SITE HISTORY

- March 1999: ISGS was tasked by IDOT to perform a Level II hydrogeologic assessment of the potential banking site.

- April and December 2003: Drainage tile removal was undertaken in the east field, also called the "spider" field. This concluded tile removal work at the bank site. In Spring 2004, trees were planted in wetland restoration areas on site.


- September 2008: A record flood stage occurred that exceeded the former record set in 1957. The flood peaked at 153.4 m (503.3 ft) on September 16 and inundated the entire site, including overtopping Pine Bluff Road south of the site. As in previous floods, the site drained rapidly and the duration of water levels greater than bankfull was only six days.

WETLAND HYDROLOGY CALCULATION FOR 2008

We estimate that the total area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2008 was 15.6 ha (38.5 ac) out of a total site area of 342 ha (844 ac). Further, 6.3 ha (15.6 ac) also satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Areas west of IL 47 are not included in these totals. These estimates are based on the following factors:

- According to the MRCC, the median date that the growing season begins in Morris, Illinois is April 13 and the season lasts 187 days; 5% of the growing season is 9 days and 12.5% of the growing season is 23 days.

- Total precipitation for the monitoring period was 103% of normal. During the four-month period from December 2007 to March 2008, precipitation was 101% of normal, resulting in normal conditions entering the growing season. In the April to August period of the growing season, however, precipitation dropped off to only 75% of normal. Extreme September 2008 precipitation totals (400% of normal) caused a large overbank flood at the site.

- In 2008, of the 46 active soil-zone wells on site, 19 satisfied wetland hydrology criteria for greater than 5% of the growing season, including 11SR, 12S, 16S, 18SR, 21SR, 35SR2, 40S, 42S, 43S, 43VS, 44S, 44VS, 46SR2, 48SR2, 51SR, 54SR, 56SR, 57S, and 61S. Further, nine of these wells satisfied wetland hydrology criteria for greater than 12.5% of the growing season, including 16S, 21SR, 42S, 43S, 43VS, 44S, 44VS, 56SR, and 57S.
Staff gauges or data loggers in closed depressions at SW5, SW7, SW7L, SW8, SW9, SW10, SW11, and SW12 indicated inundation for a period greater than 5% of the growing season. Of these gauges, SW5, SW7L, SW9, SW10, and SW11 also showed inundation for a period greater than 12.5% of the growing season.

In the 2007–2008 season, an on-site data logger at SW2 and the nearby USACE gauge showed that two small flood events during the first half of the growing season barely exceeded the bankfull elevation of the Mazon River and Mud Slough, roughly 149.4 m (490 ft). These floods were of short duration and did not flood significant areas of the site. In mid-September, a record flood affected the site. The unprecedented stage of 153.4 m (503.3 ft) deeply inundated the entire site. This flood, which peaked on September 16, was also of short duration (six days over bankfull). As in previous years, the flood duration itself was not sufficient to meet wetland hydrology criteria, nor did widespread areas of the site retain water for sufficient periods after the flood to do so.

As in previous years, perennial water bodies such as the creek channels were not included in areas having met wetland hydrology criteria.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue until no longer required by IDOT.
Morris, Illinois River Wetland Bank Site
General Study Area and Vicinity
from the USGS Topographic Series, Morris, IL 7.5-minute Quadrangle (USGS 1993)
contour interval is 5 feet
Morris, Illinois River Wetland Bank Site
Site Topographic Map (IDOT / INHS)
contours prepared by Illinois Natural History Survey in May 2000, using IDOT survey data
Map based on USGS digital orthophotograph, Morris NE quarter quadrangle
from 4/5/1998 aerial photography (ISGS 2001)
Morris, Illinois River Wetland Bank Site
Estimated Areal Extent of 2008 Wetland Hydrology
based on data collected between September 1, 2007 and October 8, 2008
Map based on USGS digital orthophotograph, Morris NE quarter quadrangle
from 4/5/1998 aerial photography (ISGS 2001)
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Water-Level Elevations
in Soil-Zone Monitoring Wells, Data Loggers, and Stage Gauges
South of the Mazon River

Elevation (in m referenced to NAVD, 1988)

Well 11SR
Well 12S
Well 16S
Well 18SR
Well 36S
Gauge SW5fR
Gauge SW2A
Gauge SW10f
SW2I Mazon River
(Infinities)
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Depth to Water
in Soil-Zone Monitoring Wells
South of the Mazon River

Depth (in m referenced to land surface)

Well 11SR
Well 12S
Well 16S
Well 18SR
Well 36S
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Water-Level Elevations
in Soil-Zone Monitoring Wells, Data Loggers, and Stage Gauges
North of the Mazon River

Elevation (in m referenced to NAVD, 1988)

Well 24S
Well 26S
Well 27S
Well 28S
Well 32S
Well 33S
Well 35SR2
Well 49S
Well 50S
Well 51SR
Well 52S
Well 53S
Well 54SR
Well 55SR
Well 58S
Well 59S

Gauge SW2A
SW2I Mazon River (Infinities)
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Water-Level Elevations
in Soil-Zone Monitoring Wells, Data Loggers, and Stage Gauges
in the East Field and near the Natural Slough

Elevation (in m referenced to NAVD, 1988)
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Depth to Water
in Soil-Zone Monitoring Wells and Data Loggers
in the East Field and near the Natural Slough

Depth (in m referenced to land surface)

Well 21SR  Well 22S  Well 22VS  Well 23S  Well 40S  Well 41S  Well 42S  Well 43S  Well 43VS  Well 44S  Well 44VS  Well 56SR  Well 57S  Well 60S

water not detected

SW8-RDS
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Water-Level Elevations
in Monitoring Wells, Data Loggers, and Stage Gauges
near the Illinois River Floodplain Forest

Elevation (in m referenced to NAVD, 1988)

- Well 38S
- Well 39S
- Well 45S
- Well 45VS
- Well 46SR2
- Well 47S
- Well 47VS
- Well 48SR2
- Well 61S
- Well 62S
- Well 63S
- Gauge SW11f
- Gauge SW12f

Illinois River at USACE Gauge
Illinois River flood stage at USACE Gauge
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Water-Level Elevations
in Selected Data Loggers

Elevation (in m referenced to NAVD, 1988)

- Illinois River flood stage at USACE Gauge
- Illinois River at USACE Gauge
- SW2I Mazon River (Infinities)
Morris, Illinois River Wetland Bank Site
September 1, 2007 to November 1, 2008

Depth to Water
in Monitoring Wells
near the Illinois River Floodplain Forest

Depth (in m referenced to land surface)

Well 38S
Well 39S
Well 45S
Well 45VS
Well 46SR2
Well 47S
Well 47VS
Well 48SR2
Well 61S
Well 62S
Well 63S
Morris, Illinois River Wetland Bank Site
September 1, 2007 through October 8, 2008
Total Monthly Precipitation Recorded On Site and at the
Channahon, IL and Morris, IL Weather Stations

on-site rain gauge
prior gauge removed 04/01/2008
calibrated gauge installed 04/01/2008

Graph last updated October 8, 2008