SITE HISTORY

- August 1997: ISGS data collection was initiated with the installation of monitoring wells and staff gauges.

- August 2004: Construction of the Milan Bypass began. The wetland mitigation plan was implemented with excavation of the southern portion of the site and the planting of trees.


- December 2005: The ISGS was tasked by IDOT to perform post-construction monitoring.

- August 2011: The ISGS was informed by IDOT that post-construction monitoring was completed.

WETLAND HYDROLOGY CALCULATION FOR 2011

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2011 growing season was estimated to be 8.9 ha (22.0 ac) out of a total area of 8.9 ha (22.0 ac), and the area that satisfied wetland hydrology criteria for greater than 12.5% of the growing season was estimated to be 8.9 ha (22.0 ac). Using the 2010 Midwest Region Supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 8.9 ha (22.0 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 at the nearby Quad City International Airport weather station in Moline, Illinois, is April 13 and the season lasts 196 days (MRCC 2011); according to the 1987 Manual, 5% of the growing season is 10 days and 12.5% of the growing season is 25 days. According to methods outlined in the 2010 Midwest Region Supplement, we estimate that March 15 was the starting date of the 2011 growing season based on soil temperatures measured at the wetland mitigation site.

- Total precipitation during the monitoring period, as recorded at the Quad City International Airport weather station in Moline, Illinois, was 90% of normal and precipitation in Spring 2011 (March through May) was 106% of normal.

- In 2011, all the monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season and for greater than 12.5% of the growing season, according to the 1987 Manual. All of the wells also satisfied wetland hydrology criteria for 14 or more
consecutive days during the growing season as per the 2010 Midwest Region Supplement.

- Surface-water elevations measured by logger SW1R were at or above 172.16 m (564.86 ft) from April 23 to May 3 (11 days), long enough to satisfy wetland hydrology criteria for greater than 5% of the growing season, and surface-water elevations were at or above 172.11 m (564.69 ft) from April 16 to May 11 (26 days), long enough to satisfy wetland hydrology criteria for greater than 12.5% of the growing season, according to the 1987 Manual. Surface-water elevations measured at SW1R were at or above 172.15 m (564.82 ft) from April 20 to May 5 (16 days), long enough to satisfy wetland hydrology criteria for 14 or more consecutive days during the growing season as per the 2010 Midwest Region Supplement.

ADDITIONAL INFORMATION

- It was first noted in Fall 2009 that beaver had built a dam upstream of the outlet of the site, though surface-water data collected at the site that year indicate that construction of the dam began earlier in the year. Since the dam was built, the following changes have been observed at the site: the northern half of the site has become semi-permanently to permanently inundated due to the elevated water levels caused by the dam; cattails have colonized the portion of the site that was excavated in 2004, this year forming dense thickets of plants standing more than 8 feet tall; and muskrats have moved onto the site and begun clearing out the cattails, forming open-water areas that are used by waterfowl in the spring as nesting grounds.
Milan Beltway, Airport Road Wetland Mitigation Site (FAU 5822)
General Study Area and Vicinity
from the USGS Topographic Series, Milan, IL-IA, 7.5-minute Quadrangle (USGS 1992)
contour interval is 10 feet
Milan Beltway, Airport Road Wetland Mitigation Site  
(FAU 5822)  
Estimated Areal Extent of 2011 Wetland Hydrology  
September 1, 2010 through August 31, 2011  
Map based on USGS digital orthophotograph, Milan NE quarter quadrangle  
from 03/28/2005 aerial photography (ISGS 2005)

---

2011 Wetland Hydrology

- >5% of growing season (1987 Manual)
- >12.5% of growing season (1987 Manual)
- 14 days or more (2010 Midwest Region Supplement)

Legend:
- site boundary
- north edge of tree-planting area
- monitoring well
- stage gauge
- rain gauge
- RDS data logger

---

Map showing the estimated areal extent of 2011 wetland hydrology at the Milan Beltway, Airport Road Wetland Mitigation Site (FAU 5822) from September 1, 2010 through August 31, 2011. The map is based on USGS digital orthophotograph from Milan NE quarter quadrangle, from 03/28/2005 aerial photography (ISGS 2005). The hydrology data includes symbols for monitoring wells, stage gauges, rain gauges, and RDS data loggers.
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in Monitoring Wells and at Surface-Water Gauges

Elevation (in m referenced to NAVD, 1988)
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Depth to Groundwater in Monitoring Wells

Well 2SR
Well 3SR
Well 11S
Well 11U
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in Monitoring Wells and at Surface-Water Gauges

Elevation (in m referenced to NAVD 1988)
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Depth to Groundwater in Monitoring Wells

- Well 4S
- Well 4D
- Well 12S
- Well 12U
- Well 13S
- Well 12S (logger)
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in Monitoring Wells and at Surface-Water Gauges
Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in Monitoring Wells and at Surface-Water Gauges
Depth to Groundwater in Monitoring Wells

Milan Beltway, Airport Road Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Depth (in m referenced to land surface)
Milan Beltway, Airport Road
Wetland Mitigation Site
September 2010 through August 2011

Total Monthly Precipitation Recorded on Site and at the
Quad City International Airport, Moline, IL

on-site rain gauge
removed 1/13/2010
installed 3/2/2011

Graph last updated 10/31/2011