SITE HISTORY

- June 2007: Construction at the wetland mitigation site was completed.
- May 2010: Well 9S was replaced and well 15S was added.

WETLAND HYDROLOGY CALCULATION FOR 2010

The area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2010 growing season is estimated to be 2.4 ha (6.0 ac) out of a total site area of approximately 4.1 ha (10.0 ac). The area that satisfied wetland hydrology criteria for greater than 12.5% of the 2010 growing season is estimated to be 1.5 ha (3.8 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, it is estimated that 1.5 ha (3.8 ac) also satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. These estimates are based on the following factors:

- According to the MRCC, the median date that the growing season begins in nearby Effingham, Illinois, is April 6, and the season lasts 210 days; 5% of the growing season is 11 days, and 12.5% of the growing season is 26 days. According to methods outlined in the 2010 Midwest Region supplement, it is estimated that March 15 was the starting date of the 2010 growing season based on vegetation growth and development observed at the site.

- Regional precipitation for the monitoring period, as recorded in Effingham, Illinois, was 127% of normal, and was 94% of normal for the period March through May 2010.

- In 2010, water levels measured in all monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season. Water levels measured in wells 3S, 4S, 11SR, 12SR, 13S, and 14S satisfied wetland hydrology criteria for greater than 12.5% of the growing season. According to the 2010 Midwest Region supplement, wells 3S, 4S, 11SR, 12SR, 13S, and 14S satisfied wetland hydrology criteria for 14 or more consecutive days of the growing season.

- Surface-water inundation was observed for greater than 5% of the growing season on both sides of the main north–south ditch. Water-level records for gauge B indicated inundation west of the main ditch at or above 160.53 m (526.67 ft) for greater than 5% of the growing season, while water-level records for gauge E indicated inundation east of the main ditch at or above 160.92 m (527.95 ft) for greater than 5% of the growing season. No surface-water inundation was observed west of the main ditch for greater...
than 12.5% of the growing season, while water-level records for gauge E indicated inundation east of the main ditch at or above 160.76 m (527.43 ft) for greater than 12.5% of the growing season. Based on the 2010 Midwest Region supplement, surface-water inundation west of the main ditch was not recorded for 14 or more consecutive days of the growing season. However, water-level records for gauge E indicated inundation east of the main ditch at or above 160.77 m (527.46 ft) for 14 or more consecutive days of the growing season.

- According to the data logger at gauge C, water levels in Green Creek reached an elevation sufficient to flood all or most of the site four times during the 2010 growing season. These events occurred on May 16, June 15, June 25, and July 13. However, the duration of these floods was not sufficient to satisfy any wetland hydrology criteria.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue at the site until no longer required by IDOT.
Green Creek Wetland Mitigation Site
(FAP 774 [IL 32/33])
General Study Area and Vicinity
from the USGS Topographic Series, Effingham North, IL, 7.5-minute Quadrangle (USGS 1985)
contour interval is 3 m (10 ft)
Green Creek Wetland Mitigation Site  
(FAP 774 [IL 32/33])  
Estimated Areal Extent of 2010 Wetland Hydrology  
September 1, 2009 through August 31, 2010  
Map based on USDA digital orthophotograph of Effingham County, Illinois, produced for the National Agricultural Imagery Program (NAIP) (USDA 2007)
Green Creek Wetland Mitigation Site
September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells

Well 1U
Well 3S
Well 4S
Well 8SR2
Well 9SR
Well 11SR
Well 12SR
Well 13S
Well 14S
Well 15S

Elevation (in m referenced to NAVD, 1988)
Green Creek Wetland Mitigation Site
September 1, 2009 through August 31, 2010

Depth to Water in Monitoring Wells

Depth (in m referenced to land surface)
Green Creek Wetland Mitigation Site
September 1, 2009 through August 31, 2010

Water-Level Elevations
at Stage Gauges and Data Loggers

Elevation (m referenced to NAVD, 1988)

Gauge B
Gauge C (data logger)
Gauge C
Gauge E
Little Wabash River stage near Effingham
Green Creek Wetland Mitigation Site
September 2009 through August 2010

Total Monthly Precipitation Recorded on Site and at Effingham, IL

Graph last updated September 29, 2010