FORMER WEBER PROPERTY  
WETLAND MITIGATION SITE  
US 20  
FAP 301  
Sequence #10487  
Stephenson County, near Freeport, Illinois  
Primary Project Manager: Eric T. Plankell  
Secondary Project Manager: not assigned

SITE HISTORY

- September 2010: IDOT District 2 requested that ISGS prepare conceptual plans for wetland creation, and plans were provided by ISGS.
- November 2010: Wetland construction was completed, and ISGS was tasked by IDOT to monitor wetland hydrology.

WETLAND HYDROLOGY CALCULATION FOR 2011

The area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2011 growing season is estimated to be 1.7 ha (4.3 ac) out of a total site area of 5.8 ha (14.3 ac), and the area that satisfied wetland hydrology criteria for greater than 12.5% of the 2011 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 1.7 ha (4.2 ac) satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. These estimates are based on the following factors:

- The median date that the growing season begins in Freeport, Illinois, is April 13, and the season lasts 183 days (MRCC 2011). According to the 1987 Manual, 5% of the growing season is 9 days, and 12.5% of the growing season is 23 days. According to methods outlined in the 2010 Midwest Region Supplement, it is estimated that March 16 was the starting date of the 2011 growing season based on soil temperatures measured at the adjacent Freeport Bypass West Wetland Mitigation Site 6W (ISGS #72).

- Total precipitation for the monitoring period, as recorded at the Freeport Wastewater Plant was 121% of normal, and was 142% of normal for the period March through May 2011. Nearly 10.5 inches of precipitation were recorded on site during July 21-31, 2011. The subsequent late-season flood on the Pecatonica River peaked on July 28 and resulted in the highest water levels recorded on the site during the 2011 growing season.

- In 2011, water levels measured in monitoring wells 8S and 9S satisfied wetland hydrology criteria for greater than 5% and greater than 12.5% of the growing season, according to the 1987 Manual. According to the 2010 Midwest Region Supplement, wells 8S and 9S also satisfied wetland hydrology criteria for 14 or more consecutive days of the growing season.
Surface-water levels measured by the data loggers at Gauges A, E, and F indicated inundation at or above 230.40 m, 230.40 m, and 231.12 m (755.91 ft, 755.91 ft, and 758.27 ft), respectively, for greater than 5% of the growing season, and inundation at or above 230.33 m, 230.33 m, and 231.08 m (755.68 ft, 755.68 ft, and 758.14 ft), respectively, for greater than 12.5% of the growing season, according to the 1987 Manual. Per the 2010 Midwest Region Supplement, surface-water levels measured by the data logger at Gauges A, E, and F indicated inundation at or above 230.41 m, 230.37 m, and 231.11 m (755.94 ft, 755.81 ft, and 758.23 ft), respectively, for 14 or more consecutive days of the growing season.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue until no longer required by IDOT.
Former Weber Property Wetland Mitigation Site
(US 20, FAP 301)

General Study Area and Vicinity

Map based on the USGS Topographic Series, Freeport West, IL, 7.5-minute Quadrangle
Former Weber Property Wetland Mitigation Site
(US 20, FAP 301)
Estimated Areal Extent of 2011 Wetland Hydrology
September 1, 2010 through September 8, 2011

Map based on National Agricultural Imagery Program (NAIP) digital orthophotograph, Stephenson County, Illinois, taken August 20, 2007 (USDA-FSA 2007)
Former Weber Property Wetland Mitigation Site
September 1, 2010 through September 8, 2011

Water-Level Elevations in Monitoring Wells

Elevation (in m referenced to NAVD 1988)
Former Weber Property Wetland Mitigation Site
September 1, 2010 through September 8, 2011

Water-Level Elevations
at Surface-Water Gauges

Gauge A (logger)
Gauge C
Gauge D (logger)
Gauge E
Gauge E (logger)
Gauge F
Gauge F (logger)
Pecatonica River at former Weber property
Total Monthly Precipitation Recorded at Site 6W and at the Freeport Wastewater Plant, IL

- Monthly precipitation recorded at Freeport, IL (MRCC)
- Monthly precipitation recorded at Site 6W by ISGS
- Data incomplete
- 1971-2000 monthly 30% above average threshold at Freeport, IL (NWCC)
- 1971-2000 monthly average precipitation at Freeport, IL (NWCC)
- 1971-2000 monthly 30% below average threshold at Freeport, IL (NWCC)

Graph last updated 10/31/2011