SITE HISTORY

- August 2005: ISGS submitted an initial site evaluation report to IDOT.
- March 2006: ISGS submitted a conceptual design plan to IDOT.
- June 2007: Construction at the wetland compensation site was completed.

WETLAND HYDROLOGY CALCULATION FOR 2008

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2008 growing season was estimated to be 1.6 ha (3.9 ac) out of a total site area of 4.1 ha (10.0 ac). The area that satisfied wetland hydrology criteria for greater than 12.5% of the 2008 growing season was estimated to be 1.4 ha (3.4 ac). These estimates were 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.
- Total precipitation during the monitoring period was 108% of normal. Above-normal precipitation from February through July helped sustain elevated water levels at the site throughout nearly the entire growing season to date.
- In 2008, ground-water levels measured in wells 3S, 4S, 10SR, 10VS, 11SR, 12SR, 13S, and 14S satisfied the wetland hydrology criteria for both 5% and 12.5% of the growing season. In addition, wells 8SR and 9S satisfied the wetland hydrology criteria for 5% of the growing season.
- Areas of inundation were observed for greater than 5% of the growing season on both sides of the main north–south ditch, while much of the eastern half of the site remained inundated for greater than 12.5% of the growing season. Water-level records for staff gauge B indicated inundation in the area west of the north–south ditch below approximately 160.41 m (526.28 ft) for greater than 5% of the growing season. Water-level records for staff gauge ER indicated inundation in the area east of the north–south ditch below approximately 160.73 m (527.33 ft) for greater than both 5% and 12.5% of the growing season. According to the surface-water gauge in Green Creek, water levels in Green Creek reached an elevation sufficient to flood the site at least six separate times in 2008: three times preceding the growing season, and three times during the growing season.
PLANNED FUTURE ACTIVITIES

- The ISGS will continue to monitor the Green Creek Wetland Compensation Site until no longer required by IDOT.
Green Creek Wetland Compensation Site
(FAP 774, IL 32/33, Sequence #12505)

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 Compensation Site
(FAP 774, IL 32/33, Sequence #12505)

Estimated Areal Extent of 2008 Wetland Hydrology
based on data collected between September 1, 2007 and September 1, 2008

Map based on USGS digital orthophotograph, Effingham North SW quarter quadrangle
produced from 2005 aerial photography (ISGS 2006)
Green Creek Wetland Compensation Site
September 1, 2007 to September 1, 2008

Water-Level Elevations

Elevation (in m referenced to NGVD, 1929)

Well 1U
Well 3S
Well 4S
Well 7S
Well 8S
Well 8SR
Well 9S
Well 10S
Well 10SR
Well 10VS
Well 11SR
Well 12S
Well 12SR
Well 13S
Well 14S
Gauge A
Gauge B
Gauge C (Infinities)
Gauge D
Gauge E
Gauge ER

Green Creek Wetland Compensation Site
September 1, 2007 to September 1, 2008

Water-Level Elevations
on the West Side of the Site

Elevation (in m referenced to NGVD, 1929)

Well 1U
Well 8S
Well 8SR
Well 9S
Gauge B
Green Creek Wetland Compensation Site
September 1, 2007 to September 1, 2008

Depth to Water
on the West Side of the Site

Depth (in m referenced to land surface)

-0.5
0.0
0.5
1.0
1.5
2.0
2.5
3.0


Well 1U
Well 8S
Well 8SR
Well 9S
Green Creek Wetland Compensation Site
September 1, 2007 to September 1, 2008

Water-Level Elevations on the East Side of the Site

Elevation (in m referenced to NGVD, 1929)

- Well 3S
- Well 4S
- Well 7S
- Well 10S
- Well 10SR
- Well 10VS
- Well 11SR
- Well 12S
- Well 12SR
- Well 13S
- Well 14S
- Gauge A
Green Creek Wetland Compensation Site
September 2007 through August 2008
Total Monthly Precipitation Recorded On Site and at the Effingham, IL Weather Station

Graph last updated October 7, 2008