SITEM QUESTION history

- August 1999: The ISGS conducted an initial site evaluation. The results were reported to IDOT by letter in November.
- September 2000: ISGS began monitoring ground- and surface-water levels.

WETLAND HYDROLOGY CALCULATION FOR 2009

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in 2009 for more than 5% of the growing season was estimated to be 14.5 ha (35.8 ac) out of a total area of 32.4 ha (80.0 ac). The area that satisfied wetland hydrology criteria for more than 12.5% of the 2009 growing season was estimated to be 13.3 ha (33.0 ac). Using new guidance proposed by the U. S. Army Corps of Engineers (2008), we estimate that 13.3 ha (33.0 ac) 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 Belleville, Illinois, is April 6 and the season lasts 199 days; 5% of the growing season is 10 days and 12.5% of the growing season is 25 days. According to methods outlined in the Midwest Regional Supplement (U.S. Army Corps of Engineers 2008), we estimate that March 8 was the starting date of the 2009 growing season based on both vegetation growth and development and soil temperatures measured at the wetland compensation site.
- Total precipitation recorded at the Belleville, Illinois weather station during the monitoring period was 110% of normal. Precipitation was at or above normal in September and December 2008, in February 2009, and from April through August 2009. Total precipitation in the spring (April through June) was 140% of normal.
- In 2009, wetland hydrology occurred for more than 5% of the growing season at wells 3S, 4S, 5S, 6S, 9S, 13S, 14S, 15S, 16S, 17SR, 23S, 24S, 25S, and 26S. Except for well 6S, wetland hydrology also occurred at these wells for 14 or more consecutive days and for more than 12.5% of the growing season.
- Surface-water elevations measured in the pond (SW Pond, gauge AR) and drainage ditch along the base of the terrace (gauges B and BR) reveal that surface-water elevation was at or above 122.22 m (401.00 ft) for more than 5% of the growing season, at or above 122.20 m (400.94 ft) for 14 or more consecutive days, and at or above 122.18 m (400.87 ft) for more than 12.5% of the growing season. At gauges D and F, on the east side of the site, surface-water elevation was above 122.36 m.
(401.46 ft) for 5%, for 14 or more consecutive days, and for 12.5% of the growing season.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue at this site until notified otherwise by IDOT.
Fairmont City, New River Crossing Potential Wetland Compensation Site
(FAP 999)
General Study Area and Vicinity
from the USGS Topographic Series, Monks Mound, IL 7.5-minute Quadrangle (USGS 1993)
Fairmont City Potential Wetland Compensation Site
(FAP 999)
Estimated Areal Extent of 2009 Wetland Hydrology
September 1, 2008 through August 31, 2009
Map based on USGS digital orthophotograph, Monks Mound SW quarter quadrangle
produced from 04/08/1999 aerial photography (ISGS 2001)
monitoring well, staff gauge and data logger locations from GPS survey

2009 Wetland Hydrology
>5% of growing season (1987 Manual)
>12.5% of growing season (1987 Manual)
14 days or more (2008 Midwest supplement)

- monitoring well
- staff gauge
- surface-water logger
- rain gauge

0  500 ft
0  100m
Water-Level Elevations in Soil-Zone and Upper Wells

Elevation (in m referenced to NAVD 1988)
Fairmont City, New River Crossing Potential Wetland Compensation Site
September 1, 2008 through August 31, 2009

Depth to Water in Soil-Zone and Upper Wells
Water-Level Elevations in Middle and Lower Wells

- Well 5M
- Well 5L
- Well 6M
- Well 6L
- Well 7M
- Well 7L
- Well 13M
- Well 13L
- Well 14M
- Well 14L
- Well 15M
- Well 15L
- Well 16M
- Well 16L

Elevation (in m referenced to NAVD, 1988)
Fairmont City, New River Crossing Potential Wetland Compensation Site
September 1, 2008 through August 31, 2009

Depth to Water in Middle and Lower Wells

Depth (in m referenced to land surface)

Well 5M
Well 5L
Well 6M
Well 6L
Well 7M
Well 7L
Well 13M
Well 13L
Well 14M
Well 14L
Well 15M
Well 15L
Well 16M
Well 16L
Water-Level Elevations at Well Cluster 25

Elevation (in m referenced to NAVD, 1988)
Fairmont City, New River Crossing Potential Wetland Compensation Site
September 1, 2008 to August 31, 2009

Water-Level Elevations on Stage Gauges and Data Loggers

- Gauge AR2
- Gauge B
- Gauge BR
- Gauge D
- Gauge E
- Gauge F
- SW Pond

(Elevation in m referenced to NAVD, 1988)
Fairmont City, New River Crossing
Potential Wetland Compensation Site
September 2008 through August 2009
Total Monthly Precipitation Recorded On Site and at the
Belleville, IL SIU Research Center Weather Station

on-site rain gauge
removed 12/09/2008
installed 02/02/2009

Graph last updated October 15, 2009