it with Site 12. Evapotranspiration and stream flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 10 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 4.6 m (15 ft) west of IL 131 and 43.9 m (144 ft) south of Stonebridge Dr.

**SPECIES LIST**

| Scientific name                  | Common name           | Stratum                    | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|-----------------------|----------------------------|--------------------------|----------------|
| <i>Acer saccharinum</i>          | silver maple          | tree, sapling, shrub, herb | FACW                     | 1              |
| <i>Alisma plantago-aquatica</i>  | water-plantain        | herb                       | OBL                      | 2              |
| <i>Alliaria petiolata</i>        | garlic mustard        | herb                       | FAC                      | *              |
| <i>Ambrosia trifida</i>          | giant ragweed         | herb                       | FAC+                     | 0              |
| <i>Bidens vulgata</i>            | sticktight            | herb                       | FACW                     | 0              |
| <i>Cirsium arvense</i>           | Canada thistle        | herb                       | FACU                     | *              |
| <i>Erigeron philadelphicus</i>   | marsh fleabane        | herb                       | FACW                     | 3              |
| <i>Glycine max</i>               | soybean               | herb                       | UPL                      | *              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower    | herb                       | FACW-                    | 2              |
| <i>Hordeum jubatum</i>           | squirrel-tail         | herb                       | FAC+                     | *              |
| <i>Juncus dudleyi</i>            | Dudley's rush         | herb                       | FAC                      | 4              |
| <i>Oenothera biennis</i>         | evening primrose      | herb                       | FACU                     | 1              |
| <i>Phalaris arundinacea</i>      | reed canary grass     | herb                       | FACW+                    | *              |
| <i>Populus deltoides</i>         | eastern cottonwood    | tree, sapling, shrub, herb | FAC+                     | 2              |
| <i>Ranunculus abortivus</i>      | little-leaf buttercup | herb                       | FACW-                    | 1              |
| <i>Rhamnus cathartica</i>        | common buckthorn      | shrub                      | FACU                     | *              |
| <i>Rumex crispus</i>             | curly dock            | herb                       | FAC+                     | *              |
| <i>Salix nigra</i>               | black willow          | sapling, shrub             | OBL                      | 3              |
| <i>Solanum dulcamara</i>         | false bittersweet     | herb                       | FAC                      | *              |
| <i>Solidago canadensis</i>       | Canada goldenrod      | herb                       | FACU                     | 1              |
| <i>Sonchus arvensis</i>          | field sowthistle      | herb                       | FAC-                     | *              |
| <i>Taraxacum officinale</i>      | dandelion             | herb                       | FACU                     | *              |
| <i>Veronica peregrina</i>        | purslane speedwell    | herb                       | FACW+                    | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 20/13 = 1.5$$

$$FQI = \sum C/\sqrt{N} = 20/\sqrt{13} = 5.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 11 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 48.8 m (160 ft) west of IL 131 and 76.2 m (250 ft) south of Stonebridge Dr.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i> | FACW             | tree          |
| 2. <i>Acer saccharinum</i> | FACW             | sapling/shrub |

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

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

**SOILS**

Series and phase: NRCS mapped as Markham silt loam, revised to Peotone silty clay loam.  
Drainage Class: Very Poorly Drained Taxonomy: Cumulic Vertic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-18           | 10YR 2/1     |                |         |           |         |         |
| 18-30          | 10YR 2/1     | 10YR 4/6       | 20%     | prominent | SiCL    | pebbles |
| 30-40          | 10YR 4/1     | 10YR 5/8       | 20%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a deep, low chroma matrix. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 11 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 48.8 m (160 ft) west of IL 131 and 76.2 m (250 ft) south of Stonebridge Dr.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Saturation, Sparsely Vegetated Concave Surface  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 11 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4

**Location:** Approximately 48.8 m (160 ft) west of IL 131 and 76.2 m (250 ft) south of Stonebridge Dr.

**SPECIES LIST**

| Scientific name                    | Common name          | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder            | sapling, shrub       | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple         | tree, sapling, shrub | FACW                     | 1              |
| <i>Alliaria petiolata</i>          | garlic mustard       | herb                 | FAC                      | *              |
| <i>Ambrosia artemisiifolia</i>     | common ragweed       | herb                 | FACU                     | 0              |
| <i>Cornus racemosa</i>             | gray dogwood         | shrub                | FACW-                    | 2              |
| <i>Cryptotaenia canadensis</i>     | honestwort           | herb                 | FAC                      | 1              |
| <i>Galium aparine</i>              | annual bedstraw      | herb                 | FACU                     | 0              |
| <i>Geum laciniatum</i>             | rough avens          | herb                 | FACW                     | 2              |
| <i>Lonicera tatarica</i>           | Tatarian honeysuckle | shrub                | FACU                     | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper     | woody vine           | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass    | herb                 | FACW+                    | *              |
| <i>Rhamnus cathartica</i>          | common buckthorn     | shrub                | FACU                     | *              |
| <i>Robinia pseudoacacia</i>        | black locust         | tree                 | FACU-                    | 1              |
| <i>Rosa multiflora</i>             | multiflora rose      | shrub                | FACU                     | *              |
| <i>Rubus occidentalis</i>          | black raspberry      | shrub                | UPL                      | 2              |
| <i>Solidago canadensis</i>         | Canada goldenrod     | herb                 | FACU                     | 1              |
| <i>Taraxacum officinale</i>        | dandelion            | herb                 | FACU                     | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 13/11 = 1.2$$

$$FQI = \sum C/\sqrt{N} = 13/\sqrt{11} = 3.9$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 12 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 22.9 m (75 ft) east of IL 131 and 49.1 m (161 ft) south of Stonebridge Dr.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b> | <b>Indicator Status</b> | <b>Stratum</b> |
|-------------------------------|-------------------------|----------------|
| 1. <i>Typha angustifolia</i>  | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Markham silt loam, revised to water  
Drainage Class: N/A Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| N/A               |              |                |         |      |         |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil is inundated and supporting rooted emergent vegetation. Prolonged inundation leads to the formation of hydric soils.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 12 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 22.9 m (75 ft) east of IL 131 and 49.1 m (161 ft) south of Stonebridge Dr.

### HYDROLOGY

Landform: Pond Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 2 m (6.6 ft)  
Depth to saturated soil: NA  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a culvert from adjacent development. Evapotranspiration and drainage into a culvert that runs west under IL 131 to Site 10 are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, True Aquatic Plants (*Lemna minor*, *Potamogeton nodosus*)  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 12 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wetland Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, NW/4  
**Location:** Approximately 22.9 m (75 ft) east of IL 131 and 49.1 m (161 ft) south of Stonebridge Dr.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Ambrosia trifida</i>       | giant ragweed         | herb    | FAC+                     | 0              |
| <i>Aster novae-angliae</i>    | New England aster     | herb    | FACW                     | 4              |
| <i>Aster simplex</i>          | panicked aster        | herb    | FACW                     | 3              |
| <i>Barbarea vulgaris</i>      | winter cress          | herb    | FAC                      | *              |
| <i>Carex comosa</i>           | bristly sedge         | herb    | OBL                      | 6              |
| <i>Carex cristatella</i>      | sedge                 | herb    | FACW+                    | 3              |
| <i>Cirsium arvense</i>        | Canada thistle        | herb    | FACU                     | *              |
| <i>Eleocharis erythropoda</i> | spike rush            | herb    | OBL                      | 3              |
| <i>Erigeron annuus</i>        | annual fleabane       | herb    | FAC-                     | 1              |
| <i>Geum laciniatum</i>        | rough avens           | herb    | FACW                     | 2              |
| <i>Juncus dudleyi</i>         | Dudley's rush         | herb    | FAC                      | 4              |
| <i>Juncus interior</i>        | inland rush           | herb    | FAC+                     | 3              |
| <i>Lemna minor</i>            | common duckweed       | herb    | OBL                      | 3              |
| <i>Lythrum salicaria</i>      | purple loosestrife    | herb    | OBL                      | *              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb    | FACW+                    | *              |
| <i>Potamogeton nodosus</i>    | American pondweed     | herb    | OBL                      | 7              |
| <i>Rumex crispus</i>          | curly dock            | herb    | FAC+                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow   | shrub   | FACW                     | 4              |
| <i>Salix exigua</i>           | sandbar willow        | shrub   | OBL                      | 1              |
| <i>Scirpus atrovirens</i>     | dark green bulrush    | herb    | OBL                      | 4              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb    | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb    | OBL                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 49/16 = 3.1$$

$$FQI = \sum C/\sqrt{N} = 49/\sqrt{16} = 12.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 13 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 143.3 m (470 ft) west of IL 131 and 15.5 m (51 ft) south of IL 173.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
Do normal environmental conditions exist at this site? Yes: X No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b> | <b>Indicator Status</b> | <b>Stratus</b> |
|-------------------------------|-------------------------|----------------|
| 1. <i>Typha angustifolia</i>  | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Markham silt loam, revised to water  
Drainage Class: N/A Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |

N/A

**Hydric soils:** Yes: X No:  
**Rationale:** This soil is inundated and supporting rooted emergent vegetation. Prolonged inundation leads to the formation of hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 13 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 143.3 m (470 ft) west of IL 131 and 15.5 m (51 ft) south of IL 173.

**HYDROLOGY**

Landform: Depression (Drainage Basin) Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.6 m (24 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and stream flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 13 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 143.3 m (470 ft) west of IL 131 and 15.5 m (51 ft) south of IL 173.

**SPECIES LIST**

| Scientific name                  | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Aster simplex</i>             | panicked aster        | herb    | FACW                     | 3              |
| <i>Barbarea vulgaris</i>         | winter cress          | herb    | FAC                      | *              |
| <i>Carex granularis</i>          | meadow sedge          | herb    | FACW+                    | 3              |
| <i>Carex lanuginosa</i>          | wooly sedge           | herb    | OBL                      | 4              |
| <i>Carex vulpinoidea</i>         | fox sedge             | herb    | OBL                      | 3              |
| <i>Cirsium vulgare</i>           | bull thistle          | herb    | FACU-                    | *              |
| <i>Dipsacus sylvestris</i>       | common teasel         | herb    | UPL                      | *              |
| <i>Eleocharis erythropoda</i>    | spike rush            | herb    | OBL                      | 3              |
| <i>Equisetum arvense</i>         | common horsetail      | herb    | FAC                      | 0              |
| <i>Euthamia graminifolia</i>     | grassleaf goldenrod   | herb    | FACW-                    | 3              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower    | herb    | FACW-                    | 2              |
| <i>Juncus dudleyi</i>            | Dudley's rush         | herb    | FAC                      | 4              |
| <i>Lythrum salicaria</i>         | purple loosestrife    | herb    | OBL                      | *              |
| <i>Mentha arvensis villosa</i>   | field mint            | herb    | FACW                     | 4              |
| <i>Penstemon digitalis</i>       | foxglove beard-tongue | herb    | FAC-                     | 4              |
| <i>Phalaris arundinacea</i>      | reed canary grass     | herb    | FACW+                    | *              |
| <i>Populus alba</i>              | white poplar          | shrub   | UPL                      | *              |
| <i>Populus deltoides</i>         | eastern cottonwood    | shrub   | FAC+                     | 2              |
| <i>Scirpus atrovirens</i>        | dark green bulrush    | herb    | OBL                      | 4              |
| <i>Sisyrinchium albidum</i>      | blue-eyed grass       | herb    | FACU                     | 4              |
| <i>Solidago canadensis</i>       | Canada goldenrod      | herb    | FACU                     | 1              |
| <i>Typha angustifolia</i>        | narrow-leaved cattail | herb    | OBL                      | *              |
| <i>Ulmus americana</i>           | American elm          | herb    | FACW-                    | 5              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 49/16 = 3.1$$

$$FQI = \sum C/\sqrt{N} = 49/\sqrt{16} = 12.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 14 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 120.4 m (395 ft) north of Taylor Ln.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Phalaris arundinacea</i> | FACW+                   | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Markham silt loam, revised to Pella silty clay loam.  
 Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-10              | 10YR 2/1     |                |         |           |         |         |
| 10-15             | 10YR 2/1     | 10YR 4/6       | 15%     | prominent | SiCL    |         |
| 15-24             | 10YR 3/1     | 10YR 4/6       | 20%     | prominent | SiCL    |         |
| 24-30             | 10YR 4/1     | 10YR 4/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 14 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 120.4 m (395 ft) north of Taylor Ln.

**HYDROLOGY**

Landform: Floodplain Local Relief: None  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and overflow from a small drainageway that runs through the site. Evapotranspiration and sheet flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (low area along small drainageway)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 14 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 6.1 m (20 ft) west of IL 131 and 120.4 m (395 ft) north of Taylor Ln.

**SPECIES LIST**

| Scientific name                 | Common name          | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>             | box elder            | tree, sapling, shrub | FACW-                    | 1              |
| <i>Acer saccharinum</i>         | silver maple         | tree, sapling, shrub | FACW                     | 1              |
| <i>Aster drummondii</i>         | Drummond's aster     | herb                 | FACU                     | 3              |
| <i>Cornus racemosa</i>          | gray dogwood         | shrub                | FACW-                    | 2              |
| <i>Crataegus mollis</i>         | downy hawthorn       | tree                 | FACW-                    | 2              |
| <i>Cryptotaenia canadensis</i>  | honestwort           | herb                 | FAC                      | 1              |
| <i>Dipsacus sylvestris</i>      | common teasel        | herb                 | UPL                      | *              |
| <i>Fragaria virginiana</i>      | wild strawberry      | herb                 | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>   | green ash            | tree, sapling, shrub | FACW                     | 2              |
| <i>Galium aparine</i>           | annual bedstraw      | herb                 | FACU                     | 0              |
| <i>Geum laciniatum</i>          | rough avens          | herb                 | FACW                     | 2              |
| <i>Glechoma hederacea</i>       | ground ivy           | herb                 | FACU                     | *              |
| <i>Hydrophyllum virginianum</i> | Virginia waterleaf   | herb                 | FACW-                    | 5              |
| <i>Leonurus cardiaca</i>        | motherwort           | herb                 | UPL                      | *              |
| <i>Lonicera maackii</i>         | amur honeysuckle     | shrub                | UPL                      | *              |
| <i>Lonicera tatarica</i>        | Tatarian honeysuckle | shrub                | FACU                     | *              |
| <i>Nepeta cataria</i>           | catnip               | herb                 | FAC-                     | *              |
| <i>Phalaris arundinacea</i>     | reed canary grass    | herb                 | FACW+                    | *              |
| <i>Poa sylvestris</i>           | woodland bluegrass   | herb                 | FAC                      | 5              |
| <i>Rhamnus cathartica</i>       | common buckthorn     | shrub                | FACU                     | *              |
| <i>Rosa multiflora</i>          | multiflora rose      | shrub                | FACU                     | *              |
| <i>Rubus occidentalis</i>       | black raspberry      | shrub                | UPL                      | 2              |
| <i>Rumex crispus</i>            | curly dock           | herb                 | FAC+                     | *              |
| <i>Sambucus canadensis</i>      | common elder         | shrub                | FACW-                    | 2              |
| <i>Solanum dulcamara</i>        | false bittersweet    | herb                 | FAC                      | *              |
| <i>Solidago canadensis</i>      | Canada goldenrod     | herb                 | FACU                     | 1              |
| <i>Solidago gigantea</i>        | late goldenrod       | herb                 | FACW                     | 3              |
| <i>Ulmus americana</i>          | American elm         | sapling, shrub, herb | FACW-                    | 5              |
| <i>Viola pratincola</i>         | common blue violet   | herb                 | FAC                      | 1              |
| <i>Vitis riparia</i>            | riverbank grape      | woody vine, herb     | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 42/19 = 2.2$$

$$FQI = \sum C/\sqrt{N} = 42/\sqrt{19} = 9.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 15 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 47.2 m (155 ft) east of IL 131 and 35.1 m (115 ft) north of 21<sup>st</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>  | FACW             | tree    |
| 2. <i>Populus deltoides</i> | FAC+             | tree    |

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

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

**SOILS**

Series and phase: Ozaukee silt loam, revised to Pella silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |          | Texture | Remarks |
|----------------|--------------|----------------|---------|----------|---------|---------|
|                |              | Color          | Percent | Type     |         |         |
| 0-15           | 10YR 2/1     |                | 10%     | distinct | SiCL    |         |
| 15-24          | 10YR 4/1     | 10YR 4/6       |         |          | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 15 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4  
**Location:** Approximately 47.2 m (155 ft) east of IL 131 and 35.1 m (115 ft) north of 21<sup>st</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.4 m (15 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a sump pump from the nearby house that drains into the site. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation, Sparsely Vegetated Concave Surface, Water-Stained Leaves  
Secondary indicators: Geomorphic Position (depression),

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 15 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 18, SW/4

**Location:** Approximately 47.2 m (155 ft) east of IL 131 and 35.1 m (115 ft) north of 21<sup>st</sup> St.

**SPECIES LIST**

| Scientific name             | Common name        | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|-----------------------------|--------------------|----------------------|--------------------------|----------------|
| <i>Acer saccharinum</i>     | silver maple       | tree, sapling, shrub | FACW                     | 1              |
| <i>Agropyron repens</i>     | quack grass        | herb                 | FACU                     | *              |
| <i>Aster simplex</i>        | panicked aster     | herb                 | FACW                     | 3              |
| <i>Carex</i> sp.            | sedge              | herb                 | ----                     | --             |
| <i>Daucus carota</i>        | Queen-Anne's-lace  | herb                 | UPL                      | *              |
| <i>Geum laciniatum</i>      | rough avens        | herb                 | FACW                     | 2              |
| <i>Phalaris arundinacea</i> | reed canary grass  | herb                 | FACW+                    | *              |
| <i>Populus alba</i>         | white poplar       | tree                 | UPL                      | *              |
| <i>Populus deltoides</i>    | eastern cottonwood | tree                 | FAC+                     | 2              |
| <i>Rumex crispus</i>        | curly dock         | herb                 | FAC+                     | *              |
| <i>Taraxacum officinale</i> | dandelion          | herb                 | FACU                     | *              |
| <i>Trifolium repens</i>     | white clover       | herb                 | FACU+                    | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 8/4 = 2.0$$

$$FQI = \sum C/\sqrt{N} = 8/\sqrt{4} = 4.0$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 16 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Just east of IL 131 and approximately 123.4 m (405 ft) south of 21<sup>st</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species        | Indicator Status | Stratum |
|-------------------------------|------------------|---------|
| 1. <i>Poa pratensis</i>       | FAC-             | herb    |
| 2. <i>Solidago canadensis</i> | FACU             | herb    |

Percentage of dominant species that are OBL, FACW, or FAC: 50%

**Hydrophytic vegetation:** Yes: No:   
**Rationale:** Not more than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to Pella silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 2/1     |                |         |           |         |         |
| 8-14              | 10YR 3/2     | 10YR 4/8       | 10%     | prominent | SiCL    |         |
| 14-20             | 10YR 4/2     | 10YR 4/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has both a low chroma and depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 16 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Just east of IL 131 and approximately 123.4 m (405 ft) south of 21<sup>st</sup> St.

**HYDROLOGY**

Landform: Field Local Relief: None  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.5 m (18 in).  
Overview of hydrological flow through the system: The primary hydrologic input to this site is precipitation. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: None  
Secondary indicators: None

**Wetland hydrology:** Yes: No: X  
**Rationale:** There is no field evidence to indicate that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: No: X  
**Rationale:** Although this site has hydric soils, dominant hydrophytic vegetation and wetland hydrology are not present; therefore, this site is not a wetland. The NWI identified this site as excavated, intermittently exposed, unconsolidated-bottom palustrine wetland (PUBGx); however, there was no evidence of a pond or any type of excavation at this site. It is possible that the pond formerly located at this site was filled in or drained.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 16 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Just east of IL 131 and approximately 123.4 m (405 ft) south of 21<sup>st</sup> St.

**SPECIES LIST**

| Scientific name               | Common name         | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|---------------------|----------------------|--------------------------|----------------|
| <i>Acer saccharinum</i>       | silver maple        | tree, sapling, shrub | FACW                     | 1              |
| <i>Aster drummondii</i>       | Drummond's aster    | herb                 | FACU                     | 3              |
| <i>Aster novae-angliae</i>    | New England aster   | herb                 | FACW                     | 4              |
| <i>Aster pilosus</i>          | hairy aster         | herb                 | FACU+                    | 0              |
| <i>Cirsium arvense</i>        | Canada thistle      | herb                 | FACU                     | *              |
| <i>Cornus racemosa</i>        | gray dogwood        | shrub                | FACW-                    | 2              |
| <i>Cornus stolonifera</i>     | red osier dogwood   | shrub                | FACW                     | 4              |
| <i>Festuca pratensis</i>      | meadow fescue       | herb                 | FACU-                    | *              |
| <i>Fragaria virginiana</i>    | wild strawberry     | herb                 | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i> | green ash           | tree, shrub          | FACW                     | 2              |
| <i>Geum laciniatum</i>        | rough avens         | herb                 | FACW                     | 2              |
| <i>Hesperis matronalis</i>    | Dame's rocket       | herb                 | UPL                      | *              |
| <i>Juglans nigra</i>          | black walnut        | shrub                | FACU                     | 4              |
| <i>Oenothera biennis</i>      | evening primrose    | herb                 | FACU                     | 1              |
| <i>Poa pratensis</i>          | Kentucky bluegrass  | herb                 | FAC-                     | *              |
| <i>Populus alba</i>           | white poplar        | tree, sapling, shrub | UPL                      | *              |
| <i>Populus deltoides</i>      | eastern cottonwood  | tree                 | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>     | common buckthorn    | shrub                | FACU                     | *              |
| <i>Rosa multiflora</i>        | multiflora rose     | shrub                | FACU                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow | sapling              | FACW                     | 4              |
| <i>Solidago canadensis</i>    | Canada goldenrod    | herb                 | FACU                     | 1              |
| <i>Solidago rigida</i>        | rigid goldenrod     | herb                 | FACU-                    | 4              |
| <i>Vitis riparia</i>          | riverbank grape     | woody vine           | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 38/16 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 38/\sqrt{16} = 9.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 17 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) south of Waverly St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Ulmus americana</i>    | FACW-            | tree          |
| 2. <i>Ulmus americana</i>    | FACW-            | sapling/shrub |
| 3. <i>Rhamnus cathartica</i> | FACU             | herb          |

Percentage of dominant species that are OBL, FACW, or FAC: 67%

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Undetermined Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-8            | 10YR 2/1     |                |         |           |         |         |
| 8-18           | 10YR 4/2     | 10YR 4/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 17 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) south of Waverly St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.5 m (18.0 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and stream flow from a culvert from the east side of IL 131. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation, Drift Deposits, Sparsely Vegetated Concave Surface, Water Marks  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** This site has no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 17 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NW/4  
**Location:** Approximately 13.7 m (45 ft) west of IL 131 and 11.6 m (38 ft) south of Waverly St.

**SPECIES LIST**

| Scientific name                    | Common name          | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder            | shrub                | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple         | tree, shrub          | FACW                     | 1              |
| <i>Allium canadense</i>            | wild garlic          | herb                 | FACU                     | 2              |
| <i>Aster drummondii</i>            | Drummond's aster     | herb                 | FACU                     | 3              |
| <i>Aster simplex</i>               | panicked aster       | herb                 | FACW                     | 3              |
| <i>Bidens frondosa</i>             | common beggar-ticks  | herb                 | FACW                     | 1              |
| <i>Cirsium arvense</i>             | Canada thistle       | herb                 | FACU                     | *              |
| <i>Fraxinus pennsylvanica</i>      | green ash            | sapling, shrub       | FACW                     | 2              |
| <i>Iris shrevei</i>                | southern blue flag   | herb                 | OBL                      | 5              |
| <i>Lonicera tatarica</i>           | Tatarian honeysuckle | shrub                | FACU                     | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper     | woody vine           | FAC-                     | 2              |
| <i>Rhamnus cathartica</i>          | common buckthorn     | sapling, shrub       | FACU                     | *              |
| <i>Ribes americanum</i>            | wild black current   | shrub                | FACW                     | 5              |
| <i>Rumex crispus</i>               | curly dock           | herb                 | FAC+                     | *              |
| <i>Solanum dulcamara</i>           | false bittersweet    | herb                 | FAC                      | *              |
| <i>Taraxacum officinale</i>        | dandelion            | herb                 | FACU                     | *              |
| <i>Ulmus americana</i>             | American elm         | tree, sapling, shrub | FACW-                    | 5              |
| <i>Viburnum opulus</i>             | high-bush cranberry  | shrub                | UPL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 30/11 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 30/\sqrt{11} = 9.1$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 18 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 490.1 m (1610 ft) north of 28<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species            | Indicator Status | Stratum       |
|-----------------------------------|------------------|---------------|
| 1. <i>Acer negundo</i>            | FACW-            | tree          |
| 2. <i>Acer negundo</i>            | FACW-            | sapling/shrub |
| 3. <i>Fraxinus pennsylvanica</i>  | FACW             | sapling/shrub |
| 4. <i>Rhamnus cathartica</i>      | FACU             | sapling/shrub |
| 5. <i>Cryptotaenia canadensis</i> | FAC              | herb          |

Percentage of dominant species that are OBL, FACW, or FAC: 80%

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

**SOILS**

Series and phase: NRCS mapped as Peotone silty clay loam, revised to Selmass loam.  
 Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-15           | 10YR 2/1     |                |         |           | L       |         |
| 15-20          | 10YR 2/1     | 10YR 4/6       | 10%     | prominent | L       |         |
| 20-25          | 10YR 3/1     | 10YR 5/8       | 20%     | prominent | L       |         |
| 25-30          | 10YR 4/1     | 10YR 5/8       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 18 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 490.1 m (1610 ft) north of 28<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.4 m (15.0 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and drainage into a roadside ditch and drainage tiles are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation, Sediment Deposits  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 18 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 490.1 m (1610 ft) north of 28<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | tree, sapling, shrub | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple          | sapling, shrub       | FACW                     | 1              |
| <i>Ambrosia trifida</i>            | giant ragweed         | herb                 | FAC+                     | 0              |
| <i>Aster simplex</i>               | panicked aster        | herb                 | FACW                     | 3              |
| <i>Boehmeria cylindrica</i>        | false nettle          | herb                 | OBL                      | 3              |
| <i>Carex cristatella</i>           | sedge                 | herb                 | FACW+                    | 3              |
| <i>Cirsium arvense</i>             | Canada thistle        | herb                 | FACU                     | *              |
| <i>Cornus racemosa</i>             | gray dogwood          | shrub                | FACW-                    | 2              |
| <i>Cryptotaenia canadensis</i>     | honewort              | herb                 | FAC                      | 1              |
| <i>Fragaria virginiana</i>         | wild strawberry       | herb                 | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>      | green ash             | tree, sapling, shrub | FACW                     | 2              |
| <i>Galium aparine</i>              | annual bedstraw       | herb                 | FACU                     | 0              |
| <i>Geum laciniatum</i>             | rough avens           | herb                 | FACW                     | 2              |
| <i>Glechoma hederacea</i>          | ground ivy            | herb                 | FACU                     | *              |
| <i>Impatiens capensis</i>          | jewelweed             | herb                 | FACW                     | 2              |
| <i>Lythrum salicaria</i>           | purple loosestrife    | herb                 | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | woody vine           | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb                 | FACW+                    | *              |
| <i>Phragmites australis</i>        | common red reed       | herb                 | FACW+                    | 1              |
| <i>Poa pratensis</i>               | Kentucky bluegrass    | herb                 | FAC-                     | *              |
| <i>Rhamnus cathartica</i>          | common buckthorn      | sapling, shrub       | FACU                     | *              |
| <i>Rosa multiflora</i>             | multiflora rose       | shrub                | FACU                     | *              |
| <i>Rubus occidentalis</i>          | black raspberry       | shrub                | UPL                      | 2              |
| <i>Salix exigua</i>                | sandbar willow        | shrub                | OBL                      | 1              |
| <i>Solidago canadensis</i>         | Canada goldenrod      | herb                 | FACU                     | 1              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb                 | OBL                      | *              |
| <i>Ulmus americana</i>             | American elm          | sapling, shrub       | FACW-                    | 5              |
| <i>Viola pratincola</i>            | common blue violet    | herb                 | FAC                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 35/20 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 35/\sqrt{20} = 7.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 19 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 12.2 m (40 ft) north of 28<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Houghton muck, revised to Adrian muck.  
Drainage Class: Very Poorly Drained      Taxonomy: Terric Haplosaprist

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |          | Texture | Remarks |
|-------------------|--------------|----------------|---------|----------|---------|---------|
|                   |              | Color          | Percent | Type     |         |         |
| 0-3               | 10YR 2/1     |                |         |          | M       |         |
| 3-24              | N 2.5/0      | 7.5YR 3/3      | 10%     | distinct | M       |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A1 (Histosol) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 19 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 12.2 m (40 ft) north of 28<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.25 m (10.0 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and stream flow from a culvert from the east side of IL 131. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation, True Aquatic Plants (*Lemna minor*)  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as unconsolidated-bottom palustrine wetland and a seasonally flooded, emergent vegetation, palustrine wetland (PUB/PEMC).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: No: X  
**Rationale:** This site has a surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 19 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 12.2 m (40 ft) north of 28<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name               | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|---------------------------|---------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder                 | shrub   | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple              | shrub   | FACW                     | 1              |
| <i>Alisma plantago-aquatica</i>    | broad-leaf water-plantain | herb    | OBL                      | 2              |
| <i>Allium canadense</i>            | wild garlic               | herb    | FACU                     | 2              |
| <i>Ambrosia trifida</i>            | giant ragweed             | herb    | FAC+                     | 0              |
| <i>Asclepias incarnata</i>         | swamp milkweed            | herb    | OBL                      | 4              |
| <i>Asclepias syriaca</i>           | common milkweed           | herb    | UPL                      | 0              |
| <i>Aster novae-angliae</i>         | New England aster         | herb    | FACW                     | 4              |
| <i>Aster puniceus</i>              | swamp aster               | herb    | OBL                      | 7              |
| <i>Barbarea vulgaris</i>           | winter cress              | herb    | FAC                      | *              |
| <i>Carex lacustris</i>             | river sedge               | herb    | OBL                      | 6              |
| <i>Carex lanuginosa</i>            | wooly sedge               | herb    | OBL                      | 4              |
| <i>Carex stricta</i>               | tussock sedge             | herb    | OBL                      | 5              |
| <i>Carex vulpinoidea</i>           | fox sedge                 | herb    | OBL                      | 3              |
| <i>Cirsium arvense</i>             | Canada thistle            | herb    | FACU                     | *              |
| <i>Cornus obliqua</i>              | pale dogwood              | shrub   | FACW+                    | 4              |
| <i>Cornus stolonifera</i>          | red osier dogwood         | shrub   | FACW                     | 4              |
| <i>Dipsacus sylvestris</i>         | common teasel             | herb    | UPL                      | *              |
| <i>Equisetum arvense</i>           | common horsetail          | herb    | FAC                      | 0              |
| <i>Eupatorium maculatum</i>        | spotted Joe Pye weed      | herb    | OBL                      | 5              |
| <i>Geum aleppicum</i>              | yellow avens              | herb    | FAC+                     | 6              |
| <i>Glyceria striata</i>            | fowl manna grass          | herb    | OBL                      | 4              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower        | herb    | FACW-                    | 2              |
| <i>Iris shrevei</i>                | southern blue flag        | herb    | OBL                      | 5              |
| <i>Juncus dudleyi</i>              | Dudley's rush             | herb    | FAC                      | 4              |
| <i>Lemna minor</i>                 | common duckweed           | herb    | OBL                      | 3              |
| <i>Lythrum salicaria</i>           | purple loosestrife        | herb    | OBL                      | *              |
| <i>Nepeta cataria</i>              | catnip                    | herb    | FAC-                     | *              |
| <i>Onoclea sensibilis</i>          | sensitive fern            | herb    | FACW                     | 5              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper          | herb    | FAC-                     | 2              |
| <i>Penthorum sedoides</i>          | ditch stonecrop           | herb    | OBL                      | 2              |
| <i>Penstemon digitalis</i>         | foxglove beard-tongue     | herb    | FAC-                     | 4              |
| <i>Phalaris arundinacea</i>        | reed canary grass         | herb    | FACW+                    | *              |
| <i>Polygonum amphibium</i>         | water smartweed           | herb    | OBL                      | 3              |
| <i>Polygonum persicaria</i>        | spotted lady's thumb      | herb    | FACW                     | *              |

Species list continued on next page.

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 19 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 12.2 m (40 ft) north of 28<sup>th</sup> St.

**SPECIES LIST** *continued*

| Scientific name                | Common name           | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------|-----------------------|-------------|--------------------------|----------------|
| <i>Rhamnus cathartica</i>      | common buckthorn      | shrub, herb | FACU                     | *              |
| <i>Rhamnus frangula</i>        | glossy buckthorn      | shrub       | FAC+                     | *              |
| <i>Rumex crispus</i>           | curly dock            | herb        | FAC+                     | *              |
| <i>Salix amygdaloides</i>      | peach-leaved willow   | tree        | FACW                     | 4              |
| <i>Salix nigra</i>             | black willow          | tree        | OBL                      | 3              |
| <i>Scirpus atrovirens</i>      | dark green bulrush    | herb        | OBL                      | 4              |
| <i>Scutellaria lateriflora</i> | mad-dog skullcap      | herb        | OBL                      | 4              |
| <i>Solanum dulcamara</i>       | false bittersweet     | herb        | FAC                      | *              |
| <i>Solidago canadensis</i>     | Canada goldenrod      | herb        | FACU                     | 1              |
| <i>Sonchus arvensis</i>        | field sowthistle      | herb        | FAC-                     | *              |
| <i>Typha angustifolia</i>      | narrow-leaved cattail | herb        | OBL                      | *              |
| <i>Typha latifolia</i>         | cattail               | herb        | OBL                      | 1              |
| <i>Vitis riparia</i>           | riverbank grape       | woody vine  | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 111/35 = 3.2$$

$$FQI = \sum C/\sqrt{N} = 111/\sqrt{35} = 18.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 20 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Pond

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 59.4 m (195 ft) north of 28<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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**

**No dominant vegetation – INUNDATED**

Percentage of dominant species that are OBL, FACW, or FAC: NA

**Hydrophytic vegetation:** Yes:      No: X

**Rationale:** There is no dominant vegetation.

**SOILS**

Series and phase: Water

Drainage Class: N/A

Taxonomy: N/A

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features<br>Color      Percent      Type | Texture | Remarks |
|-------------------|--------------|--|---------|---------|
|-------------------|--------------|--|---------|---------|

N/A

**Hydric soils:** Yes:      No: X

**Rationale:** This soil is inundated to an undetermined depth and emergent vegetation is lacking, therefore this site does not contain hydric soils.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 20 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Pond  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 59.4 m (195 ft) north of 28<sup>th</sup> St.

**HYDROLOGY**

Landform: Pond Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: > 2 m (6.6 ft)  
Depth to saturated soil: NA  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from surrounding uplands. Evapotranspiration and streamflow are the major outputs.  
Size of watershed: 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: None.  
Secondary indicators: Geomorphic Position (depression).

**Wetland hydrology:** Yes: No: X  
**Rationale:** The depth of the water is greater than 2.0 m (6.6 ft) and does not support rooted emergent vegetation.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: No: X  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as unconsolidated-bottom palustrine wetland and seasonally flooded, emergent vegetation, palustrine wetland (PUB/PEMC).

Determined by: Mary Ann Feist (vegetation, hydrology)  
Jason Zylka, Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 20 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum and Zylka **Dates:** 27 May and 29 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Pond

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 59.4 m (195 ft) north of 28<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Acer saccharinum</i>       | silver maple          | shrub   | FACW                     | 1              |
| <i>Fraxinus pennsylvanica</i> | green ash             | shrub   | FACW                     | 2              |
| <i>Iris pseudacorus</i>       | water flag            | herb    | OBL                      | *              |
| <i>Lemna minor</i>            | common duckweed       | herb    | OBL                      | 3              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>          | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Salix alba</i>             | white willow          | tree    | FACW                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow   | tree    | FACW                     | 4              |
| <i>Solanum dulcamara</i>      | false bittersweet     | herb    | FAC                      | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb    | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb    | OBL                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 11/5 = 2.2$$

$$FQI = \sum C/\sqrt{N} = 11/\sqrt{5} = 4.9$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 21 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Marcum, and Sivicek **Dates:** 31 August 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 27.4 m (90 ft) south of 28<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. *Typha angustifolia*      OBL      herb

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to undetermined

Drainage Class: poorly      Taxonomy: undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks        |
|-------------------|--------------|----------------|---------|-----------|---------|----------------|
|                   |              | Color          | Percent | Type      |         |                |
| 0-8               | 2.5Y 3/1     | 5YR 3/3        | 20%     | distinct  | SiL     | 1% concretions |
| 8-10              | 10YR 5/1     | 7.5YR 4/6      | 30%     | prominent | SiCL    |                |
| 10-15             | 2.5Y 3/1     | 5YR 3/3        | 20%     | distinct  | SiCL    | 1% concretions |

**Hydric soils:** Yes: No: X

**Rationale:** This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 21 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Marcum, and Sivicek **Dates:** 31 August 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 27.4 m (90 ft) south of 28<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Paul Marcum (vegetation, hydrology)  
Valarie Sivicek (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 21 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Marcum, and Sivicek **Dates:** 31 August 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 36.6 m (120 ft) west of IL 131 and 27.4 m (90 ft) south of 28<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | herb, shrub          | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple          | herb, shrub, sapling | FACW                     | 1              |
| <i>Agrostis alba</i>               | red top               | herb                 | FACW                     | 0              |
| <i>Asclepias incarnata</i>         | swamp milkweed        | herb                 | OBL                      | 4              |
| <i>Fraxinus pennsylvanica</i>      | green ash             | herb, shrub          | FACW                     | 2              |
| <i>Gleditsia triacanthos</i>       | honey locust          | herb                 | FAC                      | 2              |
| <i>Lythrum salicaria</i>           | purple loosestrife    | herb                 | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | herb                 | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb                 | FACW+                    | *              |
| <i>Polygonum pensylvanicum</i>     | giant smartweed       | herb                 | FACW+                    | 1              |
| <i>Polygonum punctatum</i>         | dotted smartweed      | herb                 | OBL                      | 3              |
| <i>Solanum dulcamara</i>           | false bitterweet      | herb                 | FAC                      | *              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb                 | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail               | herb                 | OBL                      | 1              |
| <i>Verbena hastata</i>             | blue vervain          | herb                 | FACW+                    | 3              |
| <i>Vitis riparia</i>               | riverbank grape       | herb, woody vine     | FACW-                    | 2              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 22/12 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 22/\sqrt{12} = 6.4$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 22 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4  
**Location:** Approximately 274.3 m (900 ft) east of IL 131 and 24.3 m (80 ft) south of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Alisma plantago-aquatica</i> | OBL              | herb    |
| 2. <i>Rumex crispus</i>            | FAC+             | herb    |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to undetermined.

Drainage Class: Undetermined

Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 2/1     |                |         |           | SiCL    |         |
| 8-12              | 10YR 4/2     | 10YR 5/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted matrix) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 22 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4  
**Location:** Approximately 274.3 m (900 ft) east of IL 131 and 24.3 m (80 ft) south of 29<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Inundation Visible on Aerial Imagery, True Aquatic Plants (*Potamogeton nodosus*), Algal Mat or Crust, Sparsely Vegetated Concave Surface  
Secondary indicators: Geomorphic Position (depression), Saturation Visible on Aerial Imagery

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion. Also see Appendix 1 and Table 1 for the determination of wetland signatures for this site from FSA aerial photographs.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Paul Marcum and Jason Zylka (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 22 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4  
**Location:** Approximately 274.3 m (900 ft) east of IL 131 and 24.3 m (80 ft) south of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|---------|--------------------------|----------------|
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb    | OBL                      | 2              |
| <i>Ambrosia artemisiifolia</i>  | common ragweed            | herb    | FACU                     | 0              |
| <i>Barbarea vulgaris</i>        | winter cress              | herb    | FAC                      | *              |
| <i>Eleocharis acicularis</i>    | needle spike rush         | herb    | OBL                      | 3              |
| <i>Eleocharis obtusa</i>        | blunt spike rush          | herb    | OBL                      | 2              |
| <i>Glycine max</i>              | soybean                   | herb    | UPL                      | *              |
| <i>Juncus bufonius</i>          | toad rush                 | herb    | FACW+                    | 2              |
| <i>Lindernia dubia</i>          | false pimpernel           | herb    | OBL                      | 5              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb    | FACW+                    | *              |
| <i>Populus deltoides</i>        | eastern cottonwood        | tree    | FAC+                     | 2              |
| <i>Potamogeton nodosus</i>      | American pondweed         | herb    | OBL                      | 7              |
| <i>Ranunculus sceleratus</i>    | cursed crowfoot           | herb    | OBL                      | 3              |
| <i>Rorippa sylvestris</i>       | creeping yellow cress     | herb    | OBL                      | *              |
| <i>Rumex crispus</i>            | curly dock                | herb    | FAC+                     | *              |
| <i>Salix amygdaloides</i>       | peach-leaved willow       | tree    | FACW                     | 4              |
| <i>Sonchus arvensis</i>         | field sowthistle          | herb    | FAC-                     | *              |
| <i>Typha angustifolia</i>       | narrow-leaved cattail     | herb    | OBL                      | *              |
| <i>Veronica peregrina</i>       | purslane speedwell        | herb    | FACW+                    | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 30/11 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 30/\sqrt{11} = 9.1$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 23 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4

**Location:** Approximately 73.2 m (240 ft) east of IL 131, just south of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b>    | <b>Indicator Status</b> | <b>Stratum</b> |
|----------------------------------|-------------------------|----------------|
| 1. <i>Fraxinus pennsylvanica</i> | FACW                    | tree           |
| 2. <i>Fraxinus pennsylvanica</i> | FACW                    | sapling/shrub  |
| 3. <i>Phalaris arundinacea</i>   | FACW+                   | herb           |
| 4. <i>Typha angustifolia</i>     | OBL                     | herb           |

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

**Hydrophytic vegetation:** Yes:  No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to undetermined.

Drainage Class: Undetermined Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 2/1     |                |         |           | SiCL    |         |
| 8-12              | 10YR 4/2     | 10YR 5/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:

**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 23 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4  
**Location:** Approximately 73.2 m (240 ft) east of IL 131, just south of 29<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation,  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Paul Marcum and Jason Zylka (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 23 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NE/4

**Location:** Approximately 73.2 m (240 ft) east of IL 131, just south of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum       | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|---------------|--------------------------|----------------|
| <i>Acer saccharinum</i>       | silver maple          | tree          | FACW                     | 1              |
| <i>Agropyron repens</i>       | quack grass           | herb          | FACU                     | *              |
| <i>Agrostis alba</i>          | red top               | herb          | FACW                     | 0              |
| <i>Aster simplex</i>          | panicled aster        | herb          | FACW                     | 3              |
| <i>Calystegia sepium</i>      | American bindweed     | herb          | FAC                      | 1              |
| <i>Festuca pratensis</i>      | meadow fescue         | herb          | FACU-                    | *              |
| <i>Fraxinus pennsylvanica</i> | green ash             | tree, sapling | FACW                     | 2              |
| <i>Hordeum jubatum</i>        | squirrel-tail         | herb          | FAC+                     | *              |
| <i>Juncus bufonius</i>        | toad rush             | herb          | FACW+                    | 2              |
| <i>Juncus torreyi</i>         | Torrey's rush         | herb          | FACW                     | 3              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb          | FACW+                    | *              |
| <i>Rorippa sylvestris</i>     | creeping yellow cress | herb          | OBL                      | *              |
| <i>Rumex crispus</i>          | curly dock            | herb          | FAC+                     | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb          | FACU                     | 1              |
| <i>Solidago gigantea</i>      | late goldenrod        | herb          | FACW                     | 3              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb          | OBL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{c} = \sum C/N = 16/9 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 16/\sqrt{9} = 5.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 24 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 50.3 m (165 ft) east of IL 131 and 3.1 m (10 ft) south of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
 Do normal environmental conditions exist at this site? Yes: X No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b>      | <b>Indicator Status</b> | <b>Stratum</b> |
|------------------------------------|-------------------------|----------------|
| 1. <i>Alisma plantago-aquatica</i> | OBL                     | herb           |
| 2. <i>Eleocharis obtusa</i>        | OBL                     | herb           |
| 3. <i>Hordeum jubatum</i>          | FAC+                    | herb           |
| 4. <i>Puccinellia distans</i>      | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to undetermined.  
 Drainage Class: Undetermined Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 2/1     |                |         |           | SiCL    |         |
| 8-12              | 10YR 4/2     | 10YR 5/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 24 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 50.3 m (165 ft) east of IL 131 and 3.1 m (10 ft) south of 29<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression), Saturation Visible on Aerial Imagery

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion. Also see Appendix 1 and Table 1 for the determination of wetland signatures for this site from FSA aerial photographs.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 24 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Farmed Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 50.3 m (165 ft) east of IL 131 and 3.1 m (10 ft) south of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|---------|--------------------------|----------------|
| <i>Acer saccharinum</i>         | silver maple              | herb    | FACW                     | 1              |
| <i>Agrostis alba</i>            | red top                   | herb    | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb    | OBL                      | 2              |
| <i>Alopecurus carolinianus</i>  | annual foxtail            | herb    | FACW                     | 0              |
| <i>Ambrosia artemisiifolia</i>  | common ragweed            | herb    | FACU                     | 0              |
| <i>Barbarea vulgaris</i>        | winter cress              | herb    | FAC                      | *              |
| <i>Daucus carota</i>            | Queen-Anne's-lace         | herb    | UPL                      | *              |
| <i>Eleocharis obtusa</i>        | blunt spike rush          | herb    | OBL                      | 2              |
| <i>Erigeron annuus</i>          | annual fleabane           | herb    | FAC-                     | 1              |
| <i>Fragaria virginiana</i>      | wild strawberry           | herb    | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>   | green ash                 | herb    | FACW                     | 2              |
| <i>Hordeum jubatum</i>          | squirrel-tail             | herb    | FAC+                     | *              |
| <i>Juncus bufonius</i>          | toad rush                 | herb    | FACW+                    | 2              |
| <i>Juncus torreyi</i>           | Torrey's rush             | herb    | FACW                     | 3              |
| <i>Lindernia dubia</i>          | false pimpernel           | herb    | OBL                      | 5              |
| <i>Oxalis stricta</i>           | yellow wood sorrel        | herb    | FACU                     | 0              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>            | Kentucky bluegrass        | herb    | FAC-                     | *              |
| <i>Puccinellia distans</i>      | alkali grass              | herb    | OBL                      | *              |
| <i>Ranunculus sceleratus</i>    | cursed crowfoot           | herb    | OBL                      | 3              |
| <i>Rorippa sylvestris</i>       | creeping yellow cress     | herb    | OBL                      | *              |
| <i>Rumex crispus</i>            | curly dock                | herb    | FAC+                     | *              |
| <i>Stellaria media</i>          | common chickweed          | herb    | FACU                     | *              |
| <i>Taraxacum officinale</i>     | dandelion                 | herb    | FACU                     | *              |
| <i>Typha angustifolia</i>       | narrow-leaved cattail     | herb    | OBL                      | *              |
| <i>Ulmus americana</i>          | American elm              | herb    | FACW-                    | 5              |
| <i>Veronica peregrina</i>       | purslane speedwell        | herb    | FACW+                    | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 28/16 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 28/\sqrt{16} = 7.0$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 25 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Both sides of IL 131, 36.6 m (120 ft) south of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>     | FACW             | tree          |
| 2. <i>Acer saccharinum</i>     | FACW             | sapling/shrub |
| 3. <i>Phalaris arundinacea</i> | FACW+            | herb          |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Pella silty clay loam, revised to undetermined.

Drainage Class: Poorly Drained

Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color        | Redox Features |         |           | Texture | Remarks    |
|----------------|---------------------|----------------|---------|-----------|---------|------------|
|                |                     | Color          | Percent | Type      |         |            |
| 0-14           | 10YR 2/1            | 7.5YR 3/3      | 15%     | distinct  | SiCL    |            |
| 14-20          | 10YR 4/2 & 10YR 2/1 | 10YR 5/8       | 15%     | prominent | SiCL    | Free water |
| 20-24          | 10YR 2/1            | 10YR 5/8       | 15%     | prominent | SiCL    |            |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 25 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Both sides of IL 131, 36.6 m (120 ft) south of 29<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.15 m (6 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 25 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Both sides of IL 131, 36.6 m (120 ft) south of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name               | Stratum                    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|---------------------------|----------------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder                 | tree, sapling, shrub       | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple              | tree, sapling, shrub       | FACW                     | 1              |
| <i>Alisma plantago-aquatica</i>    | broad-leaf water-plantain | herb                       | OBL                      | 2              |
| <i>Ambrosia trifida</i>            | giant ragweed             | herb                       | FAC+                     | 0              |
| <i>Aster simplex</i>               | panicked aster            | herb                       | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress              | herb                       | FAC                      | *              |
| <i>Carex crinita</i>               | fringed sedge             | herb                       | OBL                      | 8              |
| <i>Carex lanuginosa</i>            | wooly sedge               | herb                       | OBL                      | 4              |
| <i>Cryptotaenia canadensis</i>     | honestwort                | herb                       | FAC                      | 1              |
| <i>Equisetum arvense</i>           | common horsetail          | herb                       | FAC                      | 0              |
| <i>Fraxinus pennsylvanica</i>      | green ash                 | tree, sapling, shrub       | FACW                     | 2              |
| <i>Galium aparine</i>              | annual bedstraw           | herb                       | FACU                     | 0              |
| <i>Geum aleppicum</i>              | yellow avens              | herb                       | FAC+                     | 6              |
| <i>Geum laciniatum</i>             | rough avens               | herb                       | FACW                     | 2              |
| <i>Glechoma hederacea</i>          | ground ivy                | herb                       | FACU                     | *              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower        | herb                       | FACW-                    | 2              |
| <i>Hesperis matronalis</i>         | Dame's rocket             | herb                       | UPL                      | *              |
| <i>Lonicera tatarica</i>           | Tatarian honeysuckle      | shrub                      | FACU                     | *              |
| <i>Lycopus americanus</i>          | common water horehound    | herb                       | OBL                      | 3              |
| <i>Monarda fistulosa</i>           | wild bergamot             | herb                       | FACU                     | 4              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper          | woody vine                 | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass         | herb                       | FACW+                    | *              |
| <i>Populus deltoides</i>           | eastern cottonwood        | tree                       | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>          | common buckthorn          | shrub                      | FACU                     | *              |
| <i>Rhamnus frangula</i>            | glossy buckthorn          | shrub                      | FAC+                     | *              |
| <i>Solanum dulcamara</i>           | false bitterweet          | herb                       | FAC                      | *              |
| <i>Teucrium canadense</i>          | American germander        | herb                       | FACW-                    | 3              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail     | herb                       | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail                   | herb                       | OBL                      | 1              |
| <i>Ulmus americana</i>             | American elm              | tree, sapling, shrub, herb | FACW-                    | 5              |
| <i>Vitis riparia</i>               | riverbank grape           | woody vine                 | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 24/9 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 24/\sqrt{9} = 8.0$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 26 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Just south of Van Ct., 40.2 m (132 ft) west of Kenosha Rd.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

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

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

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

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to undetermined.  
Drainage Class: poorly      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features         |         |           | Texture | Remarks |
|-------------------|--------------|------------------------|---------|-----------|---------|---------|
|                   |              | Color                  | Percent | Type      |         |         |
| 0-10              | 10YR 3/1     | 10YR 4/6<br>& 10YR 4/2 | 10%     | prominent | SiCL    |         |
| 10-15             | 10YR 2/1     | 5YR 3/4                | 10%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 26 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Just south of Van Ct., 40.2 m (132 ft) west of Kenosha Rd.

**HYDROLOGY**

Landform: Drainageway Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.5 m (18.0 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and overflow from a pond to the north. Evapotranspiration and stream flow are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (floodplain)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 26 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Just south of Van Ct., 40.2 m (132 ft) west of Kenosha Rd.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|---------|--------------------------|----------------|
| <i>Agrostis alba</i>            | red top                   | herb    | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb    | OBL                      | 2              |
| <i>Bidens vulgata</i>           | sticktight                | herb    | FACW                     | 0              |
| <i>Eleocharis erythropoda</i>   | spike rush                | herb    | OBL                      | 3              |
| <i>Lythrum salicaria</i>        | purple loosestrife        | herb    | OBL                      | *              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>            | Kentucky bluegrass        | herb    | FAC-                     | *              |
| <i>Rumex crispus</i>            | curly dock                | herb    | FAC+                     | *              |
| <i>Sambucus canadensis</i>      | common elder              | shrub   | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 7/5 = 1.4$$

$$FQI = \sum C/\sqrt{N} = 7/\sqrt{5} = 3.1$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 27 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 3.1 m (10 ft) west of Kenosha Rd. and 115.8 m (380 ft) south of Van Ct.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>     | FACW             | tree          |
| 2. <i>Rhamnus cathartica</i>   | FACU             | sapling/shrub |
| 3. <i>Salix exigua</i>         | OBL              | sapling/shrub |
| 4. <i>Phalaris arundinacea</i> | FACW+            | herb          |

Percentage of dominant species that are OBL, FACW, or FAC: 75%

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features         |         |           | Texture | Remarks |
|----------------|--------------|------------------------|---------|-----------|---------|---------|
|                |              | Color                  | Percent | Type      |         |         |
| 0-1            | 10YR 2/1     |                        |         |           | SiCL    |         |
| 1-8            | 10YR 5/1     | 10YR 5/8<br>& 10YR 5/6 | 15%     | prominent | SiCL    |         |
| And            |              |                        |         |           |         |         |
| 0-8            | 10YR 2/1     | 5YR 3/4                | 15%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** Deeper soil samples could not be obtained. This soil has areas with a low chroma matrix containing redox concentrations and areas with a depleted matrix also containing redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) and F3 (depleted matrix) hydric soil indicators from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 27 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 3.1 m (10 ft) west of Kenosha Rd. and 115.8 m (380 ft) south of Van Ct.

**HYDROLOGY**

Landform: Seep Local Relief: None  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.1 m (4 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and groundwater seepage. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: None

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 27 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 3.1 m (10 ft) west of Kenosha Rd. and 115.8 m (380 ft) south of Van Ct.

**SPECIES LIST**

| Scientific name                | Common name        | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------|--------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>            | box elder          | tree, sapling, shrub | FACW-                    | 1              |
| <i>Acer saccharinum</i>        | silver maple       | tree, sapling, shrub | FACW                     | 1              |
| <i>Asclepias syriaca</i>       | common milkweed    | herb                 | UPL                      | 0              |
| <i>Aster drummondii</i>        | Drummond's aster   | herb                 | FACU                     | 3              |
| <i>Cirsium arvense</i>         | Canada thistle     | herb                 | FACU                     | *              |
| <i>Cornus racemosa</i>         | gray dogwood       | shrub                | FACW-                    | 2              |
| <i>Cryptotaenia canadensis</i> | honestwort         | herb                 | FAC                      | 1              |
| <i>Daucus carota</i>           | Queen-Anne's-lace  | herb                 | UPL                      | *              |
| <i>Dipsacus sylvestris</i>     | common teasel      | herb                 | UPL                      | *              |
| <i>Hemerocallis fulva</i>      | day lily           | herb                 | UPL                      | *              |
| <i>Lysimachia nummularia</i>   | moneywort          | herb                 | FACW+                    | *              |
| <i>Phalaris arundinacea</i>    | reed canary grass  | herb                 | FACW+                    | *              |
| <i>Poa pratensis</i>           | Kentucky bluegrass | herb                 | FAC-                     | *              |
| <i>Prunus virginiana</i>       | common chokecherry | shrub                | FAC-                     | 3              |
| <i>Quercus macrocarpa</i>      | burr oak           | tree, sapling, shrub | FAC-                     | 5              |
| <i>Rhamnus cathartica</i>      | common buckthorn   | shrub                | FACU                     | *              |
| <i>Rosa multiflora</i>         | multiflora rose    | shrub                | FACU                     | *              |
| <i>Rumex crispus</i>           | curly dock         | herb                 | FAC+                     | *              |
| <i>Salix exigua</i>            | sandbar willow     | shrub                | OBL                      | 1              |
| <i>Solidago canadensis</i>     | Canada goldenrod   | herb                 | FACU                     | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 18/10 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 18/\sqrt{10} = 5.7$$

**IEPA CASE SPECIFIC WATER QUALITY CERTIFICATION**

This site requires IEPA Case Specific Water Quality Certification due to the presence of *Quercus macrocarpa*.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 28 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 155.5 m (510 ft) west of Kenosha Rd. and 670.6 m (2200 ft) south of 21<sup>st</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to undetermined.  
Drainage Class: Poorly Drained      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 3/1     | 10YR 4/4       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma matrix surface horizon with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 28 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 155.5 m (510 ft) west of Kenosha Rd. and 670.6 m (2200 ft) south of 21<sup>st</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.4 m (16 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and a spillway which connects the site to Site 29 are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 28 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 155.5 m (510 ft) west of Kenosha Rd. and 670.6 m (2200 ft) south of 21<sup>st</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name        | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|--------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder          | sapling, shrub, herb | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple       | tree, sapling, shrub | FACW                     | 1              |
| <i>Alisma plantago-aquatica</i>    | water-plantain     | herb                 | OBL                      | 2              |
| <i>Alliaria petiolata</i>          | garlic mustard     | herb                 | FAC                      | *              |
| <i>Aster puniceus</i>              | swamp aster        | herb                 | OBL                      | 7              |
| <i>Aster simplex</i>               | panicked aster     | herb                 | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress       | herb                 | FAC                      | *              |
| <i>Carex cristatella</i>           | sedge              | herb                 | FACW+                    | 3              |
| <i>Carex vulpinoidea</i>           | fox sedge          | herb                 | OBL                      | 3              |
| <i>Daucus carota</i>               | Queen-Anne's-lace  | herb                 | UPL                      | *              |
| <i>Eleocharis erythropoda</i>      | spike rush         | herb                 | OBL                      | 3              |
| <i>Eleocharis obtusa</i>           | blunt spike rush   | herb                 | OBL                      | 2              |
| <i>Equisetum arvense</i>           | common horsetail   | herb                 | FAC                      | 0              |
| <i>Erigeron annuus</i>             | annual fleabane    | herb                 | FAC-                     | 1              |
| <i>Geum laciniatum</i>             | rough avens        | herb                 | FACW                     | 2              |
| <i>Juncus dudleyi</i>              | Dudley's rush      | herb                 | AC                       | 4              |
| <i>Juncus torreyi</i>              | Torrey's rush      | herb                 | FACW                     | 3              |
| <i>Lycopus americanus</i>          | water horehound    | herb                 | OBL                      | 3              |
| <i>Lythrum salicaria</i>           | purple loosestrife | herb                 | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper   | woody vine           | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass  | herb                 | FACW+                    | *              |
| <i>Poa pratensis</i>               | Kentucky bluegrass | herb                 | FAC-                     | *              |
| <i>Polygonum amphibium</i>         | water smartweed    | herb                 | OBL                      | 3              |
| <i>Populus deltoides</i>           | eastern cottonwood | tree, sapling, shrub | FAC+                     | 2              |
| <i>Potentilla anserina</i>         | silverweed         | herb                 | FACW+                    | 6              |
| <i>Rosa multiflora</i>             | multiflora rose    | shrub                | FACU                     | *              |
| <i>Rumex crispus</i>               | curly dock         | herb                 | FAC+                     | *              |
| <i>Salix exigua</i>                | sandbar willow     | shrub                | OBL                      | 1              |
| <i>Salix nigra</i>                 | black willow       | tree                 | OBL                      | 3              |
| <i>Salix discolor</i>              | pussy willow       | shrub                | FACW                     | 4              |
| <i>Scirpus atrovirens</i>          | dark green bulrush | herb                 | OBL                      | 4              |
| <i>Scirpus fluviatilis</i>         | river bulrush      | herb                 | OBL                      | 3              |
| <i>Solanum dulcamara</i>           | false bittersweet  | herb                 | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod   | herb                 | FACU                     | 1              |

Species list continued on next page.

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 28 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 155.5 m (510 ft) west of Kenosha Rd. and 670.6 m (2200 ft) south of 21<sup>st</sup> St.

**SPECIES LIST** *continued*

| <b>Scientific name</b>    | <b>Common name</b>    | <b>Stratum</b> | <b>Wetland indicator status</b> | <b>C<sup>Ψ</sup></b> |
|---------------------------|-----------------------|----------------|---------------------------------|----------------------|
| <i>Trifolium hybridum</i> | alsike clover         | herb           | FAC-                            | *                    |
| <i>Typha angustifolia</i> | narrow-leaved cattail | herb           | OBL                             | *                    |
| <i>Ulmus americana</i>    | American elm          | sapling        | FACW-                           | 5                    |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 34/13 = 2.6$$

$$FQI = \sum C/\sqrt{N} = 34/\sqrt{13} = 9.4$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 29 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 216.4 m (710 ft) west of Kenosha Rd. and 685.8 m (2250 ft) south of 21<sup>st</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Acer saccharinum</i>     | FACW                    | tree           |
| 2. <i>Populus deltoides</i>    | FAC+                    | tree           |
| 3. <i>Salix exigua</i>         | OBL                     | shrub          |
| 4. <i>Aster simplex</i>        | FACW                    | herb           |
| 5. <i>Juncus dudleyi</i>       | FAC                     | herb           |
| 6. <i>Phalaris arundinacea</i> | FACW+                   | herb           |
| 7. <i>Typha angustifolia</i>   | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to Peotone silty clay loam  
 Drainage Class: Very Poorly Drained Taxonomy: Cumulic Vertic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks     |
|-------------------|--------------|----------------|---------|-----------|---------|-------------|
|                   |              | Color          | Percent | Type      |         |             |
| 0-15              | 10YR 2/1     |                |         |           | UND     | loose & wet |
| 15-30             | 10YR 2/1     | 10YR 4/4       | 1%      | prominent | SiCL    |             |
| 30-40             | 2.5Y 4/1     | 10YR 4/6       | 20%     | prominent | SiCL    |             |
| 40-48             | 2.5Y 5/1     | 10YR 5/6       | 30%     | prominent | L       | Concretions |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a dark surface. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 29 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 216.4 m (710 ft) west of Kenosha Rd. and 685.8 m (2250 ft) south of 21<sup>st</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and a spillway from Site 28.  
Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water-Stained Leaves, Sediment Deposits, Oxidized Rhizospheres on Living Roots  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent vegetation, palustrine wetland (PEMC).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 29 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 216.4 m (710 ft) west of Kenosha Rd. and 685.8 m (2250 ft) south of 21<sup>st</sup> St.

**SPECIES LIST**

| Scientific name                      | Common name               | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------------|---------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                  | box elder                 | shrub, herb          | FACW-                    | 1              |
| <i>Acer saccharinum</i>              | silver maple              | tree, sapling, shrub | FACW                     | 1              |
| <i>Agrostis alba</i>                 | red top                   | herb                 | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i>      | broad-leaf water-plantain | herb                 | OBL                      | 2              |
| <i>Aster simplex</i>                 | panicled aster            | herb                 | FACW                     | 3              |
| <i>Barbarea vulgaris</i>             | winter cress              | herb                 | FAC                      | *              |
| <i>Bidens vulgata</i>                | sticktight                | herb                 | FACW                     | 0              |
| <i>Carex cristatella</i>             | sedge                     | herb                 | FACW+                    | 3              |
| <i>Carex vulpinoidea</i>             | fox sedge                 | herb                 | OBL                      | 3              |
| <i>Cryptotaenia canadensis</i>       | honewort                  | herb                 | FAC                      | 1              |
| <i>Daucus carota</i>                 | Queen-Anne's-lace         | herb                 | UPL                      | *              |
| <i>Eleocharis acicularis</i>         | needle spike rush         | herb                 | OBL                      | 3              |
| <i>Rorippa islandica fernaldiana</i> | marsh yellow cress        | herb                 | OBL                      | 4              |
| <i>Erigeron annuus</i>               | annual fleabane           | herb                 | FAC-                     | 1              |
| <i>Fragaria virginiana</i>           | wild strawberry           | herb                 | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>        | green ash                 | tree                 | FACW                     | 2              |
| <i>Geum aleppicum</i>                | yellow avens              | herb                 | FAC+                     | 6              |
| <i>Geum laciniatum</i>               | rough avens               | herb                 | FACW                     | 2              |
| <i>Juncus dudleyi</i>                | Dudley's rush             | herb                 | FAC                      | 4              |
| <i>Melilotus officinalis</i>         | yellow sweet clover       | herb                 | FACU                     | *              |
| <i>Oenothera biennis</i>             | evening primrose          | herb                 | FACU                     | 1              |
| <i>Parthenocissus quinquefolia</i>   | Virginia creeper          | woody vine           | FAC-                     | 2              |
| <i>Penthorum sedoides</i>            | ditch stonecrop           | herb                 | OBL                      | 2              |
| <i>Phalaris arundinacea</i>          | reed canary grass         | herb                 | FACW+                    | *              |
| <i>Poa pratensis</i>                 | Kentucky bluegrass        | herb                 | FAC-                     | *              |
| <i>Populus deltoides</i>             | eastern cottonwood        | tree                 | FAC+                     | 2              |
| <i>Ranunculus pensylvanicus</i>      | bristly crowfoot          | herb                 | OBL                      | 5              |
| <i>Rhamnus cathartica</i>            | common buckthorn          | shrub                | FACU                     | *              |
| <i>Rumex crispus</i>                 | curly dock                | herb                 | FAC+                     | *              |
| <i>Salix amygdaloides</i>            | peach-leaved willow       | tree                 | FACW                     | 4              |
| <i>Salix discolor</i>                | pussy willow              | shrub                | FACW                     | 4              |
| <i>Salix exigua</i>                  | sandbar willow            | shrub                | OBL                      | 1              |
| <i>Scirpus atrovirens</i>            | dark green bulrush        | herb                 | OBL                      | 4              |
| <i>Scirpus fluviatilis</i>           | river bulrush             | herb                 | OBL                      | 3              |
| <i>Solidago canadensis</i>           | Canada goldenrod          | herb                 | FACU                     | 1              |

*Species list continued on next page.*

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 29 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4  
**Location:** Approximately 216.4 m (710 ft) west of Kenosha Rd. and 685.8 m (2250 ft) south of 21<sup>st</sup> St.

**SPECIES LIST** *continued*

| <b>Scientific name</b>      | <b>Common name</b>    | <b>Stratum</b> | <b>Wetland indicator status</b> | <b>C<sup>Ψ</sup></b> |
|-----------------------------|-----------------------|----------------|---------------------------------|----------------------|
| <i>Taraxacum officinale</i> | dandelion             | herb           | FACU                            | *                    |
| <i>Trifolium hybridum</i>   | alsike clover         | herb           | FAC-                            | *                    |
| <i>Trifolium repens</i>     | white clover          | herb           | FACU+                           | *                    |
| <i>Typha angustifolia</i>   | narrow-leaved cattail | herb           | OBL                             | *                    |
| <i>Vitis riparia</i>        | riverbank grape       | woody vine     | FACW-                           | 2                    |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 69/29 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 69/\sqrt{29} = 12.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 30 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4

**Location:** Approximately 85.3 m (280 ft) west of Kenosha Rd. and 840.7 m (2640 ft) south of 21<sup>st</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
Do normal environmental conditions exist at this site? Yes: X No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Aster simplex</i>        | FACW                    | herb           |
| 2. <i>Eleocharis obtusa</i>    | OBL                     | herb           |
| 3. <i>Phalaris arundinacea</i> | FACW+                   | herb           |
| 4. <i>Rumex crispus</i>        | FAC+                    | herb           |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to undetermined.

Drainage Class: Poorly Drained

Taxonomy: Undetermined.

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-10              | 10YR 2/1     |                |         |           | H. SiCL |         |
| 10-15             | 10YR 4/2     | 10YR 4/6       | 20%     | prominent | H. SiCL |         |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 30 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4

**Location:** Approximately 85.3 m (280 ft) west of Kenosha Rd. and 840.7 m (2640 ft) south of 21<sup>st</sup> St.

### HYDROLOGY

Landform: Depression

Local Relief: Concave

Inundated: Yes: X No: Depth of standing water: < 0.15 m (6 in)

Depth to saturated soil: At or near surface.

Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.

Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation

Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 30 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, NE/4

**Location:** Approximately 85.3 m (280 ft) west of Kenosha Rd. and 840.7 m (2640 ft) south of 21<sup>st</sup> St.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|------------|--------------------------|----------------|
| <i>Agrostis alba</i>            | red top                   | herb       | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb       | OBL                      | 2              |
| <i>Alopecurus carolinianus</i>  | annual foxtail            | herb       | FACW                     | 0              |
| <i>Aster simplex</i>            | panicked aster            | herb       | FACW                     | 3              |
| <i>Eleocharis acicularis</i>    | needle spike rush         | herb       | OBL                      | 3              |
| <i>Eleocharis erythropoda</i>   | spike rush                | herb       | OBL                      | 3              |
| <i>Eleocharis obtusa</i>        | blunt spike rush          | herb       | OBL                      | 2              |
| <i>Festuca pratensis</i>        | meadow fescue             | herb       | FACU-                    | *              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb       | FACW+                    | *              |
| <i>Poa pratensis</i>            | Kentucky bluegrass        | herb       | FAC-                     | *              |
| <i>Polygonum amphibium</i>      | water smartweed           | herb       | OBL                      | 3              |
| <i>Polygonum persicaria</i>     | spotted lady's thumb      | herb       | FACW                     | *              |
| <i>Rumex crispus</i>            | curly dock                | herb       | FAC+                     | *              |
| <i>Viburnum opulus</i>          | high-bush cranberry       | shrub      | UPL                      | *              |
| <i>Vitis riparia</i>            | riverbank grape           | woody vine | FACW-                    | 2              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 18/9 = 2$$

$$FQI = \sum C/\sqrt{N} = 18/\sqrt{9} = 6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 31 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 7.6 m (25 ft) west of Kenosha Rd. and 164.6 m (540 ft) north of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

**Dominant Plant Species**      **Indicator Status**      **Stratum**  
1. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to undetermined.  
Drainage Class: Poorly Drained      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-12              | 10YR 3/1     | 10YR 5/8       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 31 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 7.6 m (25 ft) west of Kenosha Rd. and 164.6 m (540 ft) north of 29<sup>th</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 31 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4  
**Location:** Approximately 7.6 m (25 ft) west of Kenosha Rd. and 164.6 m (540 ft) north of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name        | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|--------------------|------------|--------------------------|----------------|
| <i>Barbarea vulgaris</i>           | winter cress       | herb       | FAC                      | *              |
| <i>Carex lanuginosa</i>            | wooly sedge        | herb       | OBL                      | 4              |
| <i>Carex vulpinoidea</i>           | fox sedge          | herb       | OBL                      | 3              |
| <i>Cornus racemosa</i>             | gray dogwood       | shrub      | FACW-                    | 2              |
| <i>Eleocharis erythropoda</i>      | spike rush         | herb       | OBL                      | 3              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower | herb       | FACW-                    | 2              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper   | woody vine | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass  | herb       | FACW+                    | *              |
| <i>Poa pratensis</i>               | Kentucky bluegrass | herb       | FAC-                     | *              |
| <i>Populus deltoides</i>           | eastern cottonwood | tree, herb | FAC+                     | 2              |
| <i>Rumex crispus</i>               | curly dock         | herb       | FAC+                     | *              |
| <i>Scirpus fluviatilis</i>         | river bulrush      | herb       | OBL                      | 3              |
| <i>Solidago canadensis</i>         | Canada goldenrod   | herb       | FACU                     | 1              |
| <i>Vitis riparia</i>               | riverbank grape    | woody vine | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 21/10 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 21/\sqrt{10} = 7.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 32 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Sivicek, Zylka, and Marcum

**Dates:** 28 May, 30 June, 31 August 2009

**Sequence No.:** 14766      **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois      **County:** Lake      **Applicant:** IDOT District 1

**Site Name:** Wet Meadow (Pasture)

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 30.5 m (100 ft) east of Kenosha Rd. and 198.1 m (650 ft) north of 29<sup>th</sup> St.

Are climatic/hydrologic conditions typical for time of year?      Yes: X    No:  
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. <i>Plantago rugelii</i>     | FAC              | herb    |
| 3. <i>Poa pratensis</i>        | FAC-             | herb    |
| 3. <i>Polygonum persicaria</i> | FACW             | herb    |
| 4. <i>Rumex crispus</i>        | FAC+             | herb    |

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

**Hydrophytic vegetation:** Yes: X    No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to Pella silty clay loam.

Drainage Class: Poorly Drained      Taxonomy: Typic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-14              | 10YR 2/1     |                |         |           | SiCL    |         |
| 14-24             | 10YR 4/2     | 10YR 5/8       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X    No:

**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 32 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Sivicek, Zylka, and Marcum

**Dates:** 28 May, 30 June, 31 August 2009

**Sequence No.:** 14766      **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois      **County:** Lake      **Applicant:** IDOT District 1

**Site Name:** Wet Meadow (Pasture)

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 30.5 m (100 ft) east of Kenosha Rd. and 198.1 m (650 ft) north of 29<sup>th</sup> St.

### HYDROLOGY

Landform: Depression      Local Relief: Concave

Inundated: Yes: X (in part) No:      Depth of standing water: < 0.08 m (3 in)

Depth to saturated soil: At or near surface.

Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.

Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation

Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X      No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X      No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X      No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist, Paul Marcum, and Jason Zylka (vegetation, hydrology)  
Valarie Sivicek (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 32 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Sivicek, Zylka, and Marcum

**Dates:** 28 May, 30 June, 31 August 2009

**Sequence No.:** 14766      **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois      **County:** Lake      **Applicant:** IDOT District 1

**Site Name:** Wet Meadow (Pasture)

**Legal Description:** T. 46 N., R. 12 E., Sect. 19, SW/4

**Location:** Approximately 30.5 m (100 ft) east of Kenosha Rd. and 198.1 m (650 ft) north of 29<sup>th</sup> St.

**SPECIES LIST**

| Scientific name               | Common name          | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|----------------------|---------|--------------------------|----------------|
| <i>Barbarea vulgaris</i>      | winter cress         | herb    | FAC                      | *              |
| <i>Cornus racemosa</i>        | gray dogwood         | shrub   | FACW-                    | 2              |
| <i>Eleocharis acicularis</i>  | needle spike rush    | herb    | OBL                      | 3              |
| <i>Eleocharis erythropoda</i> | spike rush           | herb    | OBL                      | 3              |
| <i>Phalaris arundinacea</i>   | reed canary grass    | herb    | FACW+                    | *              |
| <i>Plantago rugelii</i>       | red-stalked plantain | herb    | FAC                      | 0              |
| <i>Poa pratensis</i>          | Kentucky bluegrass   | herb    | FAC-                     | *              |
| <i>Polygonum persicaria</i>   | spotted lady's thumb | herb    | FACW                     | *              |
| <i>Populus deltoides</i>      | eastern cottonwood   | herb    | FAC+                     | 2              |
| <i>Rumex crispus</i>          | curly dock           | herb    | FAC+                     | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod     | herb    | FACU                     | 1              |
| <i>Taraxacum officinale</i>   | dandelion            | herb    | FACU                     | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 11/6 = 1.8$$

$$FQI = \sum C/\sqrt{N} = 11/\sqrt{6} = 4.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 33 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 4.6 m (15 ft) east of IL 131 and directly across from Major Ave.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species         | Indicator Status | Stratum       |
|--------------------------------|------------------|---------------|
| 1. <i>Acer saccharinum</i>     | FACW             | tree          |
| 2. <i>Acer saccharinum</i>     | FACW             | sapling/shrub |
| 3. <i>Carex stricta</i>        | OBL              | herb          |
| 4. <i>Carex lanuginosa</i>     | OBL              | herb          |
| 5. <i>Iris shrevei</i>         | OBL              | herb          |
| 6. <i>Phalaris arundinacea</i> | FACW+            | herb          |

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

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

**SOILS**

Series and phase: NRCS mapped as Peotone, revised to Pella silty clay loam  
 Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

**Profile Description:**

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks     |
|----------------|--------------|----------------|---------|-----------|---------|-------------|
|                |              | Color          | Percent | Type      |         |             |
| 0-10           | 10YR 2/1     |                |         |           | UND     | Loose & wet |
| 10-20          | 10YR 2/1     |                |         |           | SiCL    |             |
| 20-30          | 10YR 4/2     | 10YR 5/8       | 15%     | prominent | SiCL    |             |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations beneath a thick dark surface. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 33 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 4.6 m (15 ft) east of IL 131 and directly across from Major Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water Marks, Water-Stained Leaves  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 33 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 4.6 m (15 ft) east of IL 131 and directly across from Major Ave.

**SPECIES LIST**

| Scientific name                    | Common name        | Stratum                    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|--------------------|----------------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder          | sapling, shrub, herb       | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple       | tree, sapling, shrub, herb | FACW                     | 1              |
| <i>Agrostis alba</i>               | red top            | herb                       | FACW                     | 0              |
| <i>Ambrosia artemisiifolia</i>     | common ragweed     | herb                       | FACU                     | 0              |
| <i>Ambrosia trifida</i>            | giant ragweed      | herb                       | FAC+                     | 0              |
| <i>Aster novae-angliae</i>         | New England aster  | herb                       | FACW                     | 4              |
| <i>Aster puniceus</i>              | swamp aster        | herb                       | OBL                      | 7              |
| <i>Aster simplex</i>               | panicked aster     | herb                       | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress       | herb                       | FAC                      | *              |
| <i>Bidens vulgata</i>              | sticktight         | herb                       | FACW                     | 0              |
| <i>Carex lanuginosa</i>            | wooly sedge        | herb                       | OBL                      | 4              |
| <i>Carex</i> sp.                   | sedge              | herb                       | ----                     | --             |
| <i>Carex stricta</i>               | tussock sedge      | herb                       | OBL                      | 5              |
| <i>Cicuta maculata</i>             | water hemlock      | herb                       | OBL                      | 4              |
| <i>Cornus racemosa</i>             | gray dogwood       | shrub                      | FACW-                    | 2              |
| <i>Cryptotaenia canadensis</i>     | honestwort         | herb                       | FAC                      | 1              |
| <i>Equisetum arvense</i>           | common horsetail   | herb                       | FAC                      | 0              |
| <i>Erigeron philadelphicus</i>     | marsh fleabane     | herb                       | FACW                     | 3              |
| <i>Fraxinus pennsylvanica</i>      | green ash          | sapling, shrub             | FACW                     | 2              |
| <i>Galium aparine</i>              | annual bedstraw    | herb                       | FACU                     | 0              |
| <i>Geum aleppicum</i>              | yellow avens       | herb                       | FAC+                     | 6              |
| <i>Geum laciniatum</i>             | rough avens        | herb                       | FACW                     | 2              |
| <i>Glyceria striata</i>            | fowl manna grass   | herb                       | OBL                      | 4              |
| <i>Glyceria striata</i>            | fowl manna grass   | herb                       | OBL                      | 4              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower | herb                       | FACW-                    | 2              |
| <i>Iris shrevei</i>                | southern blue flag | herb                       | OBL                      | 5              |
| <i>Leersia oryzoides</i>           | rice cutgrass      | herb                       | OBL                      | 3              |
| <i>Lycopus americanus</i>          | water horehound    | herb                       | OBL                      | 3              |
| <i>Oxalis stricta</i>              | yellow wood sorrel | herb                       | FACU                     | 0              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper   | woody vine                 | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass  | herb                       | FACW+                    | *              |
| <i>Physostegia virginiana</i>      | false dragonhead   | herb                       | FACW                     | 6              |
| <i>Poa palustris</i>               | fowl bluegrass     | herb                       | FACW+                    | 7              |
| <i>Rhamnus cathartica</i>          | common buckthorn   | sapling, shrub             | FACU                     | *              |

*Species list continued on next page.*

## ROUTINE ONSITE WETLAND DETERMINATION

Site 33 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4

**Location:** Approximately 4.6 m (15 ft) east of IL 131 and directly across from Major Ave.

### SPECIES LIST *continued*

| Scientific name             | Common name           | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|-----------------------------|-----------------------|------------|--------------------------|----------------|
| <i>Rhamnus frangula</i>     | glossy buckthorn      | shrub      | FAC+                     | *              |
| <i>Sium suave</i>           | water parsnip         | herb       | OBL                      | 5              |
| <i>Solanum dulcamara</i>    | false bittersweet     | herb       | FAC                      | *              |
| <i>Solidago gigantea</i>    | late goldenrod        | herb       | FACW                     | 3              |
| <i>Taraxacum officinale</i> | dandelion             | herb       | FACU                     | *              |
| <i>Typha angustifolia</i>   | narrow-leaved cattail | herb       | OBL                      | *              |
| <i>Viburnum opulus</i>      | high-bush cranberry   | shrub      | UPL                      | *              |
| <i>Viola pratincola</i>     | common blue violet    | herb       | FAC                      | 1              |
| <i>Vitis riparia</i>        | riverbank grape       | woody vine | FACW-                    | 2              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 92/34 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 92/\sqrt{34} = 15.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 34 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4

**Location:** Just east of IL 131 and directly across from Major Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Aster simplex</i>             | FACW             | herb    |
| 2. <i>Carex lanuginosa</i>          | OBL              | herb    |
| 3. <i>Geum aleppicum</i>            | FAC+             | herb    |
| 4. <i>Helianthus grosseserratus</i> | FACW-            | herb    |
| 5. <i>Typha angustifolia</i>        | OBL              | herb    |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to undetermined.

Drainage Class: Poorly Drained Taxonomy: NA

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|----------------|--------------|----------------|---------|-----------|----------|---------|
|                |              | Color          | Percent | Type      |          |         |
| 0-5            | 10YR 3/1     | 10YR 5/8       | 10%     | prominent | SiL      |         |
| 5-14           | 10YR 2/1     |                |         |           | SiL-SiCL |         |
| 14-24          | 10YR 4/1     | 10YR 5/6       | 20%     | prominent | SiCL-SiC |         |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has a low chroma matrix with surface redox features and a depleted matrix with redox features. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 34 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Just east of IL 131 and directly across from Major Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.6 m (24 in)  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Sediment Deposits  
Secondary indicators: Geomorphic Position (depression), Drainage Patterns

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 34 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4

**Location:** Just east of IL 131 and directly across from Major Ave.

**SPECIES LIST**

| Scientific name                    | Common name            | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|------------------------|-------------|--------------------------|----------------|
| <i>Acer saccharinum</i>            | silver maple           | herb        | FACW                     | 1              |
| <i>Agrostis alba</i>               | red top                | herb        | FACW                     | 0              |
| <i>Ambrosia trifida</i>            | giant ragweed          | herb        | FAC+                     | 0              |
| <i>Apocynum cannabinum</i>         | dogbane                | herb        | FAC                      | 2              |
| <i>Asclepias incarnata</i>         | swamp milkweed         | herb        | OBL                      | 4              |
| <i>Aster novae-angliae</i>         | New England aster      | herb        | FACW                     | 4              |
| <i>Aster simplex</i>               | panicled aster         | herb        | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress           | herb        | FAC                      | *              |
| <i>Bidens frondosa</i>             | common beggar-ticks    | herb        | FACW                     | 1              |
| <i>Carex cristatella</i>           | sedge                  | herb        | FACW+                    | 3              |
| <i>Carex lanuginosa</i>            | wooly sedge            | herb        | OBL                      | 4              |
| <i>Cicuta maculata</i>             | water hemlock          | herb        | OBL                      | 4              |
| <i>Cirsium arvense</i>             | Canada thistle         | herb        | FACU                     | *              |
| <i>Cornus racemosa</i>             | gray dogwood           | shrub       | FACW-                    | 2              |
| <i>Eleocharis erythropoda</i>      | spike rush             | herb        | OBL                      | 3              |
| <i>Eupatorium serotinum</i>        | late boneset           | herb        | FAC+                     | 1              |
| <i>Fraxinus pennsylvanica</i>      | green ash              | shrub, herb | FACW                     | 2              |
| <i>Geum aleppicum</i>              | yellow avens           | herb        | FAC+                     | 6              |
| <i>Geum laciniatum</i>             | rough avens            | herb        | FACW                     | 2              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower     | herb        | FACW-                    | 2              |
| <i>Hordeum jubatum</i>             | squirrel-tail          | herb        | FAC+                     | *              |
| <i>Lycopus americanus</i>          | common water horehound | herb        | OBL                      | 3              |
| <i>Lythrum salicaria</i>           | purple loosestrife     | herb        | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper       | woody vine  | FAC-                     | 2              |
| <i>Penstemon digitalis</i>         | foxglove beard-tongue  | herb        | FAC-                     | 4              |
| <i>Penthorum sedoides</i>          | ditch stonecrop        | herb        | OBL                      | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass      | herb        | FACW+                    | *              |
| <i>Rhamnus frangula</i>            | glossy buckthorn       | shrub       | FAC+                     | *              |
| <i>Rosa palustris</i>              | swampy rose            | shrub       | OBL                      | 7              |
| <i>Rumex crispus</i>               | curly dock             | herb        | FAC+                     | *              |
| <i>Scirpus atrovirens</i>          | dark green bulrush     | herb        | OBL                      | 4              |
| <i>Solanum dulcamara</i>           | false bittersweet      | herb        | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod       | herb        | FACU                     | 1              |
| <i>Sonchus arvensis</i>            | field sowthistle       | herb        | FAC-                     | *              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail  | herb        | OBL                      | *              |

*Species list continued on next page.*

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 34 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Just east of IL 131 and directly across from Major Ave.

**SPECIES LIST** *continued*

| <b>Scientific name</b> | <b>Common name</b> | <b>Stratum</b> | <b>Wetland indicator status</b> | <b>C<sup>Ψ</sup></b> |
|------------------------|--------------------|----------------|---------------------------------|----------------------|
| <i>Typha latifolia</i> | cattail            | herb           | OBL                             | 1                    |
| <i>Ulmus americana</i> | American elm       | shrub, herb    | FACW-                           | 5                    |
| <i>Verbena hastata</i> | blue vervain       | herb           | FACW+                           | 3                    |
| <i>Vitis riparia</i>   | riverbank grape    | woody vine     | FACW-                           | 2                    |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 78/29 = 2.7$$

$$FQI = \sum C/\sqrt{N} = 78/\sqrt{29} = 14.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 35 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 7.6 m (25 ft) east of IL 131 and 161.5 m (530 ft) south of Major Ave.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

**Dominant Plant Species**      **Indicator Status**      **Stratum**  
1. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to undetermined.  
Drainage Class: Poorly Drained      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-8               | 10YR 2/1     | 7.5YR 3/4      |         | prominent | L       |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 35 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 7.6 m (25 ft) east of IL 131 and 161.5 m (530 ft) south of Major Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and drainage via a culvert running west under IL 131 are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 35 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4

**Location:** Approximately 7.6 m (25 ft) east of IL 131 and 161.5 m (530 ft) south of Major Ave.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | shrub      | FACW-                    | 1              |
| <i>Alliaria petiolata</i>          | garlic mustard        | herb       | FAC                      | *              |
| <i>Ambrosia trifida</i>            | giant ragweed         | herb       | FAC+                     | 0              |
| <i>Aster novae-angliae</i>         | New England aster     | herb       | FACW                     | 4              |
| <i>Aster simplex</i>               | panicked aster        | herb       | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress          | herb       | FAC                      | *              |
| <i>Carex cristatella</i>           | sedge                 | herb       | FACW+                    | 3              |
| <i>Carex lanuginosa</i>            | wooly sedge           | herb       | OBL                      | 4              |
| <i>Carex</i> sp.                   | sedge                 | herb       | ----                     | --             |
| <i>Carex vulpinoidea</i>           | fox sedge             | herb       | OBL                      | 3              |
| <i>Cornus racemosa</i>             | gray dogwood          | shrub      | FACW-                    | 2              |
| <i>Eleocharis erythropoda</i>      | spike rush            | herb       | OBL                      | 3              |
| <i>Equisetum arvense</i>           | common horsetail      | herb       | FAC                      | 0              |
| <i>Erigeron annuus</i>             | annual fleabane       | herb       | FAC-                     | 1              |
| <i>Geum laciniatum</i>             | rough avens           | herb       | FACW                     | 2              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower    | herb       | FACW-                    | 2              |
| <i>Hesperis matronalis</i>         | Dame's rocket         | herb       | UPL                      | *              |
| <i>Hordeum jubatum</i>             | squirrel-tail         | herb       | FAC+                     | *              |
| <i>Juncus dudleyi</i>              | Dudley's rush         | herb       | FAC                      | 4              |
| <i>Leersia oryzoides</i>           | rice cutgrass         | herb       | OBL                      | 3              |
| <i>Lythrum salicaria</i>           | purple loosestrife    | herb       | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | woody vine | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb       | FACW+                    | *              |
| <i>Phragmites australis</i>        | common red reed       | herb       | FACW+                    | 1              |
| <i>Rhamnus frangula</i>            | glossy buckthorn      | shrub      | FAC+                     | *              |
| <i>Rubus occidentalis</i>          | black raspberry       | shrub      | UPL                      | 2              |
| <i>Rumex crispus</i>               | curly dock            | herb       | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow   | shrub      | FACW                     | 4              |
| <i>Salix discolor</i>              | pussy willow          | shrub      | FACW                     | 4              |
| <i>Salix exigua</i>                | sandbar willow        | shrub      | OBL                      | 1              |
| <i>Solanum dulcamara</i>           | false bittersweet     | herb       | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod      | herb       | FACU                     | 1              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb       | OBL                      | *              |
| <i>Ulmus americana</i>             | American elm          | shrub      | FACW-                    | 5              |
| <i>Vitis riparia</i>               | riverbank grape       | woody vine | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 57/24 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 57/\sqrt{24} = 11.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 36 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 12.2 m (40 ft) north of 33<sup>rd</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>       | FACW             | tree          |
| 2. <i>Fraxinus pennsylvanica</i> | FACW             | tree          |
| 3. <i>Acer saccharinum</i>       | FACW             | sapling/shrub |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.

Drainage Class: Poorly Drained

Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|-------------------|--------------|----------------|---------|-----------|----------|---------|
|                   |              | Color          | Percent | Type      |          |         |
| 0-12              | 10YR 2/1     | 7.5YR 3/4      | 20%     | prominent | SiL-SiCL |         |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 36 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 12.2 m (40 ft) north of 33<sup>rd</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.5 m (18 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water-Stained Leaves, Water Marks, Sparsely Vegetated Concave Surface  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 36 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 12.2 m (40 ft) north of 33<sup>rd</sup> St.

**SPECIES LIST**

| Scientific name               | Common name         | Stratum       | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|---------------------|---------------|--------------------------|----------------|
| <i>Acer saccharinum</i>       | silver maple        | tree, sapling | FACW                     | 1              |
| <i>Fraxinus pennsylvanica</i> | green ash           | tree, shrub   | FACW                     | 2              |
| <i>Galium aparine</i>         | annual bedstraw     | herb          | FACU                     | 0              |
| <i>Phalaris arundinacea</i>   | reed canary grass   | herb          | FACW+                    | *              |
| <i>Rhamnus cathartica</i>     | common buckthorn    | shrub         | FACU                     | *              |
| <i>Ribes missouriense</i>     | Missouri gooseberry | shrub         | UPL                      | 2              |
| <i>Solanum dulcamara</i>      | false bittersweet   | herb          | FAC                      | *              |
| <i>Viburnum opulus</i>        | high-bush cranberry | shrub         | UPL                      | *              |
| <i>Vitis riparia</i>          | riverbank grape     | woody vine    | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 7/5 = 1.4$$

$$FQI = \sum C/\sqrt{N} = 7/\sqrt{5} = 3.1$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 37 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 33.5 m (110 ft) north of 33<sup>rd</sup> St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 2. <i>Typha angustifolia</i>   | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|-------------------|--------------|----------------|---------|-----------|----------|---------|
|                   |              | Color          | Percent | Type      |          |         |
| 0-12              | 10YR 2/1     | 7.5YR 3/4      | 20%     | prominent | SiL-SiCL |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 37 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 33.5 m (110 ft) north of 33<sup>rd</sup> St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.15 m (6 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 37 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, NW/4  
**Location:** Approximately 71.6 m (235 ft) east of IL 131 and 33.5 m (110 ft) north of 33<sup>rd</sup> St.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|-------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | herb, shrub | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple          | herb, shrub | FACW                     | 1              |
| <i>Agrostis alba</i>               | red top               | herb        | FACW                     | 0              |
| <i>Cirsium arvense</i>             | Canada thistle        | herb        | FACU                     | *              |
| <i>Fraxinus pennsylvanica</i>      | green ash             | herb, shrub | FACW                     | 2              |
| <i>Galium aparine</i>              | annual bedstraw       | herb        | FACU                     | 0              |
| <i>Geum aleppicum</i>              | yellow avens          | herb        | FAC+                     | 6              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower    | herb        | FACW-                    | 2              |
| <i>Monarda fistulosa</i>           | wild bergamot         | herb        | FACU                     | 4              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | herb        | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb        | FACW+                    | *              |
| <i>Rhamnus cathartica</i>          | common buckthorn      | shrub       | FACU                     | *              |
| <i>Ribes americanum</i>            | wild black current    | shrub       | FACW                     | 5              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb        | OBL                      | *              |
| <i>Vitis riparia</i>               | riverbank grape       | herb        | FACW-                    | 2              |
| <i>Xanthium strumarium</i>         | cockle bur            | herb        | FAC                      | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 25/12 = 2.1$$

$$FQI = \sum C/\sqrt{N} = 25/\sqrt{12} = 7.2$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 38 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 6.1 m (20 ft) east of IL 131 and 146.3 m (480 ft) south of 33rd St.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Drained      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture  | Remarks |
|-------------------|--------------|----------------|---------|-----------|----------|---------|
|                   |              | Color          | Percent | Type      |          |         |
| 0-12              | 10YR 2/1     | 7.5YR 3/6      | 20%     | prominent | SiL-SiCL |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 38 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 6.1 m (20 ft) east of IL 131 and 146.3 m (480 ft) south of 33rd St.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.08 m (3 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and stream flow from a culvert into a culvert under IL 131 are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 38 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4

**Location:** Approximately 6.1 m (20 ft) east of IL 131 and 146.3 m (480 ft) south of 33rd St.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum          | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | tree, shrub      | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple          | sapling          | FACW                     | 1              |
| <i>Agropyron repens</i>            | quack grass           | herb             | FACU                     | *              |
| <i>Alliaria petiolata</i>          | garlic mustard        | herb             | FAC                      | *              |
| <i>Barbarea vulgaris</i>           | winter cress          | herb             | FAC                      | *              |
| <i>Carex lanuginosa</i>            | wooly sedge           | herb             | OBL                      | 4              |
| <i>Cirsium arvense</i>             | Canada thistle        | herb             | FACU                     | *              |
| <i>Cornus racemosa</i>             | gray dogwood          | shrub, herb      | FACW-                    | 2              |
| <i>Dipsacus laciniatus</i>         | cut-leaved teasel     | herb             | UPL                      | *              |
| <i>Eleocharis erythropoda</i>      | spike rush            | herb             | OBL                      | 3              |
| <i>Erigeron annuus</i>             | annual fleabane       | herb             | FAC-                     | 1              |
| <i>Erigeron philadelphicus</i>     | marsh fleabane        | herb             | FACW                     | 3              |
| <i>Euthamia graminifolia</i>       | grassleaf goldenrod   | herb             | FACW-                    | 3              |
| <i>Galium aparine</i>              | annual bedstraw       | herb             | FACU                     | 0              |
| <i>Geum laciniatum</i>             | rough avens           | herb             | FACW                     | 2              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower    | herb             | FACW-                    | 2              |
| <i>Hordeum jubatum</i>             | squirrel-tail         | herb             | FAC+                     | *              |
| <i>Juncus torreyi</i>              | Torrey's rush         | herb             | FACW                     | 3              |
| <i>Lythrum salicaria</i>           | purple loosestrife    | herb             | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | woody vine, herb | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb             | FACW+                    | *              |
| <i>Phragmites australis</i>        | common red reed       | herb             | FACW+                    | 1              |
| <i>Rhamnus cathartica</i>          | common buckthorn      | shrub            | FACU                     | *              |
| <i>Rosa palustris</i>              | swampy rose           | shrub            | OBL                      | 7              |
| <i>Rumex crispus</i>               | curly dock            | herb             | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow   | shrub            | FACW                     | 4              |
| <i>Scirpus atrovirens</i>          | dark green bulrush    | herb             | OBL                      | 4              |
| <i>Scirpus tabernaemontanii</i>    | great bulrush         | herb             | OBL                      | 4              |
| <i>Solanum dulcamara</i>           | false bittersweet     | herb             | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod      | herb             | FACU                     | 1              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb             | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail               | herb             | OBL                      | 1              |
| <i>Ulmus americana</i>             | American elm          | tree             | FACW-                    | 5              |
| <i>Vitis riparia</i>               | riverbank grape       | woody vine       | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 56/22 = 2.6$$

$$FQI = \sum C/\sqrt{N} = 56/\sqrt{22} = 11.9$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 39 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 9.1 m (30 ft) east of IL 131 and 71.6 m (235 ft) south of Waldo Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
Do normal environmental conditions exist at this site? Yes: X No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b>    | <b>Indicator Status</b> | <b>Stratum</b> |
|----------------------------------|-------------------------|----------------|
| 1. <i>Fraxinus pennsylvanica</i> | FACW                    | tree           |
| 2. <i>Acer saccharinum</i>       | FACW                    | sapling/shrub  |
| 3. <i>Carex stricta</i>          | OBL                     | herb           |
| 4. <i>Typha angustifolia</i>     | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features          |         |           | Texture  | Remarks |
|-------------------|--------------|-------------------------|---------|-----------|----------|---------|
|                   |              | Color                   | Percent | Type      |          |         |
| 0-6               | 10YR 2/1     | 7.5YR 3/4<br>& 10YR 4/2 | 20%     | prominent | SiL-SiCL |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) and F7 (depleted dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 39 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 9.1 m (30 ft) east of IL 131 and 71.6 m (235 ft) south of Waldo Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water Marks  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 39 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 9.1 m (30 ft) east of IL 131 and 71.6 m (235 ft) south of Waldo Ave.

**SPECIES LIST**

| Scientific name                  | Common name               | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|---------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>              | box elder                 | tree, sapling, shrub | FACW-                    | 1              |
| <i>Acer saccharinum</i>          | silver maple              | tree, sapling, shrub | FACW                     | 1              |
| <i>Agastache nepetoides</i>      | yellow giant hyssop       | herb                 | FACU                     | 4              |
| <i>Agrostis alba</i>             | red top                   | herb                 | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i>  | broad-leaf water-plantain | herb                 | OBL                      | 2              |
| <i>Alliaria petiolata</i>        | garlic mustard            | herb                 | FAC                      | *              |
| <i>Apocynum cannabinum</i>       | dogbane                   | herb                 | FAC                      | 2              |
| <i>Aster novae-angliae</i>       | New England aster         | herb                 | FACW                     | 4              |
| <i>Aster puniceus</i>            | swamp aster               | herb                 | OBL                      | 7              |
| <i>Aster simplex</i>             | panicked aster            | herb                 | FACW                     | 3              |
| <i>Bidens vulgata</i>            | sticktight                | herb                 | FACW                     | 0              |
| <i>Calamagrostis canadensis</i>  | bluejoint grass           | herb                 | OBL                      | 3              |
| <i>Carex lanuginosa</i>          | wooly sedge               | herb                 | OBL                      | 4              |
| <i>Carex sartwellii</i>          | Sartwell's sedge          | herb                 | OBL                      | 5              |
| <i>Carex stricta</i>             | tussock sedge             | herb                 | OBL                      | 5              |
| <i>Cornus racemosa</i>           | gray dogwood              | shrub                | FACW-                    | 2              |
| <i>Eleocharis erythropoda</i>    | spike rush                | herb                 | OBL                      | 3              |
| <i>Epilobium hirsutum</i>        | hairy willow herb         | herb                 | FACW+                    | *              |
| <i>Equisetum arvense</i>         | common horsetail          | herb                 | FAC                      | 0              |
| <i>Erigeron philadelphicus</i>   | marsh fleabane            | herb                 | FACW                     | 3              |
| <i>Eupatorium serotinum</i>      | late boneset              | herb                 | FAC+                     | 1              |
| <i>Euthamia graminifolia</i>     | grassleaf goldenrod       | herb                 | FACW-                    | 3              |
| <i>Fraxinus pennsylvanica</i>    | green ash                 | tree, sapling, shrub | FACW                     | 2              |
| <i>Galium aparine</i>            | annual bedstraw           | herb                 | FACU                     | 0              |
| <i>Geum aleppicum</i>            | yellow avens              | herb                 | FAC+                     | 6              |
| <i>Geum laciniatum</i>           | rough avens               | herb                 | FACW                     | 2              |
| <i>Glyceria striata</i>          | fowl manna grass          | herb                 | OBL                      | 4              |
| <i>Helenium autumnale</i>        | sneezeweed                | herb                 | FACW+                    | 3              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower        | herb                 | FACW-                    | 2              |
| <i>Iris shrevei</i>              | southern blue flag        | herb                 | OBL                      | 5              |
| <i>Juncus dudleyi</i>            | Dudley's rush             | herb                 | FAC                      | 4              |
| <i>Juncus torreyi</i>            | Torrey's rush             | herb                 | FACW                     | 3              |
| <i>Lycopus americanus</i>        | common water horehound    | herb                 | OBL                      | 3              |
| <i>Lythrum salicaria</i>         | purple loosestrife        | herb                 | OBL                      | *              |

*Species list continued on next page.*

## ROUTINE ONSITE WETLAND DETERMINATION

Site 39 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 30, SW/4  
**Location:** Approximately 9.1 m (30 ft) east of IL 131 and 71.6 m (235 ft) south of Waldo Ave.

### SPECIES LIST *continued*

| Scientific name                    | Common name           | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|------------|--------------------------|----------------|
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | woody vine | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb       | FACW+                    | *              |
| <i>Poa pratensis</i>               | Kentucky bluegrass    | herb       | FAC-                     | *              |
| <i>Polygonum amphibium</i>         | water smartweed       | herb       | OBL                      | 3              |
| <i>Polygonum</i> sp.               | smartweed             | herb       | -----                    | --             |
| <i>Populus deltoides</i>           | eastern cottonwood    | shrub      | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>          | common buckthorn      | shrub      | FACU                     | *              |
| <i>Rhamnus frangula</i>            | glossy buckthorn      | shrub      | FAC+                     | *              |
| <i>Rumex crispus</i>               | curly dock            | herb       | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow   | sapling    | FACW                     | 4              |
| <i>Salix exigua</i>                | sandbar willow        | shrub      | OBL                      | 1              |
| <i>Salix nigra</i>                 | black willow          | tree       | OBL                      | 3              |
| <i>Sambucus canadensis</i>         | common elder          | shrub      | FACW-                    | 2              |
| <i>Scirpus americanus</i>          | American bulrush      | herb       | OBL                      | 3              |
| <i>Scirpus atrovirens</i>          | dark green bulrush    | herb       | OBL                      | 4              |
| <i>Sium suave</i>                  | water parsnip         | herb       | OBL                      | 5              |
| <i>Spartina pectinata</i>          | freshwater cord grass | herb       | FACW+                    | 4              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb       | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail               | herb       | OBL                      | 1              |
| <i>Verbena urticifolia</i>         | white vervian         | herb       | FAC+                     | 3              |
| <i>Vitis riparia</i>               | riverbank grape       | woody vine | FACW-                    | 2              |

<sup>Ψ</sup> Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 126/45 = 2.8$$

$$FQI = \sum C/\sqrt{N} = 126/\sqrt{45} = 18.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 40 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 91.4 m (300 ft) west of IL 131 and 12.2 m (40 ft) south of Wadsworth Rd.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species         | Indicator Status | Stratum |
|--------------------------------|------------------|---------|
| 1. <i>Carex lanuginosa</i>     | OBL              | herb    |
| 2. <i>Carex stricta</i>        | OBL              | herb    |
| 3. <i>Juncus dudleyi</i>       | FAC              | herb    |
| 4. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 5. <i>Typha angustifolia</i>   | OBL              | herb    |

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

**Hydrophytic vegetation:** Yes:  No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: Pella silty clay loam

Drainage Class: Poorly Drained

Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features      |         | Texture   | Remarks |
|----------------|--------------|---------------------|---------|-----------|---------|
|                |              | Color               | Percent |           |         |
| 0-15           | 10YR 2/1     |                     |         | SiCL      |         |
| 15-24          | 10YR 4/2     | 10YR 5/6            | 20%     | Prominent | SiCL    |
| And            |              |                     |         |           |         |
| 0-10           | 10YR 2/1     | 10YR 5/6 & 10YR 4/2 | 20%     | Prominent | SiCL    |
| 10-15          | 10YR 2/1     | 7.5YR 3/6           | 10%     | Prominent | M       |
| 15-24          | 10YR 5/1     | 10YR 5/6            | 20%     | Prominent | SiCL    |

**Hydric soils:** Yes:  No:

**Rationale:** This soil has low chroma and depleted matrixes with redox concentrations and a layer of organic soil in one area. These characteristics are evidence of a hydric soil. This soil meets the F7 (depleted dark surface) and A12 (thick dark surface) hydric soil indicators from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 40 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 91.4 m (300 ft) west of IL 131 and 12.2 m (40 ft) south of Wadsworth Rd.

### HYDROLOGY

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.15 m (6 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site partially as a drained/ditched, temporarily flooded, emergent, palustrine wetland (PEMAd).

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 40 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 91.4 m (300 ft) west of IL 131 and 12.2 m (40 ft) south of Wadsworth Rd.

**SPECIES LIST**

| Scientific name                  | Common name          | Stratum             | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|----------------------|---------------------|--------------------------|----------------|
| <i>Acer negundo</i>              | box elder            | shrub               | FACW-                    | 1              |
| <i>Acer saccharinum</i>          | silver maple         | tree, sapling, herb | FACW                     | 1              |
| <i>Apocynum cannabinum</i>       | dogbane              | herb                | FAC                      | 2              |
| <i>Asclepias incarnata</i>       | swamp milkweed       | herb                | OBL                      | 4              |
| <i>Aster novae-angliae</i>       | New England aster    | herb                | FACW                     | 4              |
| <i>Aster puniceus</i>            | swamp aster          | herb                | OBL                      | 7              |
| <i>Aster simplex</i>             | panicked aster       | herb                | FACW                     | 3              |
| <i>Barbarea vulgaris</i>         | winter cress         | herb                | FAC                      | *              |
| <i>Carex lanuginosa</i>          | wooly sedge          | herb                | OBL                      | 4              |
| <i>Carex sp.</i>                 | sedge                | herb                | ----                     | --             |
| <i>Carex stricta</i>             | tussock sedge        | herb                | OBL                      | 5              |
| <i>Carex vulpinoidea</i>         | fox sedge            | herb                | OBL                      | 3              |
| <i>Cicuta maculata</i>           | water hemlock        | herb                | OBL                      | 4              |
| <i>Cirsium arvense</i>           | Canada thistle       | herb                | FACU                     | *              |
| <i>Cornus racemosa</i>           | gray dogwood         | shrub               | FACW-                    | 2              |
| <i>Elaeagnus umbellata</i>       | oleaster             | shrub               | UPL                      | *              |
| <i>Eleocharis erythropoda</i>    | spike rush           | herb                | OBL                      | 3              |
| <i>Epilobium coloratum</i>       | cinnamon willow herb | herb                | OBL                      | 3              |
| <i>Equisetum arvense</i>         | common horsetail     | herb                | FAC                      | 0              |
| <i>Erigeron annuus</i>           | annual fleabane      | herb                | FAC-                     | 1              |
| <i>Erigeron philadelphicus</i>   | marsh fleabane       | herb                | FACW                     | 3              |
| <i>Festuca pratensis</i>         | meadow fescue        | herb                | FACU-                    | *              |
| <i>Fragaria virginiana</i>       | wild strawberry      | herb                | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>    | green ash            | tree, shrub         | FACW                     | 2              |
| <i>Geum aleppicum</i>            | yellow avens         | herb                | FAC+                     | 6              |
| <i>Geum laciniatum</i>           | rough avens          | herb                | FACW                     | 2              |
| <i>Glyceria striata</i>          | fowl manna grass     | herb                | OBL                      | 4              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower   | herb                | FACW-                    | 2              |
| <i>Hesperis matronalis</i>       | Dame's rocket        | herb                | UPL                      | *              |
| <i>Hypoxis hirsuta</i>           | yellow star grass    | herb                | FAC                      | 6              |
| <i>Iris shrevei</i>              | southern blue flag   | herb                | OBL                      | 5              |
| <i>Juncus dudleyi</i>            | Dudley's rush        | herb                | FAC                      | 4              |
| <i>Juncus torreyi</i>            | Torrey's rush        | herb                | FACW                     | 3              |
| <i>Lonicera tatarica</i>         | Tatarian honeysuckle | shrub               | FACU                     | *              |

*Species list continued on next page.*

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 40 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh/Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 91.4 m (300 ft) west of IL 131 and 12.2 m (40 ft) south of Wadsworth Rd.

**SPECIES LIST** *continued*

| Scientific name                    | Common name            | Stratum       | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|------------------------|---------------|--------------------------|----------------|
| <i>Lycopus americanus</i>          | common water horehound | herb          | OBL                      | 3              |
| <i>Lythrum alatum</i>              | winged loosestrife     | herb          | OBL                      | 5              |
| <i>Lythrum salicaria</i>           | purple loosestrife     | herb          | OBL                      | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper       | woody vine    | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass      | herb          | FACW+                    | *              |
| <i>Populus deltoides</i>           | eastern cottonwood     | tree, sapling | FAC+                     | 2              |
| <i>Prunus virginiana</i>           | common chokecherry     | shrub         | FAC-                     | 3              |
| <i>Ranunculus septentrionalis</i>  | swamp buttercup        | herb          | FACW+                    | 4              |
| <i>Rhamnus cathartica</i>          | common buckthorn       | shrub         | FACU                     | *              |
| <i>Rhamnus frangula</i>            | glossy buckthorn       | shrub         | FAC+                     | *              |
| <i>Rumex crispus</i>               | curly dock             | herb          | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow    | tree          | FACW                     | 4              |
| <i>Sambucus canadensis</i>         | common elder           | shrub         | FACW-                    | 2              |
| <i>Scirpus atrovirens</i>          | dark green bulrush     | herb          | OBL                      | 4              |
| <i>Senecio pauperculus</i>         | balsam groundsel       | herb          | FAC+                     | 4              |
| <i>Solanum dulcamara</i>           | false bitterweet       | herb          | FAC                      | *              |
| <i>Solidago canadensis</i>         | Canada goldenrod       | herb          | FACU                     | 1              |
| <i>Solidago gigantea</i>           | late goldenrod         | herb          | FACW                     | 3              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail  | herb          | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail                | herb          | OBL                      | 1              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 124/40 = 3.1$$

$$FQI = \sum C/\sqrt{N} = 124/\sqrt{40} = 19.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 41 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 57.9 m (190 ft) west of IL 131 and 219.5 m (720 ft) south of Wadsworth Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>     | FACW             | herb    |
| 2. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 3. <i>Typha latifolia</i>      | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to Peotone silty clay loam  
Drainage Class: Very Poorly Drained Taxonomy: Cumulic Vertic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features   |            |           | Texture | Remarks |
|----------------|--------------|------------------|------------|-----------|---------|---------|
|                |              | Color            | Percent    | Type      |         |         |
| 0-20           | 10YR 2/1     |                  |            |           | SiCL    |         |
| 20-28          | 10YR 2/1     | 10YR 5/8         | 20%        | prominent | SiCL    |         |
| 28-35          | 2.5Y5/1      | 10YR 5/6 & N 5/0 | 30%<br>10% | prominent | H. SiCL |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a deep, low chroma matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 41 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 57.9 m (190 ft) west of IL 131 and 219.5 m (720 ft) south of Wadsworth Rd.

### HYDROLOGY

Landform: Depression

Local Relief: Concave

Inundated: Yes: X (in part) No:

Depth of standing water: NA

Depth to saturated soil: At or near surface.

Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.

Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation, Water-Stained Leaves, Water Marks

Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site partially as a drained/ditched, temporarily flooded, emergent, palustrine wetland (PEMAd).

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 41 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 57.9 m (190 ft) west of IL 131 and 219.5 m (720 ft) south of Wadsworth Rd.

**SPECIES LIST**

| Scientific name                    | Common name            | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|------------------------|-------------|--------------------------|----------------|
| <i>Acer saccharinum</i>            | silver maple           | tree        | FACW                     | 1              |
| <i>Alliaria petiolata</i>          | garlic mustard         | herb        | FAC                      | *              |
| <i>Asclepias incarnata</i>         | swamp milkweed         | herb        | OBL                      | 4              |
| <i>Aster novae-angliae</i>         | New England aster      | herb        | FACW                     | 4              |
| <i>Aster puniceus</i>              | swamp aster            | herb        | OBL                      | 7              |
| <i>Aster simplex</i>               | panicked aster         | herb        | FACW                     | 3              |
| <i>Barbarea vulgaris</i>           | winter cress           | herb        | FAC                      | *              |
| <i>Bidens frondosa</i>             | common beggar-ticks    | herb        | FACW                     | 1              |
| <i>Calystegia sepium</i>           | American bindweed      | herb        | FAC                      | 1              |
| <i>Carex lanuginosa</i>            | wooly sedge            | herb        | OBL                      | 4              |
| <i>Carex stricta</i>               | tussock sedge          | herb        | OBL                      | 5              |
| <i>Carex vulpinoidea</i>           | fox sedge              | herb        | OBL                      | 3              |
| <i>Cicuta maculata</i>             | water hemlock          | herb        | OBL                      | 4              |
| <i>Cornus obliqua</i>              | pale dogwood           | shrub       | FACW+                    | 4              |
| <i>Cornus racemosa</i>             | gray dogwood           | shrub       | FACW-                    | 2              |
| <i>Daucus carota</i>               | Queen-Anne's-lace      | herb        | UPL                      | *              |
| <i>Epilobium coloratum</i>         | cinnamon willow herb   | herb        | OBL                      | 3              |
| <i>Equisetum arvense</i>           | common horsetail       | herb        | FAC                      | 0              |
| <i>Erigeron annuus</i>             | annual fleabane        | herb        | FAC-                     | 1              |
| <i>Eupatorium serotinum</i>        | late boneset           | herb        | FAC+                     | 1              |
| <i>Fraxinus pennsylvanica</i>      | green ash              | tree, shrub | FACW                     | 2              |
| <i>Geum aleppicum</i>              | yellow avens           | herb        | FAC+                     | 6              |
| <i>Geum laciniatum</i>             | rough avens            | herb        | FACW                     | 2              |
| <i>Glyceria striata</i>            | fowl manna grass       | herb        | OBL                      | 4              |
| <i>Helianthus grosseserratus</i>   | sawtooth sunflower     | herb        | FACW-                    | 2              |
| <i>Iodanthus pinnatifidus</i>      | purple rocket          | herb        | FACW                     | 6              |
| <i>Iris shrevei</i>                | southern blue flag     | herb        | OBL                      | 5              |
| <i>Juncus dudleyi</i>              | Dudley's rush          | herb        | FAC                      | 4              |
| <i>Juncus torreyi</i>              | Torrey's rush          | herb        | FACW                     | 3              |
| <i>Lycopus americanus</i>          | common water horehound | herb        | OBL                      | 3              |
| <i>Lythrum alatum</i>              | winged loosestrife     | herb        | OBL                      | 5              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper       | woody vine  | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass      | herb        | FACW+                    | *              |
| <i>Polygonum amphibium</i>         | water smartweed        | herb        | OBL                      | 3              |

*Species list continued on next page.*

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 41 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 57.9 m (190 ft) west of IL 131 and 219.5 m (720 ft) south of Wadsworth Rd.

**SPECIES LIST** *continued*

| Scientific name                | Common name           | Stratum          | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------|-----------------------|------------------|--------------------------|----------------|
| <i>Ranunculus longirostris</i> | longbeak buttercup    | herb             | OBL                      | 6              |
| <i>Rhamnus cathartica</i>      | common buckthorn      | shrub            | FACU                     | *              |
| <i>Rhamnus frangula</i>        | glossy buckthorn      | shrub            | FAC+                     | *              |
| <i>Rorippa sylvestris</i>      | creeping yellow cress | herb             | OBL                      | *              |
| <i>Rubus occidentalis</i>      | black raspberry       | shrub            | UPL                      | 2              |
| <i>Rumex crispus</i>           | curly dock            | herb             | FAC+                     | *              |
| <i>Salix amygdaloides</i>      | peach-leaved willow   | tree             | FACW                     | 4              |
| <i>Salix nigra</i>             | black willow          | tree             | OBL                      | 3              |
| <i>Sambucus canadensis</i>     | common elder          | shrub            | FACW-                    | 2              |
| <i>Sanicula gregaria</i>       | common snakeroot      | herb             | FAC+                     | 2              |
| <i>Scirpus atrovirens</i>      | dark green bulrush    | herb             | OBL                      | 4              |
| <i>Sium suave</i>              | water parsnip         | herb             | OBL                      | 5              |
| <i>Solanum dulcamara</i>       | false bittersweet     | herb             | FAC                      | *              |
| <i>Solidago canadensis</i>     | Canada goldenrod      | herb             | FACU                     | 1              |
| <i>Solidago gigantea</i>       | late goldenrod        | herb             | FACW                     | 3              |
| <i>Typha angustifolia</i>      | narrow-leaved cattail | herb             | OBL                      | *              |
| <i>Typha latifolia</i>         | cattail               | herb             | OBL                      | 1              |
| <i>Ulmus americana</i>         | American elm          | tree, shrub      | FACW-                    | 5              |
| <i>Ulmus rubra</i>             | slippery elm          | sapling          | FAC                      | 3              |
| <i>Verbena hastata</i>         | blue vervain          | herb             | FACW+                    | 3              |
| <i>Viburnum opulus</i>         | high-bush cranberry   | shrub            | UPL                      | *              |
| <i>Vitis riparia</i>           | riverbank grape       | woody vine, herb | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 141/45 = 3.1$$

$$FQI = \sum C/\sqrt{N} = 141/\sqrt{45} = 21.0$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 42 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 3.1 m (10 ft) east of IL 131 and 15.2 m (50 ft) north of Aviation Dr.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Acer saccharinum</i>     | FACW             | tree          |
| 2. <i>Ulmus americana</i>      | FACW-            | sapling/shrub |
| 3. <i>Acer saccharinum</i>     | FACW             | herb          |
| 4. <i>Aster simplex</i>        | FACW             | herb          |
| 5. <i>Phalaris arundinacea</i> | FACW+            | herb          |

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

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to Pella silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-15           | 10YR 2/1     |                |         |           | SiL     |         |
| 15-24          | 10YR 4/2     | 10YR 5/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 42 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 3.1 m (10 ft) east of IL 131 and 15.2 m (50 ft) north of Aviation Dr.

### HYDROLOGY

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.15 m (6 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water-Stained Leaves, Water Marks  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 42 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, Zylka, and Marcum **Dates:** 28 May and 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, NW/4  
**Location:** Approximately 3.1 m (10 ft) east of IL 131 and 15.2 m (50 ft) north of Aviation Dr.

**SPECIES LIST**

| Scientific name                    | Common name               | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|---------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder                 | shrub                | FACW-                    | 1              |
| <i>Acer saccharinum</i>            | silver maple              | tree, herb           | FACW                     | 1              |
| <i>Alisma plantago-aquatica</i>    | broad-leaf water-plantain | herb                 | OBL                      | 2              |
| <i>Aster simplex</i>               | panicled aster            | herb                 | FACW                     | 3              |
| <i>Campanula americana</i>         | American bellflower       | herb                 | FAC                      | 4              |
| <i>Carex blanda</i>                | woodland sedge            | herb                 | FAC                      | 2              |
| <i>Carex cristatella</i>           | sedge                     | herb                 | FACW+                    | 3              |
| <i>Carex</i> sp.                   | sedge                     | herb                 | ----                     | --             |
| <i>Circaea lutetiana</i>           | enchanter's nightshade    | herb                 | FACU                     | 2              |
| <i>Cryptotaenia canadensis</i>     | honestwort                | herb                 | FAC                      | 1              |
| <i>Fraxinus pennsylvanica</i>      | green ash                 | shrub                | FACW                     | 2              |
| <i>Geum laciniatum</i>             | rough avens               | herb                 | FACW                     | 2              |
| <i>Glyceria striata</i>            | fowl manna grass          | herb                 | OBL                      | 4              |
| <i>Lonicera tatarica</i>           | Tatarian honeysuckle      | shrub                | FACU                     | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper          | woody vine           | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass         | herb                 | FACW+                    | *              |
| <i>Rhamnus cathartica</i>          | common buckthorn          | shrub                | FACU                     | *              |
| <i>Sium suave</i>                  | water parsnip             | herb                 | OBL                      | 5              |
| <i>Solanum dulcamara</i>           | false bittersweet         | herb                 | FAC                      | *              |
| <i>Solidago gigantea</i>           | late goldenrod            | herb                 | FACW                     | 3              |
| <i>Toxicodendron radicans</i>      | poison ivy                | woody vine           | FAC+                     | 1              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail     | herb                 | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail                   | herb                 | OBL                      | 1              |
| <i>Ulmus americana</i>             | American elm              | tree, sapling, shrub | FACW-                    | 5              |
| <i>Viburnum opulus</i>             | high-bush cranberry       | shrub                | UPL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 44/18 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 44/\sqrt{18} = 10.4$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 43 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4

**Location:** Approximately 15.2 m (50 ft) west of IL 131 and 79.3 m (260 ft) south of Beach Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
Do normal environmental conditions exist at this site? Yes: X No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No: X

**VEGETATION**

| <b>Dominant Plant Species</b> | <b>Indicator Status</b> | <b>Stratum</b> |
|-------------------------------|-------------------------|----------------|
| 1. <i>Typha angustifolia</i>  | OBL                     | herb           |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.

Drainage Class: somewhat poorly to poorly drained Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |              | Texture | Remarks |
|-------------------|--------------|----------------|--------------|---------|---------|
|                   |              | Color          | Percent Type |         |         |
| NA                |              |                |              |         |         |

**Hydric soils:** Yes: X No:

**Rationale:** A soil sample could not be obtained. Based on geomorphic position, inundation, and the lack of an obvious drainage outlet, the formation of hydric soils is likely.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 43 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** Approximately 15.2 m (50 ft) west of IL 131 and 79.3 m (260 ft) south of Beach Rd.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X No: Depth of standing water: < 0.08 m (3 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 43 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4

**Location:** Approximately 15.2 m (50 ft) west of IL 131 and 79.3 m (260 ft) south of Beach Rd.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Acer saccharinum</i>       | silver maple          | shrub   | FACW                     | 1              |
| <i>Agropyron repens</i>       | quack grass           | herb    | FACU                     | *              |
| <i>Aster simplex</i>          | panicled aster        | herb    | FACW                     | 3              |
| <i>Erigeron annuus</i>        | annual fleabane       | herb    | FAC-                     | 1              |
| <i>Euthamia graminifolia</i>  | grassleaf goldenrod   | herb    | FACW-                    | 3              |
| <i>Fraxinus pennsylvanica</i> | green ash             | shrub   | FACW                     | 2              |
| <i>Hemerocallis fulva</i>     | day lily              | herb    | UPL                      | *              |
| <i>Hordeum jubatum</i>        | squirrel-tail         | herb    | FAC+                     | *              |
| <i>Juncus dudleyi</i>         | Dudley's rush         | herb    | FAC                      | 4              |
| <i>Medicago lupulina</i>      | black medic           | herb    | FAC-                     | *              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb    | FACW+                    | *              |
| <i>Phragmites australis</i>   | common red reed       | herb    | FACW+                    | 1              |
| <i>Poa pratensis</i>          | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Populus deltoides</i>      | eastern cottonwood    | shrub   | FAC+                     | 2              |
| <i>Rumex crispus</i>          | curly dock            | herb    | FAC+                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow   | shrub   | FACW                     | 4              |
| <i>Solanum dulcamara</i>      | false bittersweet     | herb    | FAC                      | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb    | OBL                      | *              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 21/9 = 2.3$$

$$FQI = \sum C/\sqrt{N} = 21/\sqrt{9} = 7$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 44 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** East of IL 131 and north of Suddard St.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

**Dominant Plant Species**      **Indicator Status**      **Stratum**  
1. *Festuca pratensis*      FACU-      herb

Percentage of dominant species that are OBL, FACW, or FAC: 0%

**Hydrophytic vegetation:** Yes:      No:   
**Rationale:** Less than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam, revised to undetermined.  
Drainage Class: NA      Taxonomy: NA

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |      | Texture | Remarks |
|-------------------|--------------|----------------|---------|------|---------|---------|
|                   |              | Color          | Percent | Type |         |         |
| NA                |              |                |         |      |         |         |

**Hydric soils:** Yes:      No:   
**Rationale:** A soil sample could not be obtained since the site was fenced-off and on airport grounds. A similar topographic area immediately outside the fence was not readily apparent at the time of the visit. The location did not appear to be wet for any extended period of time.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 44 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** East of IL 131 and north of Suddard St.

**HYDROLOGY**

Landform: Field Local Relief: None  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.6 m (24 in)  
Overview of hydrological flow through the system: The primary hydrologic input to this site is precipitation. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: None.  
Secondary indicators: None.

**Wetland hydrology:** Yes: No: X  
**Rationale:** There is no field evidence to suggest that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: No: X  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are not present at this site; therefore, this site is not a wetland. The NWI identified this site as excavated, intermittently exposed, unconsolidated bottom, palustrine wetland (PUBGx).

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 44 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Non-native Grassland  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** East of IL 131 and north of Suddard St.

**SPECIES LIST**

| Scientific name             | Common name           | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|-----------------------------|-----------------------|---------|--------------------------|----------------|
| <i>Bromus inermis</i>       | awnless brome grass   | herb    | UPL                      | *              |
| <i>Coronilla varia</i>      | crown vetch           | herb    | UPL                      | *              |
| <i>Festuca pratensis</i>    | meadow fescue         | herb    | FACU-                    | *              |
| <i>Medicago lupulina</i>    | black medic           | herb    | FAC-                     | *              |
| <i>Plantago lanceolata</i>  | lance-leaved plantain | herb    | FAC                      | *              |
| <i>Poa pratensis</i>        | Kentucky bluegrass    | herb    | FAC-                     | *              |
| <i>Rumex crispus</i>        | curly dock            | herb    | FAC+                     | *              |
| <i>Solidago canadensis</i>  | Canada goldenrod      | herb    | FACU                     | 1              |
| <i>Taraxacum officinale</i> | dandelion             | herb    | FACU                     | *              |
| <i>Trifolium pratense</i>   | red clover            | herb    | FACU+                    | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 1/1 = 1$$

$$FQI = \sum C/\sqrt{N} = 1/\sqrt{1} = 1$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 45 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** Both sides of IL 131, just north of Townline Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Calamagrostis canadensis</i> | OBL              | herb    |
| 2. <i>Carex lanuginosa</i>         | OBL              | herb    |
| 3. <i>Typha latifolia</i>          | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features         |         |           | Texture | Remarks |
|----------------|--------------|------------------------|---------|-----------|---------|---------|
|                |              | Color                  | Percent | Type      |         |         |
| 0-5            | 10YR 3/2     | 10YR 3/6<br>& 10YR 4/2 | 10%     | prominent | SiL     |         |
| 5-18           | 10YR 2/1     | 10YR 3/4               | 10%     | prominent | SiCL    |         |
| 18-24          | 10YR 5/2     | 10YR 4/6               | 30%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a dark surface with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 45 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** Both sides of IL 131, just north of Townline Rd.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output. A culvert beneath IL 131 connects the two parts of this site.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 45 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 46 N., R. 12 E., Sect. 31, SW/4  
**Location:** Both sides of IL 131, just north of Townline Rd.

**SPECIES LIST**

| Scientific name                  | Common name        | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|--------------------|------------|--------------------------|----------------|
| <i>Agropyron repens</i>          | quack grass        | herb       | FACU                     | *              |
| <i>Agrostis alba</i>             | red top            | herb       | FACW                     | 0              |
| <i>Aster novae-angliae</i>       | New England aster  | herb       | FACW                     | 4              |
| <i>Barbarea vulgaris</i>         | winter cress       | herb       | FAC                      | *              |
| <i>Calamagrostis canadensis</i>  | bluejoint grass    | herb       | OBL                      | 3              |
| <i>Carex lanuginosa</i>          | wooly sedge        | herb       | OBL                      | 4              |
| <i>Carex vulpinoidea</i>         | fox sedge          | herb       | OBL                      | 3              |
| <i>Cirsium arvense</i>           | Canada thistle     | herb       | FACU                     | *              |
| <i>Dipsacus laciniatus</i>       | cut-leaved teasel  | herb       | UPL                      | *              |
| <i>Eleocharis erythropoda</i>    | spike rush         | herb       | OBL                      | 3              |
| <i>Equisetum arvense</i>         | common horsetail   | herb       | FAC                      | 0              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower | herb       | FACW-                    | 2              |
| <i>Hordeum jubatum</i>           | squirrel-tail      | herb       | FAC+                     | *              |
| <i>Juncus dudleyi</i>            | Dudley's rush      | herb       | FAC                      | 4              |
| <i>Lythrum salicaria</i>         | purple loosestrife | herb       | OBL                      | *              |
| <i>Phalaris arundinacea</i>      | reed canary grass  | herb       | FACW+                    | *              |
| <i>Phragmites australis</i>      | common red reed    | herb       | FACW+                    | 1              |
| <i>Poa pratensis</i>             | Kentucky bluegrass | herb       | FAC-                     | *              |
| <i>Rumex crispus</i>             | curly dock         | herb       | FAC+                     | *              |
| <i>Scirpus atrovirens</i>        | dark green bulrush | herb       | OBL                      | 4              |
| <i>Scirpus tabernaemontanii</i>  | great bulrush      | herb       | OBL                      | 4              |
| <i>Solidago canadensis</i>       | Canada goldenrod   | herb       | FACU                     | 1              |
| <i>Toxicodendron radicans</i>    | poison ivy         | woody vine | FAC+                     | 1              |
| <i>Typha latifolia</i>           | cattail            | herb       | OBL                      | 1              |
| <i>Vitis riparia</i>             | riverbank grape    | woody vine | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 37/16 = 2.3$$

$$FQI = \sum C/\sqrt{N} = 37/\sqrt{16} = 9.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 46 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4

**Location:** Approximately 134.1 m (440 ft) east of IL 131 and 12.2 m (40 ft) south of Townline Rd.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Agrostis alba</i>          | FACW             | herb    |
| 2. <i>Eleocharis erythropoda</i> | OBL              | herb    |
| 3. <i>Juncus dudleyi</i>         | FAC              | herb    |
| 4. <i>Scirpus atrovirens</i>     | OBL              | herb    |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined

Drainage Class: Poorly Drained

Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-5            | 10YR 2/1     |                |         |           | M       |         |
| 5-18           | 10YR 4/2     | 10YR 4/4       | 30%     | prominent | L. SiCL |         |
| 18-24          | 10Y 5/2      | 10YR 4/6       | 30%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has an organic surface horizon underlain by a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A10 (2 cm muck) and F3 (depleted matrix) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 46 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 134.1 m (440 ft) east of IL 131 and 12.2 m (40 ft) south of  
Townline Rd.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Saturation, Algal Mat or Crust  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows, Surface Soil Cracks

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 46 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4

**Location:** Approximately 134.1 m (440 ft) east of IL 131 and 12.2 m (40 ft) south of Townline Rd.

**SPECIES LIST**

| Scientific name                    | Common name               | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|---------------------------|------------|--------------------------|----------------|
| <i>Agrostis alba</i>               | red top                   | herb       | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i>    | broad-leaf water-plantain | herb       | OBL                      | 2              |
| <i>Alopecurus carolinianus</i>     | annual foxtail            | herb       | FACW                     | 0              |
| <i>Carex granularis</i>            | meadow sedge              | herb       | FACW+                    | 3              |
| <i>Carex lanuginosa</i>            | wooly sedge               | herb       | OBL                      | 4              |
| <i>Carex molesta</i>               | sedge                     | herb       | FAC                      | 2              |
| <i>Carex vulpinoidea</i>           | fox sedge                 | herb       | OBL                      | 3              |
| <i>Eleocharis compressa</i>        | flat-stemmed spike rush   | herb       | OBL                      | 7              |
| <i>Eleocharis erythropoda</i>      | spike rush                | herb       | OBL                      | 3              |
| <i>Eleocharis obtusa</i>           | blunt spike rush          | herb       | OBL                      | 2              |
| <i>Equisetum arvense</i>           | common horsetail          | herb       | FAC                      | 0              |
| <i>Fraxinus pennsylvanica</i>      | green ash                 | tree       | FACW                     | 2              |
| <i>Fraxinus pennsylvanica</i>      | green ash                 | tree       | FACW                     | 2              |
| <i>Geum aleppicum</i>              | yellow avens              | herb       | FAC+                     | 6              |
| <i>Glechoma hederacea</i>          | ground ivy                | herb       | FACU                     | *              |
| <i>Juncus dudleyi</i>              | Dudley's rush             | herb       | FAC                      | 4              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper          | woody vine | FAC-                     | 2              |
| <i>Penstemon digitalis</i>         | foxglove beard-tongue     | herb       | FAC-                     | 4              |
| <i>Plantago rugelii</i>            | red-stalked plantain      | herb       | FAC                      | 0              |
| <i>Rhamnus frangula</i>            | glossy buckthorn          | shrub      | FAC+                     | *              |
| <i>Rumex crispus</i>               | curly dock                | herb       | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow       | tree       | FACW                     | 4              |
| <i>Scirpus atrovirens</i>          | dark green bulrush        | herb       | OBL                      | 4              |
| <i>Toxicodendron radicans</i>      | poison ivy                | woody vine | FAC+                     | 1              |
| <i>Trifolium pratense</i>          | red clover                | herb       | FACU+                    | *              |
| <i>Typha latifolia</i>             | cattail                   | herb       | OBL                      | 1              |
| <i>Ulmus americana</i>             | American elm              | tree       | FACW-                    | 5              |
| <i>Veronica peregrina</i>          | purslane speedwell        | herb       | FACW+                    | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 61/24 = 2.5$$

$$FQI = \sum C/\sqrt{N} = 61/\sqrt{24} = 12.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 47 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 137.2 m (450 ft) east of IL 131 and 76.2 m (250 ft) south of Townline Rd.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species         | Indicator Status | Stratum |
|--------------------------------|------------------|---------|
| 1. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 2. <i>Scirpus atrovirens</i>   | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined  
 Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features      |         |           | Texture | Remarks |
|----------------|--------------|---------------------|---------|-----------|---------|---------|
|                |              | Color               | Percent | Type      |         |         |
| 0-2            | 10YR 2/1     |                     |         |           | M       |         |
| 2-8            | 10YR 2/1     |                     |         |           | L. SiCL |         |
| 8-15           | 10YR 4/1     | 10YR 4/4            | 20%     | prominent | SiCL    |         |
| 15-24          | N 5/0        | 2.5Y 5/3 & 10YR 5/6 | 30%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has an organic surface horizon underlain by a depleted matrix with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A10 (2 cm muck) and F3 (depleted matrix) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 47 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 137.2 m (450 ft) east of IL 131 and 76.2 m (250 ft) south of Townline Rd.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.08 m (3 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Saturation  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 47 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4

**Location:** Approximately 137.2 m (450 ft) east of IL 131 and 76.2 m (250 ft) south of Townline Rd.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|---------|--------------------------|----------------|
| <i>Agrimonia parviflora</i>     | swamp agrimony            | herb    | FAC+                     | 5              |
| <i>Agrostis alba</i>            | red top                   | herb    | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb    | OBL                      | 2              |
| <i>Alopecurus carolinianus</i>  | annual foxtail            | herb    | FACW                     | 0              |
| <i>Carex cristatella</i>        | sedge                     | herb    | FACW+                    | 3              |
| <i>Carex granularis</i>         | meadow sedge              | herb    | FACW+                    | 3              |
| <i>Carex normalis</i>           | sedge                     | herb    | FACW                     | 4              |
| <i>Carex vulpinoidea</i>        | fox sedge                 | herb    | OBL                      | 3              |
| <i>Chenopodium album</i>        | lamb's quarters           | herb    | FAC-                     | *              |
| <i>Epilobium coloratum</i>      | cinnamon willow herb      | herb    | OBL                      | 3              |
| <i>Equisetum arvense</i>        | common horsetail          | herb    | FAC                      | 0              |
| <i>Geum canadense</i>           | white avens               | herb    | FAC                      | 2              |
| <i>Geum laciniatum</i>          | rough avens               | herb    | FACW                     | 2              |
| <i>Lythrum salicaria</i>        | purple loosestrife        | herb    | OBL                      | *              |
| <i>Oxalis stricta</i>           | yellow wood sorrel        | herb    | FACU                     | 0              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb    | FACW+                    | *              |
| <i>Poa pratensis</i>            | Kentucky bluegrass        | herb    | FAC-                     | *              |
| <i>Potentilla simplex</i>       | common cinquefoil         | herb    | FACU-                    | 3              |
| <i>Prunella vulgaris</i>        | self-heal                 | herb    | FAC                      | *              |
| <i>Rhamnus cathartica</i>       | common buckthorn          | shrub   | FACU                     | *              |
| <i>Scirpus atrovirens</i>       | dark green bulrush        | herb    | OBL                      | 4              |
| <i>Solidago gigantea</i>        | late goldenrod            | herb    | FACW                     | 3              |
| <i>Trifolium hybridum</i>       | alsike clover             | herb    | FAC-                     | *              |
| <i>Ulmus americana</i>          | American elm              | tree    | FACW-                    | 5              |
| <i>Veronica peregrina</i>       | purslane speedwell        | herb    | FACW+                    | 0              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 42/18 = 2.3$$

$$FQI = \sum C/\sqrt{N} = 42/\sqrt{18} = 9.9$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 48 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Just east of IL 131 and directly across from Eastwood Rd.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

**Dominant Plant Species**      **Indicator Status**      **Stratum**  
1. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to undetermined.  
Drainage Class: Poorly Drained      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-5               | 10YR 2/1     |                |         |           | SiCL    |         |
| 5-12              | 10YR 6/1     | 10YR 4/4       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a dark surface. These characteristics are evidence of a hydric soil. This soil meets the F3 (depleted matrix) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 48 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Just east of IL 131 and directly across from Eastwood Rd.

**HYDROLOGY**

Landform: Depression (retention basin) Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.08 m (3 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 48 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Just east of IL 131 and directly across from Eastwood Rd.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>           | box elder             | shrub                | FACW-                    | 1              |
| <i>Acer saccharinum</i>       | silver maple          | shrub                | FACW                     | 1              |
| <i>Calystegia sepium</i>      | American bindweed     | herb                 | FAC                      | 1              |
| <i>Carex granularis</i>       | meadow sedge          | herb                 | FACW+                    | 3              |
| <i>Convolvulus arvensis</i>   | field bindweed        | herb                 | UPL                      | *              |
| <i>Erigeron annuus</i>        | annual fleabane       | herb                 | FAC-                     | 1              |
| <i>Euthamia graminifolia</i>  | grassleaf goldenrod   | herb                 | FACW-                    | 3              |
| <i>Fragaria virginiana</i>    | wild strawberry       | herb                 | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i> | green ash             | shrub                | FACW                     | 2              |
| <i>Geum laciniatum</i>        | rough avens           | herb                 | FACW                     | 2              |
| <i>Lemna minor</i>            | common duckweed       | herb                 | OBL                      | 3              |
| <i>Lythrum salicaria</i>      | purple loosestrife    | herb                 | OBL                      | *              |
| <i>Monarda fistulosa</i>      | wild bergamot         | herb                 | FACU                     | 4              |
| <i>Oenothera biennis</i>      | evening primrose      | herb                 | FACU                     | 1              |
| <i>Penstemon digitalis</i>    | foxglove beard-tongue | herb                 | FAC-                     | 4              |
| <i>Poa pratensis</i>          | Kentucky bluegrass    | herb                 | FAC-                     | *              |
| <i>Prunus virginiana</i>      | common chokecherry    | shrub                | FAC-                     | 3              |
| <i>Robinia pseudoacacia</i>   | black locust          | sapling, shrub       | FACU-                    | *              |
| <i>Rumex crispus</i>          | curly dock            | herb                 | FAC+                     | *              |
| <i>Salix amygdaloides</i>     | peach-leaved willow   | tree, sapling, shrub | FACW                     | 4              |
| <i>Scirpus atrovirens</i>     | dark green bulrush    | herb                 | OBL                      | 4              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb                 | FACU                     | 1              |
| <i>Solidago gigantea</i>      | late goldenrod        | herb                 | FACW                     | 3              |
| <i>Taraxacum officinale</i>   | dandelion             | herb                 | FACU                     | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb                 | OBL                      | *              |
| <i>Verbena hastata</i>        | blue vervain          | herb                 | FACW+                    | 3              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 46/19 = 2.4$$

$$FQI = \sum C/\sqrt{N} = 46/\sqrt{19} = 10.6$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 49 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 4.6 m (15 ft) west and directly across from Blossom Ave.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species         | Indicator Status | Stratum |
|--------------------------------|------------------|---------|
| 1. <i>Acer negundo</i>         | FACW-            | herb    |
| 2. <i>Gleditsia tricanthos</i> | FAC              | herb    |
| 3. <i>Ulmus americana</i>      | FACW-            | herb    |
| 4. <i>Rhamnus cathartica</i>   | FACU             | herb    |

Percentage of dominant species that are OBL, FACW, or FAC: 75%

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

**SOILS**

Series and phase: NRCS mapped as Ozaukee silt loam, revised to Ashkum silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks     |
|-------------------|--------------|----------------|---------|-----------|---------|-------------|
|                   |              | Color          | Percent | Type      |         |             |
| 0-10              | 10YR 2/1     |                |         |           |         |             |
| 10-15             | 10YR 2/1     | 7.5YR 3/4      | 10%     | prominent |         |             |
| 15-20             | 10YR 4/1     | 7.5YR 3/4      | 20%     | prominent |         | concretions |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a deep low chroma matrix. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 49 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 4.6 m (15 ft) west and directly across from Blossom Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.5 m (18 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Algal Crust, Water-Stained Leaves, Drift Deposits  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 49 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 4.6 m (15 ft) west and directly across from Blossom Ave.

**SPECIES LIST**

| Scientific name               | Common name          | Stratum        | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|----------------------|----------------|--------------------------|----------------|
| <i>Acer negundo</i>           | box elder            | tree, shrub    | FACW-                    | 1              |
| <i>Agropyron repens</i>       | quack grass          | herb           | FACU                     | *              |
| <i>Aster simplex</i>          | panicked aster       | herb           | FACW                     | 3              |
| <i>Glechoma hederacea</i>     | ground ivy           | herb           | FACU                     | *              |
| <i>Gleditsia triacanthos</i>  | honey locust         | tree           | FAC                      | 2              |
| <i>Hemerocallis fulva</i>     | day lily             | herb           | UPL                      | *              |
| <i>Lonicera tatarica</i>      | Tatarian honeysuckle | shrub          | FACU                     | *              |
| <i>Morus alba</i>             | white mulberry       | tree           | FAC                      | *              |
| <i>Phalaris arundinacea</i>   | reed canary grass    | herb           | FACW+                    | *              |
| <i>Poa pratensis</i>          | Kentucky bluegrass   | herb           | FAC-                     | *              |
| <i>Rhamnus cathartica</i>     | common buckthorn     | sapling, shrub | FACU                     | *              |
| <i>Robinia pseudoacacia</i>   | black locust         | tree           | FACU-                    | *              |
| <i>Rubus occidentalis</i>     | black raspberry      | shrub          | UPL                      | 2              |
| <i>Solidago canadensis</i>    | Canada goldenrod     | herb           | FACU                     | 1              |
| <i>Taraxacum officinale</i>   | dandelion            | herb           | FACU                     | *              |
| <i>Toxicodendron radicans</i> | poison ivy           | woody vine     | FAC+                     | 1              |
| <i>Ulmus americana</i>        | American elm         | tree           | FACW-                    | 5              |
| <i>Vitis riparia</i>          | riverbank grape      | woody vine     | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 17/8 = 2.1$$

$$FQI = \sum C/\sqrt{N} = 17/\sqrt{8} = 6.0$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 50 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland/Marsh

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4

**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 9.1 m (30 ft) north of Paddock Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Fraxinus pennsylvanica</i> | FACW             | tree    |
| 2. <i>Populus deltoides</i>      | FAC+             | tree    |
| 3. <i>Salix amygdaloides</i>     | FACW             | tree    |
| 4. <i>Typha angustifolia</i>     | OBL              | herb    |

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

**Hydrophytic vegetation:** Yes: X No:

**Rationale:** More than 50% of the dominants are OBL, FACW, or FAC.

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to Pella silty clay loam

Drainage Class: Poorly Drained

Taxonomy: Typic Endoaquoll

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|-------------------|--------------|----------------|---------|-----------|---------|---------|
|                   |              | Color          | Percent | Type      |         |         |
| 0-10              | 10YR 2/1     |                |         |           | SiL     |         |
| 10-20             | 10YR 4/1     |                |         |           | SiCL    |         |
| 20-35             | 10YR 6/1     | 10YR 5/6       | 40%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes: X No:

**Rationale:** This soil has a depleted matrix with redox concentrations below a dark surface. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 50 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 9.1 m (30 ft) north of Paddock Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.3 m (12 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Water Marks, Water-Stained Leaves  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as semipermanently flooded, aquatic bed, palustrine wetland (PABF).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 50 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Forested Wetland/Marsh

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4

**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 9.1 m (30 ft) north of Paddock Ave.

**SPECIES LIST**

| Scientific name                  | Common name            | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|----------------------------------|------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>              | box elder              | tree, sapling        | FACW-                    | 1              |
| <i>Agrostis alba</i>             | red top                | herb                 | FACW                     | 0              |
| <i>Aster puniceus</i>            | swamp aster            | herb                 | OBL                      | 7              |
| <i>Aster simplex</i>             | panicled aster         | herb                 | FACW                     | 3              |
| <i>Barbarea vulgaris</i>         | winter cress           | herb                 | FAC                      | *              |
| <i>Boehmeria cylindrica</i>      | false nettle           | herb                 | OBL                      | 3              |
| <i>Carex cristatella</i>         | sedge                  | herb                 | FACW+                    | 3              |
| <i>Carex lanuginosa</i>          | wooly sedge            | herb                 | OBL                      | 4              |
| <i>Carex vulpinoidea</i>         | fox sedge              | herb                 | OBL                      | 3              |
| <i>Eleocharis erythropoda</i>    | spike rush             | herb                 | OBL                      | 3              |
| <i>Eupatorium serotinum</i>      | late boneset           | herb                 | FAC+                     | 1              |
| <i>Fraxinus pennsylvanica</i>    | green ash              | tree, sapling, shrub | FACW                     | 2              |
| <i>Geum aleppicum</i>            | yellow avens           | herb                 | FAC+                     | 6              |
| <i>Geum laciniatum</i>           | rough avens            | herb                 | FACW                     | 2              |
| <i>Glyceria striata</i>          | fowl manna grass       | herb                 | OBL                      | 4              |
| <i>Helianthus grosseserratus</i> | sawtooth sunflower     | herb                 | FACW-                    | 2              |
| <i>Hemerocallis fulva</i>        | day lily               | herb                 | UPL                      | *              |
| <i>Iris shrevei</i>              | southern blue flag     | herb                 | OBL                      | 5              |
| <i>Juncus dudleyi</i>            | Dudley's rush          | herb                 | FAC                      | 4              |
| <i>Lemna minor</i>               | common duckweed        | herb                 | OBL                      | 3              |
| <i>Lycopus americanus</i>        | common water horehound | herb                 | OBL                      | 3              |
| <i>Pastinaca sativa</i>          | parsnip                | herb                 | UPL                      | *              |
| <i>Penstemon digitalis</i>       | foxglove beard-tongue  | herb                 | FAC-                     | 4              |
| <i>Phalaris arundinacea</i>      | reed canary grass      | herb                 | FACW+                    | *              |
| <i>Populus deltoides</i>         | eastern cottonwood     | tree                 | FAC+                     | 2              |
| <i>Quercus macrocarpa</i>        | burr oak               | tree                 | FAC-                     | 5              |
| <i>Rhamnus cathartica</i>        | common buckthorn       | shrub                | FACU                     | *              |
| <i>Rhamnus frangula</i>          | glossy buckthorn       | shrub                | FAC+                     | *              |
| <i>Ribes americanum</i>          | wild black current     | shrub                | FACW                     | 5              |
| <i>Salix amygdaloides</i>        | peach-leaved willow    | tree                 | FACW                     | 4              |
| <i>Salix exigua</i>              | sandbar willow         | shrub                | OBL                      | 1              |
| <i>Scirpus atrovirens</i>        | dark green bulrush     | herb                 | OBL                      | 4              |
| <i>Sium suave</i>                | water parsnip          | herb                 | OBL                      | 5              |
| <i>Solanum dulcamara</i>         | false bittersweet      | herb                 | FAC                      | *              |

Species list continued on next page.

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 50 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland/Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, NW/4  
**Location:** Approximately 3.1 m (10 ft) west of IL 131 and 9.1 m (30 ft) north of Paddock Ave.

**SPECIES LIST** *continued*

| Scientific name               | Common name           | Stratum        | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|----------------|--------------------------|----------------|
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb           | FACU                     | 1              |
| <i>Symplocarpus foetidus</i>  | skunk cabbage         | herb           | OBL                      | 8              |
| <i>Toxicodendron radicans</i> | poison ivy            | woody vine     | FAC+                     | 1              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb           | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb           | OBL                      | 1              |
| <i>Ulmus americana</i>        | American elm          | sapling, shrub | FACW-                    | 5              |
| <i>Verbena hastata</i>        | blue vervain          | herb           | FACW+                    | 3              |
| <i>Vitis riparia</i>          | riverbank grape       | woody vine     | FACW-                    | 2              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 110/34 = 3.2$$

$$FQI = \sum C/\sqrt{N} = 110/\sqrt{34} = 18.9$$

**IEPA CASE SPECIFIC WATER QUALITY CERTIFICATION**

This site requires IEPA Case Specific Water Quality Certification due to the presence of *Quercus macrocarpa*.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 51 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 50 m (164 ft) south of Graves Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
 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. <i>Agrostis alba</i>        | FACW             | herb    |
| 2. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 3. <i>Typha angustifolia</i>   | OBL              | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam and Beecher silt loam, revised to undetermined.

Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features      |           |          | Texture | Remarks |
|----------------|--------------|---------------------|-----------|----------|---------|---------|
|                |              | Color               | Percent   | Type     |         |         |
| 0-15           | 7.5YR 2.5/1  | 5YR 3/4 & 7.5YR 4/1 | 5%<br>10% | distinct | SiCL    |         |
| 15-20          | 10YR 4/2     | 10YR 5/6            | 20%       | distinct | SiCL    | pebbles |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a dark surface with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 51 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 50 m (164 ft) south of Graves Ave.

**HYDROLOGY**

Landform: Depression

Local Relief: Concave

Inundated: Yes: No: X

Depth of standing water: NA

Depth to saturated soil: 0.3 m (12 in)

Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.

Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Saturation

Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 51 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 50 m (164 ft) south of Graves Ave.

**SPECIES LIST**

| Scientific name                      | Common name            | Stratum        | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------------|------------------------|----------------|--------------------------|----------------|
| <i>Agastache nepetoides</i>          | yellow giant hyssop    | herb           | FACU                     | 4              |
| <i>Agrostis alba</i>                 | red top                | herb           | FACW                     | 0              |
| <i>Aster simplex</i>                 | panicled aster         | herb           | FACW                     | 3              |
| <i>Carex stricta</i>                 | tussock sedge          | herb           | OBL                      | 5              |
| <i>Cirsium arvense</i>               | Canada thistle         | herb           | FACU                     | *              |
| <i>Cornus racemosa</i>               | gray dogwood           | shrub          | FACW-                    | 2              |
| <i>Eleocharis erythropoda</i>        | spike rush             | herb           | OBL                      | 3              |
| <i>Epilobium coloratum</i>           | cinnamon willow herb   | herb           | OBL                      | 3              |
| <i>Fraxinus pennsylvanica</i>        | green ash              | sapling, shrub | FACW                     | 2              |
| <i>Geum aleppicum</i>                | yellow avens           | herb           | FAC+                     | 6              |
| <i>Glechoma hederacea</i>            | ground ivy             | herb           | FACU                     | *              |
| <i>Helianthus grosseserratus</i>     | sawtooth sunflower     | herb           | FACW-                    | 2              |
| <i>Lycopus americanus</i>            | common water horehound | herb           | OBL                      | 3              |
| <i>Lythrum salicaria</i>             | purple loosestrife     | herb           | OBL                      | *              |
| <i>Mentha arvensis villosa</i>       | field mint             | herb           | FACW                     | 4              |
| <i>Parthenocissus quinquefolia</i>   | Virginia creeper       | woody vine     | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>          | reed canary grass      | herb           | FACW+                    | *              |
| <i>Poa pratensis</i>                 | Kentucky bluegrass     | herb           | FAC-                     | *              |
| <i>Populus deltoides</i>             | eastern cottonwood     | sapling, shrub | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>            | common buckthorn       | shrub          | FACU                     | *              |
| <i>Rhamnus frangula</i>              | glossy buckthorn       | shrub          | FAC+                     | *              |
| <i>Rorippa islandica fernaldiana</i> | marsh yellow cress     | herb           | OBL                      | 4              |
| <i>Sambucus canadensis</i>           | common elder           | shrub          | FACW-                    | 2              |
| <i>Scirpus atrovirens</i>            | dark green bulrush     | herb           | OBL                      | 4              |
| <i>Solidago canadensis</i>           | Canada goldenrod       | herb           | FACU                     | 1              |
| <i>Solidago gigantea</i>             | late goldenrod         | herb           | FACW                     | 3              |
| <i>Typha angustifolia</i>            | narrow-leaved cattail  | herb           | OBL                      | *              |
| <i>Ulmus americana</i>               | American elm           | tree           | FACW-                    | 5              |
| <i>Vitis riparia</i>                 | riverbank grape        | woody vine     | FACW-                    | 2              |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 62/21 = 3$$

$$FQI = \sum C/\sqrt{N} = 62/\sqrt{21} = 13.5$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 52 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 73.2 m (240 ft) south of Graves Ave.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
Do normal environmental conditions exist at this site? Yes:  No:  
Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| Dominant Plant Species           | Indicator Status | Stratum |
|----------------------------------|------------------|---------|
| 1. <i>Acer saccharinum</i>       | FACW             | herb    |
| 2. <i>Fraxinus pennsylvanica</i> | FACW             | herb    |
| 3. <i>Ulmus americana</i>        | FACW-            | herb    |
| 4. <i>Fraxinus pennsylvanica</i> | FACW             | herb    |
| 5. <i>Rhamnus cathartica</i>     | FACU             | herb    |
| 6. <i>Aster simplex</i>          | FACW             | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth (inches) | Matrix Color | Redox Features         |           |          | Texture | Remarks |
|----------------|--------------|------------------------|-----------|----------|---------|---------|
|                |              | Color                  | Percent   | Type     |         |         |
| 0-15           | 7.5YR 2.5/1  | 5YR 3/4 &<br>7.5YR 4/1 | 5%<br>10% | distinct | SiCL    |         |
| 15-20          | 10YR 4/2     | 10YR 5/6               | 20%       | distinct | SiCL    | pebbles |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a dark surface with redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the F6 (redox dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 52 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 73.2 m (240 ft) south of Graves Ave.

**HYDROLOGY**

Landform: Depression Local Relief: Concave  
Inundated: Yes No: X Depth of standing water: NA  
Depth to saturated soil: < 0.3 m (12 in)  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration and drainage via a culvert under IL 131 to Site 53 are the major outputs.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation, Drift Deposits, Water Marks, Sediment Deposits  
Secondary indicators: Geomorphic Position (depression), Crayfish Burrows

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 52 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Forested Wetland  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 3.7 m (12 ft) east of IL 131 and 73.2 m (240 ft) south of Graves Ave.

**SPECIES LIST**

| Scientific name                    | Common name          | Stratum           | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|----------------------|-------------------|--------------------------|----------------|
| <i>Acer saccharinum</i>            | silver maple         | tree, shrub, herb | FACW                     | 1              |
| <i>Aster simplex</i>               | panicked aster       | herb              | FACW                     | 3              |
| <i>Carex vulpinoidea</i>           | fox sedge            | herb              | OBL                      | 3              |
| <i>Fraxinus pennsylvanica</i>      | green ash            | tree, shrub, herb | FACW                     | 2              |
| <i>Geum laciniatum</i>             | rough avens          | herb              | FACW                     | 2              |
| <i>Lonicera tatarica</i>           | Tatarian honeysuckle | shrub             | FACU                     | *              |
| <i>Oxalis stricta</i>              | yellow wood sorrel   | herb              | FACU                     | 0              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper     | woody vine        | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass    | herb              | FACW+                    | *              |
| <i>Rhamnus cathartica</i>          | common buckthorn     | shrub             | FACU                     | *              |
| <i>Ulmus americana</i>             | American elm         | tree, shrub       | FACW-                    | 5              |
| <i>Viburnum opulus</i>             | high-bush cranberry  | shrub             | UPL                      | *              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 18/8 = 2.3$$

$$FQI = \sum C/\sqrt{N} = 18/\sqrt{8} = 6.4$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 53 (page 1 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 30.5 m (100 ft) west of IL 131 and 73.2 m (240 ft) south of Graves Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. <i>Equisetum arvense</i>    | FAC              | herb    |
| 2. <i>Phalaris arundinacea</i> | FACW+            | herb    |
| 3. <i>Solidago canadensis</i>  | FACU             | herb    |

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

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

**SOILS**

Series and phase: NRCS mapped as Ashkum sitly clay loam, revised to Pella silty clay loam  
Drainage Class: Poorly Drained Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-4            | 10YR 2/1     |                |         |           | SiL     |         |
| 4-9            | 10YR 2/1     | 5YR 3/4        | 20%     | prominent | SiCL    |         |
| 9-14           | 10Y 5/1      | 10YR 4/6       | 20%     | prominent | SiCL    | pebbles |
| 14-18          | N 5/0        | 10YR 4/4       | 10%     | prominent | SiCL    | pebbles |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix below a dark surface, both containing redox concentrations. These characteristics are evidence of a hydric soil. This soil meets the A11 (depleted below dark surface) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 53 (page 2 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Wet Meadow  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 30.5 m (100 ft) west of IL 131 and 73.2 m (240 ft) south of Graves Ave.

**HYDROLOGY**

Landform: Floodplain Local Relief: None  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.5 m (18 in)  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and streamflow via a culvert under IL 131 from Site 52. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Sediment Deposits  
Secondary indicators: Geomorphic Position (floodplain)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
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**ROUTINE ONSITE WETLAND DETERMINATION**

Site 53 (page 3 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 30.5 m (100 ft) west of IL 131 and 73.2 m (240 ft) south of Graves Ave.

**SPECIES LIST**

| Scientific name                      | Common name               | Stratum     | Wetland indicator status | C <sup>Ψ</sup> |
|--------------------------------------|---------------------------|-------------|--------------------------|----------------|
| <i>Acer negundo</i>                  | box elder                 | tree        | FACW-                    | 1              |
| <i>Acer saccharinum</i>              | silver maple              | tree, shrub | FACW                     | 1              |
| <i>Agrostis alba</i>                 | red top                   | herb        | FACW                     | 0              |
| <i>Alisma plantago-aquatica</i>      | broad-leaf water-plantain | herb        | OBL                      | 2              |
| <i>Alliaria petiolata</i>            | garlic mustard            | herb        | FAC                      | *              |
| <i>Asclepias incarnata</i>           | swamp milkweed            | herb        | OBL                      | 4              |
| <i>Asclepias syriaca</i>             | common milkweed           | herb        | UPL                      | 0              |
| <i>Aster puniceus</i>                | swamp aster               | herb        | OBL                      | 7              |
| <i>Barbarea vulgaris</i>             | winter cress              | herb        | FAC                      | *              |
| <i>Carex cristatella</i>             | sedge                     | herb        | FACW+                    | 3              |
| <i>Carex molesta</i>                 | sedge                     | herb        | FAC                      | 2              |
| <i>Carex stricta</i>                 | tussock sedge             | herb        | OBL                      | 5              |
| <i>Carex vulpinoidea</i>             | fox sedge                 | herb        | OBL                      | 3              |
| <i>Cirsium arvense</i>               | Canada thistle            | herb        | FACU                     | *              |
| <i>Eleocharis erythropoda</i>        | spike rush                | herb        | OBL                      | 3              |
| <i>Equisetum arvense</i>             | common horsetail          | herb        | FAC                      | 0              |
| <i>Erigeron annuus</i>               | annual fleabane           | herb        | FAC-                     | 1              |
| <i>Euthamia graminifolia</i>         | grassleaf goldenrod       | herb        | FACW-                    | 3              |
| <i>Fragaria virginiana</i>           | wild strawberry           | herb        | FAC-                     | 2              |
| <i>Fraxinus pennsylvanica</i>        | green ash                 | shrub       | FACW                     | 2              |
| <i>Geum aleppicum</i>                | yellow avens              | herb        | FAC+                     | 6              |
| <i>Geum canadense</i>                | white avens               | herb        | FAC                      | 2              |
| <i>Geum laciniatum</i>               | rough avens               | herb        | FACW                     | 2              |
| <i>Helianthus grosseserratus</i>     | sawtooth sunflower        | herb        | FACW-                    | 2              |
| <i>Juncus dudleyi</i>                | Dudley's rush             | herb        | FAC                      | 4              |
| <i>Lonicera tatarica</i>             | Tatarian honeysuckle      | shrub       | FACU                     | *              |
| <i>Lythrum salicaria</i>             | purple loosestrife        | herb        | OBL                      | *              |
| <i>Onoclea sensibilis</i>            | sensitive fern            | herb        | FACW                     | 5              |
| <i>Phalaris arundinacea</i>          | reed canary grass         | herb        | FACW+                    | *              |
| <i>Populus deltoides</i>             | eastern cottonwood        | shrub       | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>            | common buckthorn          | shrub       | FACU                     | *              |
| <i>Rorippa islandica fernaldiana</i> | marsh yellow cress        | herb        | OBL                      | 4              |
| <i>Rumex crispus</i>                 | curly dock                | herb        | FAC+                     | *              |
| <i>Scirpus atrovirens</i>            | dark green bulrush        | herb        | OBL                      | 4              |
| <i>Solanum dulcamara</i>             | false bittersweet         | herb        | FAC                      | *              |

*Species list continued on next page.*

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 53 (page 4 of 4)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Wet Meadow

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 30.5 m (100 ft) west of IL 131, just north of Vercoe Ave.

**SPECIES LIST** *continued*

| <b>Scientific name</b>     | <b>Common name</b>    | <b>Stratum</b> | <b>Wetland indicator status</b> | <b>C<sup>Ψ</sup></b> |
|----------------------------|-----------------------|----------------|---------------------------------|----------------------|
| <i>Solidago canadensis</i> | Canada goldenrod      | herb           | FACU                            | 1                    |
| <i>Typha angustifolia</i>  | narrow-leaved cattail | herb           | OBL                             | *                    |
| <i>Vitis riparia</i>       | riverbank grape       | woody vine     | FACW-                           | 2                    |

<sup>Ψ</sup>Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{c} = \sum C/N = 73/28 = 2.6$$

$$FQI = \sum C/\sqrt{N} = 73/\sqrt{28} = 13.8$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 54 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Just east of IL 131, both north and south of Audrey Ave.

Are climatic/hydrologic conditions typical for time of year? Yes:  No:  
 Do normal environmental conditions exist at this site? Yes:  No:  
 Has the vegetation, soil, or hydrology been significantly disturbed? Yes: No:

**VEGETATION**

| <b>Dominant Plant Species</b>  | <b>Indicator Status</b> | <b>Stratum</b> |
|--------------------------------|-------------------------|----------------|
| 1. <i>Phalaris arundinacea</i> | FACW+                   | herb           |
| 2. <i>Typha angustifolia</i>   | OBL                     | herb           |

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

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

**SOILS**

Series and phase: NRCS mapped as Beecher silt loam, revised to undetermined.  
 Drainage Class: Poorly Drained Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features         |            |           | Texture | Remarks |
|-------------------|--------------|------------------------|------------|-----------|---------|---------|
|                   |              | Color                  | Percent    | Type      |         |         |
| 0-3               | 10YR 2/1.5   |                        |            |           | M       |         |
| 3-9               | 10YR 4/2     | 10YR 4/6 &<br>10YR 5/2 | 10%<br>30% | prominent | L. SiCL | high OM |
| 9-20              | 10YR 2/1     |                        |            |           | L. SiCL | high OM |
| 20-36             | N 2.5/0      |                        |            |           | L. SiCL | high OM |

**Hydric soils:** Yes:  No:  
**Rationale:** This soil has a depleted matrix with redox concentration below a thin layer of organic soil. These characteristics are evidence of a hydric soil. This soil meets the F3 (depleted matrix) and A10 (muck) hydric soil indicators from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 54 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Just east of IL 131, both north and south of Audrey Ave.

**HYDROLOGY**

Landform: Drainageway Local Relief: Concave  
Inundated: Yes: No: X Depth of standing water: NA  
Depth to saturated soil: > 0.9 m (36 in)  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and stream flow from a roadside ditch. Evapotranspiration and stream flow are the major outputs. The three parts of this site are all connected by culverts.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Sediment Deposits  
Secondary indicators: Geomorphic Position (along a drainageway)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI did not identify this site as wetland.

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
Champaign, Illinois 61820  
(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 54 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Just east of IL 131, both north and south of Audrey Ave.

**SPECIES LIST**

| Scientific name                 | Common name               | Stratum              | Wetland indicator status | C <sup>Ψ</sup> |
|---------------------------------|---------------------------|----------------------|--------------------------|----------------|
| <i>Acer negundo</i>             | box elder                 | shrub                | FACW-                    | 1              |
| <i>Acer saccharinum</i>         | silver maple              | tree, sapling, shrub | FACW                     | 1              |
| <i>Agastache nepetoides</i>     | yellow giant hyssop       | herb                 | FACU                     | 4              |
| <i>Alisma plantago-aquatica</i> | broad-leaf water-plantain | herb                 | OBL                      | 2              |
| <i>Barbarea vulgaris</i>        | winter cress              | herb                 | FAC                      | *              |
| <i>Calystegia sepium</i>        | American bindweed         | herb                 | FAC                      | 1              |
| <i>Carex lanuginosa</i>         | wooly sedge               | herb                 | OBL                      | 4              |
| <i>Carex stricta</i>            | tussock sedge             | herb                 | OBL                      | 5              |
| <i>Cirsium arvense</i>          | Canada thistle            | herb                 | FACU                     | *              |
| <i>Eleocharis erythropoda</i>   | spike rush                | herb                 | OBL                      | 3              |
| <i>Epilobium coloratum</i>      | cinnamon willow herb      | herb                 | OBL                      | 3              |
| <i>Festuca pratensis</i>        | meadow fescue             | herb                 | FACU-                    | *              |
| <i>Fraxinus pennsylvanica</i>   | green ash                 | sapling, shrub       | FACW                     | 2              |
| <i>Geum aleppicum</i>           | yellow avens              | herb                 | FAC+                     | 6              |
| <i>Geum laciniatum</i>          | rough avens               | herb                 | FACW                     | 2              |
| <i>Iris shrevei</i>             | southern blue flag        | herb                 | OBL                      | 5              |
| <i>Leucanthemum vulgare</i>     | common tansy              | herb                 | UPL                      | *              |
| <i>Lythrum salicaria</i>        | purple loosestrife        | herb                 | OBL                      | *              |
| <i>Monarda fistulosa</i>        | wild bergamot             | herb                 | FACU                     | 4              |
| <i>Phalaris arundinacea</i>     | reed canary grass         | herb                 | FACW+                    | *              |
| <i>Sambucus canadensis</i>      | common elder              | shrub                | FACW-                    | 2              |
| <i>Scirpus atrovirens</i>       | dark green bulrush        | herb                 | OBL                      | 4              |
| <i>Solidago canadensis</i>      | Canada goldenrod          | herb                 | FACU                     | 1              |
| <i>Solidago gigantea</i>        | late goldenrod            | herb                 | FACW                     | 3              |
| <i>Typha angustifolia</i>       | narrow-leaved cattail     | herb                 | OBL                      | *              |
| <i>Typha latifolia</i>          | cattail                   | herb                 | OBL                      | 1              |
| <i>Ulmus americana</i>          | American elm              | tree                 | FACW-                    | 5              |
| <i>Vitis riparia</i>            | riverbank grape           | woody vine           | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 61/21 = 2.9$$

$$FQI = \sum C/\sqrt{N} = 61/\sqrt{21} = 13.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 55 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4  
**Location:** Approximately 4.6 m (15 ft) east of IL 131 and 182.8 m (600 ft) north of Sunset Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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, or FAC: 100%

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

**SOILS**

Series and phase: NRCS mapped as Ashkum silty clay loam and Markham silt loam, revised to Pella silty clay loam  
Drainage Class: Poorly Drained      Taxonomy: Typic Endoaquoll

Profile Description:

| Depth (inches) | Matrix Color | Redox Features |         |           | Texture | Remarks |
|----------------|--------------|----------------|---------|-----------|---------|---------|
|                |              | Color          | Percent | Type      |         |         |
| 0-2            | 10YR 2/1     |                |         |           | M       |         |
| 2-13           | 10YR 2/1     |                |         |           | Si-SiCL |         |
| 13-18          | 2.5Y 4/1     | 2.5Y 5/6       | 20%     | prominent | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a depleted matrix with redox concentrations below a dark surface. These characteristics are evidence of a hydric soil. This soil meets the A12 (thick dark surface) hydric soil indicator from the NRCS.

## ROUTINE ON-SITE WETLAND DETERMINATION

Site 55 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 4.6 m (15 ft) east of IL 131 and 182.8 m (600 ft) north of Sunset Ave.

### HYDROLOGY

Landform: Depression

Local Relief: Concave

Inundated: Yes: X (in part) No: Depth of standing water: < 0.15 m (6 in)

Depth to saturated soil: At or near surface.

Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation, runoff from the surrounding uplands, and stream flow from a roadside ditch.

Evapotranspiration is the major output.

Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)

Primary indicators: Surface Water, Saturation

Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:

**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

### WETLAND DETERMINATION AND RATIONALE:

**Is the site a wetland?:** Yes: X No:

**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent, palustrine wetland (PEMC).

### ISOLATED STATUS

**Is the wetland isolated?** Yes: X No:

**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 55 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 45 N., R. 12 E., Sect. 6, SW/4

**Location:** Approximately 4.6 m (15 ft) east of IL 131 and 182.8 m (600 ft) north of Sunset Ave.

**SPECIES LIST**

| Scientific name                    | Common name           | Stratum       | Wetland indicator status | C <sup>Ψ</sup> |
|------------------------------------|-----------------------|---------------|--------------------------|----------------|
| <i>Acer negundo</i>                | box elder             | shrub         | FACW-                    | 1              |
| <i>Agropyron repens</i>            | quack grass           | herb          | FACU                     | *              |
| <i>Ambrosia trifida</i>            | giant ragweed         | herb          | FAC+                     | 0              |
| <i>Apocynum cannabinum</i>         | dogbane               | herb          | FAC                      | 2              |
| <i>Barbarea vulgaris</i>           | winter cress          | herb          | FAC                      | *              |
| <i>Carex lanuginosa</i>            | wooly sedge           | herb          | OBL                      | 4              |
| <i>Cirsium arvense</i>             | Canada thistle        | herb          | FACU                     | *              |
| <i>Cornus obliqua</i>              | pale dogwood          | shrub         | FACW+                    | 4              |
| <i>Cornus racemosa</i>             | gray dogwood          | shrub         | FACW-                    | 2              |
| <i>Erigeron annuus</i>             | annual fleabane       | herb          | FAC-                     | 1              |
| <i>Euthamia graminifolia</i>       | grassleaf goldenrod   | herb          | FACW-                    | 3              |
| <i>Leucanthemum vulgare</i>        | common tansy          | herb          | UPL                      | *              |
| <i>Lythrum salicaria</i>           | purple loosestrife    | herb          | OBL                      | *              |
| <i>Nepeta cataria</i>              | catnip                | herb          | FAC-                     | *              |
| <i>Parthenocissus quinquefolia</i> | Virginia creeper      | woody vine    | FAC-                     | 2              |
| <i>Phalaris arundinacea</i>        | reed canary grass     | herb          | FACW+                    | *              |
| <i>Populus deltoides</i>           | eastern cottonwood    | tree, sapling | FAC+                     | 2              |
| <i>Rhamnus cathartica</i>          | common buckthorn      | shrub, herb   | FACU                     | *              |
| <i>Rumex crispus</i>               | curly dock            | herb          | FAC+                     | *              |
| <i>Salix amygdaloides</i>          | peach-leaved willow   | tree, sapling | FACW                     | 4              |
| <i>Solidago canadensis</i>         | Canada goldenrod      | herb          | FACU                     | 1              |
| <i>Solidago gigantea</i>           | late goldenrod        | herb          | FACW                     | 3              |
| <i>Typha angustifolia</i>          | narrow-leaved cattail | herb          | OBL                      | *              |
| <i>Typha latifolia</i>             | cattail               | herb          | OBL                      | 1              |
| <i>Ulmus americana</i>             | American elm          | shrub         | FACW-                    | 5              |
| <i>Vitis riparia</i>               | riverbank grape       | woody vine    | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 37/16 = 2.3$$

$$FQI = \sum C/\sqrt{N} = 37/\sqrt{16} = 9.3$$

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 56 (page 1 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 7, NW/4  
**Location:** Approximately 50.3 m (165 ft) west of IL 131 and 135.6 m (445 ft) south of Sunset Ave.

Are climatic/hydrologic conditions typical for time of year? Yes: X No:  
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. *Typha angustifolia*      OBL      herb

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

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

**SOILS**

Series and phase: NRCS mapped as Wauconda and Beecher silt loams, revised to undetermined  
Drainage Class: Poorly      Taxonomy: Undetermined

Profile Description:

| Depth<br>(inches) | Matrix Color | Redox Features |         |       | Texture | Remarks |
|-------------------|--------------|----------------|---------|-------|---------|---------|
|                   |              | Color          | Percent | Type  |         |         |
| 0-2               | 10YR 2/1     |                |         |       | MM      |         |
| 2-13              | 10YR 2/1     |                |         |       | MM/Si   |         |
| 13-18             | 2.5Y 4/1     | 10YR 5/1       | 10%     | faint | SiCL    |         |

**Hydric soils:** Yes: X No:  
**Rationale:** This soil has a thick surface horizon with a modified surface texture indicating long periods of anaerobic conditions. This soil meets the F1 (loamy mucky mineral) hydric soil indicator from the NRCS.

**ROUTINE ON-SITE WETLAND DETERMINATION**

Site 56 (page 2 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009  
**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)  
**State:** Illinois **County:** Lake **Applicant:** IDOT District 1  
**Site Name:** Marsh  
**Legal Description:** T. 45 N., R. 12 E., Sect. 7, NW/4  
**Location:** Approximately 50.3 m (165 ft) west of IL 131 and 135.6 m (445 ft) south of Sunset Ave.

**HYDROLOGY**

Landform: Depression (retention basin) Local Relief: Concave  
Inundated: Yes: X (in part) No: Depth of standing water: < 0.08 m (3 in)  
Depth to saturated soil: At or near surface.  
Overview of hydrological flow through the system: Primary hydrologic inputs to this site are precipitation and runoff from the surrounding uplands. Evapotranspiration is the major output.  
Size of watershed: < 10 km<sup>2</sup> (3.9 mi<sup>2</sup>)  
Primary indicators: Surface Water, Saturation  
Secondary indicators: Geomorphic Position (depression)

**Wetland hydrology:** Yes: X No:  
**Rationale:** Field evidence cited above indicates that this site is inundated or saturated for a sufficient duration to satisfy the wetland hydrology criterion.

**WETLAND DETERMINATION AND RATIONALE:**

**Is the site a wetland?:** Yes: X No:  
**Rationale:** Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are present at this site; therefore, this site is a wetland. The NWI identified this site as seasonally flooded, emergent, palustrine wetland (PEMC).

**ISOLATED STATUS**

**Is the wetland isolated?** Yes: X No:  
**Rationale:** There is no surface connection to waters of the U. S.

Determined by: Mary Ann Feist and Jason Zylka (vegetation, hydrology)  
Paul Marcum (vegetation, hydrology, and GPS)  
Jesse Kurylo (soils and hydrology)  
Illinois Natural History Survey  
1816 S. Oak St.  
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(217) 244-6858 (Feist)

**ROUTINE ONSITE WETLAND DETERMINATION**

Site 56 (page 3 of 3)

**Field Investigators:** Feist, Kurylo, and Marcum **Dates:** 30 June 2009

**Sequence No.:** 14766 **Project Name:** FAP 880/FAP 2711 (IL 131)

**State:** Illinois **County:** Lake **Applicant:** IDOT District 1

**Site Name:** Marsh

**Legal Description:** T. 45 N., R. 12 E., Sect. 7, NW/4

**Location:** Approximately 50.3 m (165 ft) west of IL 131 and 135.6 m (445 ft) south of Sunset Ave.

**SPECIES LIST**

| Scientific name               | Common name           | Stratum    | Wetland indicator status | C <sup>Ψ</sup> |
|-------------------------------|-----------------------|------------|--------------------------|----------------|
| <i>Acer negundo</i>           | box elder             | shrub      | FACW-                    | 1              |
| <i>Barbarea vulgaris</i>      | winter cress          | herb       | FAC                      | *              |
| <i>Calystegia sepium</i>      | American bindweed     | herb       | FAC                      | 1              |
| <i>Cirsium arvense</i>        | Canada thistle        | herb       | FACU                     | *              |
| <i>Cirsium vulgare</i>        | bull thistle          | herb       | FACU-                    | *              |
| <i>Eleocharis erythropoda</i> | spike rush            | herb       | OBL                      | 3              |
| <i>Epilobium coloratum</i>    | cinnamon willow herb  | herb       | OBL                      | 3              |
| <i>Erigeron annuus</i>        | annual fleabane       | herb       | FAC-                     | 1              |
| <i>Lythrum salicaria</i>      | purple loosestrife    | herb       | OBL                      | *              |
| <i>Phalaris arundinacea</i>   | reed canary grass     | herb       | FACW+                    | *              |
| <i>Phragmites australis</i>   | common red reed       | herb       | FACW+                    | 1              |
| <i>Populus deltoides</i>      | eastern cottonwood    | tree       | FAC+                     | 2              |
| <i>Robinia pseudoacacia</i>   | black locust          | shrub      | FACU-                    | *              |
| <i>Rumex crispus</i>          | curly dock            | herb       | FAC+                     | *              |
| <i>Solidago canadensis</i>    | Canada goldenrod      | herb       | FACU                     | 1              |
| <i>Sonchus arvensis</i>       | field sowthistle      | herb       | FAC-                     | *              |
| <i>Typha angustifolia</i>     | narrow-leaved cattail | herb       | OBL                      | *              |
| <i>Typha latifolia</i>        | cattail               | herb       | OBL                      | 1              |
| <i>Vitis riparia</i>          | riverbank grape       | woody vine | FACW-                    | 2              |

Ψ Coefficient of Conservatism (Taft et al. 1997)

\*Non-native species

$$\bar{C} = \sum C/N = 16/10 = 1.6$$

$$FQI = \sum C/\sqrt{N} = 16/\sqrt{10} = 5.1$$

Appendix 1

FSA Photos for Site 22 and Site 24 (FAP 880/FAP 2711, Lake Co., IL).



1987



1999



1990



2001



1997

Appendix 1 *continued*

Table 1. Determination of wetland signatures using FSA photos for Site 22 and Site 24 (FAP 880/FAP 2711, Lake Co., IL).

| Year | Wetland Signature |         |
|------|-------------------|---------|
|      | Site 22           | Site 24 |
| 1987 | No                | No      |
| 1990 | Yes               | Yes     |
| 1997 | Yes               | Yes     |
| 1999 | Yes               | Yes     |
| 2001 | Yes               | No      |



 Project boundary  
 Non-wet NWI site  
 Wetland site

0 400 800 Feet

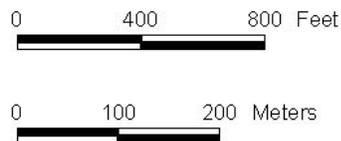
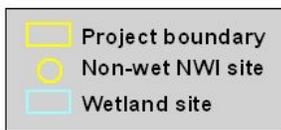


0 100 200 Meters



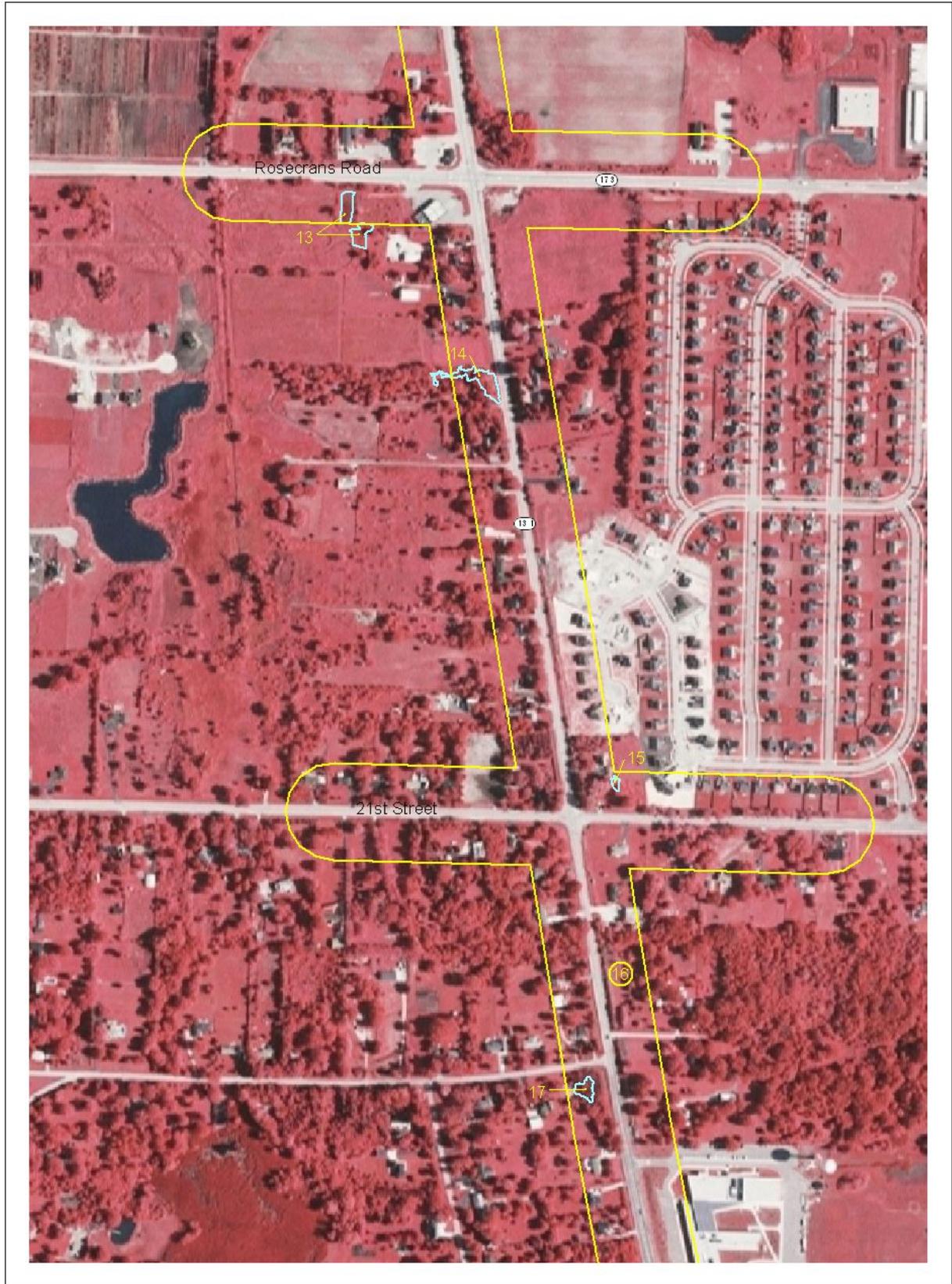
scale 1:4800  
1 inch=400 ft





scale 1:4800  
1 inch=400 ft





- Project boundary
- Non-wet NWI site
- Wetland site

0 400 800 Feet



0 100 200 Meters



scale 1:4800  
1 inch=400 ft





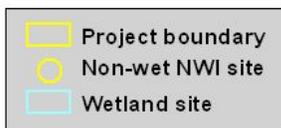
-  Project boundary
-  Non-wet NWI site
-  Wetland site

0 400 800 Feet

0 100 200 Meters

scale 1:4800  
1 inch=400 ft





0 400 800 Feet



0 100 200 Meters



scale 1:4800  
1 inch=400 ft





-  Project boundary
-  Non-wet NWI site
-  Wetland site

0 400 800 Feet

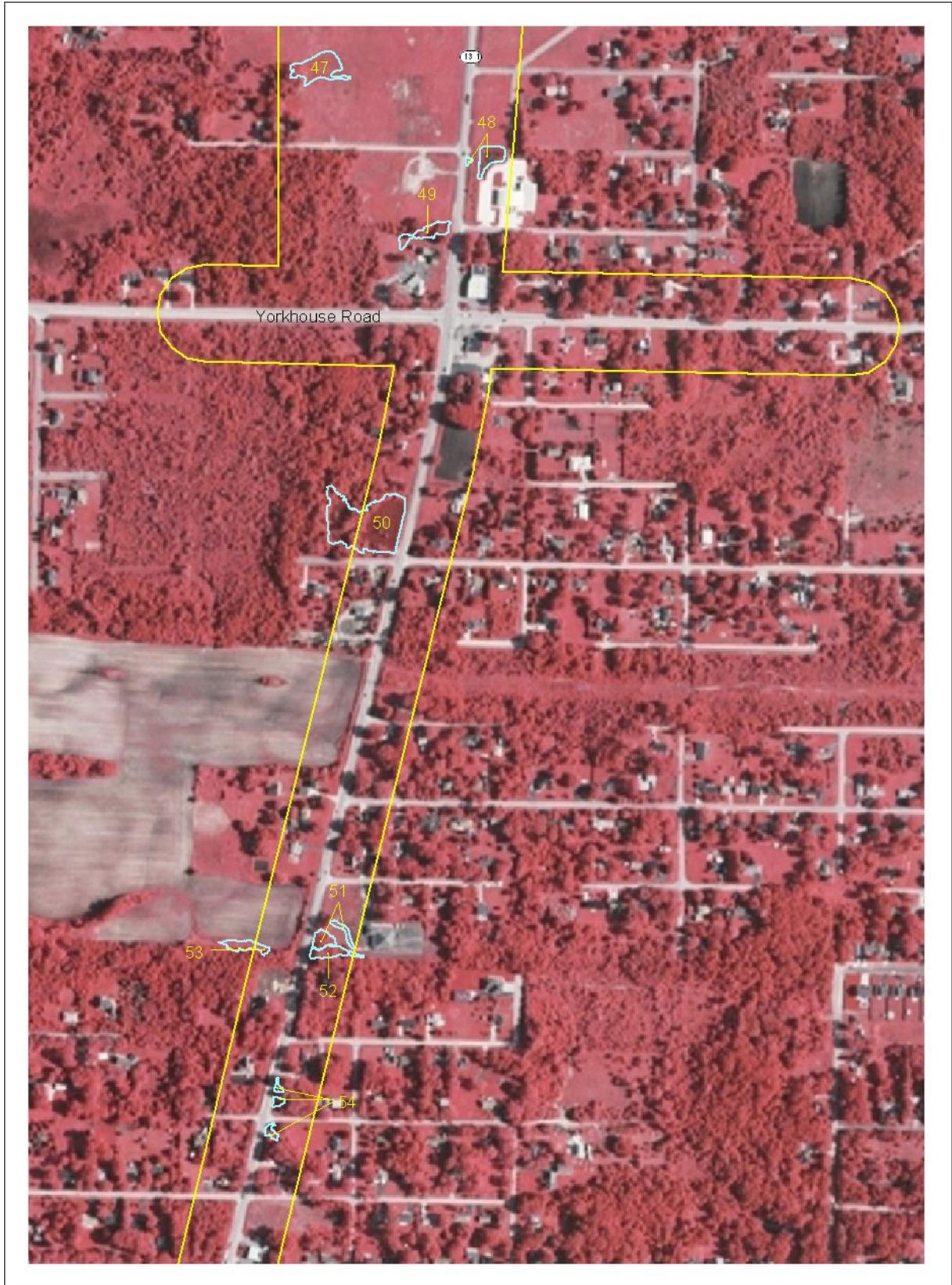


0 100 200 Meters



scale 1:4800  
1 inch=400 ft





- Project boundary
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0 400 800 Feet

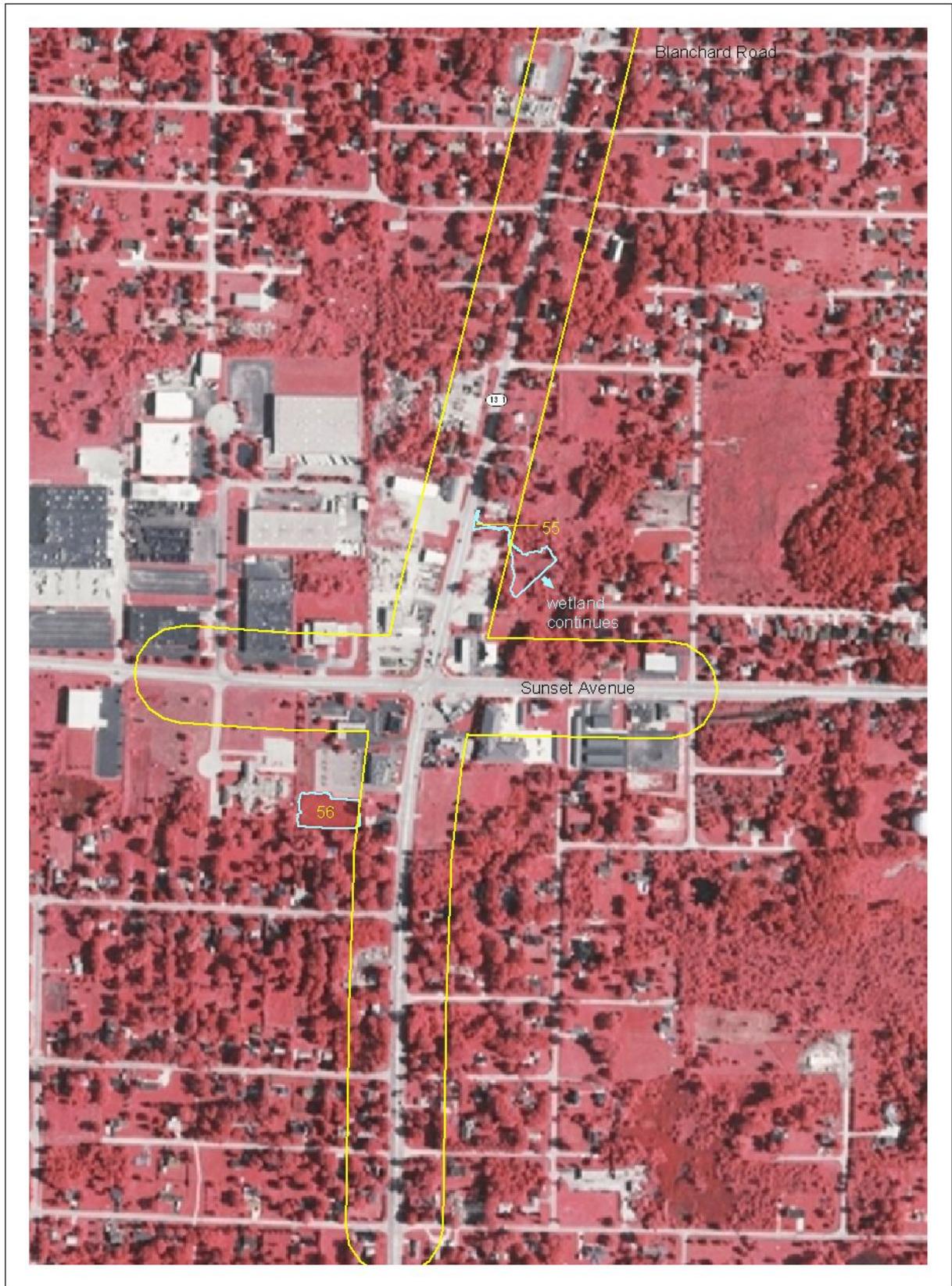


0 100 200 Meters



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