



**EDWARDS RIVER, MERCER COUNTY
WETLAND COMPENSATION SITE**

ISGS #50

FAP 310

Mercer County, near Boden, Illinois

Primary Project Manager: Steven E. Benton

Secondary Project Manager: Keith W. Carr

SITE HISTORY

- May 1996: ISGS submitted an Initial Site Evaluation Report to IDOT.
- Spring 1999: ISGS began post-construction monitoring.
- Fall 1999: 11 sediment traps were added to the site.
- April 2005: A berm was constructed at the northwest corner of the site by IDOT in order to increase the depth and duration of water retention on the site.

WETLAND HYDROLOGY CALCULATION FOR 2006

We estimate that the portion of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5%, and greater than 12.5%, of the growing season was 0.0 ha (0.0 ac) out of a total area of 1.51 ac (0.61 ha). These estimates are based on the following factors:

- According to the Midwestern Climate Center, the median date that the growing season begins in nearby Aledo, Illinois, is April 11 and the season lasts 195 days; 5% of the growing season is 10 days and 12.5% of the growing season is 24 days.
- Total precipitation for the monitoring period was 30.41 inches, which was 85% of normal. Precipitation was at or above normal in September 2005, and in January, March, April, and August 2006. Total precipitation in April, May, and June was 8.72 inches, which was 72% of normal.
- The monitoring wells at the site were generally dry throughout the monitoring period. Therefore, the wetland hydrology criteria for ground water was not satisfied because the depth to ground water was generally greater than 30 cm (12 inches). Ground water at depths less than 30 cm (12 inches) was detected for brief periods in April and May by the data logger in well RDS 2, however, the longest period was only 6 days, which is only 3% of the growing season.
- Surface water levels measured by RDS 1 reveal that inundation did not occur on the site during the monitoring period. In addition, river stage measured by the Infinities data logger reveal that Edwards River did not get high enough during the monitoring period to flood the site.

ADDITIONAL INFORMATION

- Edwards River did not exceed the elevation necessary to flood the site, therefore, no riverine sediments were deposited on the site during the monitoring period.

- A berm was constructed in April 2005 in order to increase the depth and duration of surface-water retention on the site, and thereby increase the area satisfying wetland hydrology criteria. However, the lack of a flood event on Edwards River during the 2006 growing season made it impossible to determine the effect of the berm on the hydrology of the site.

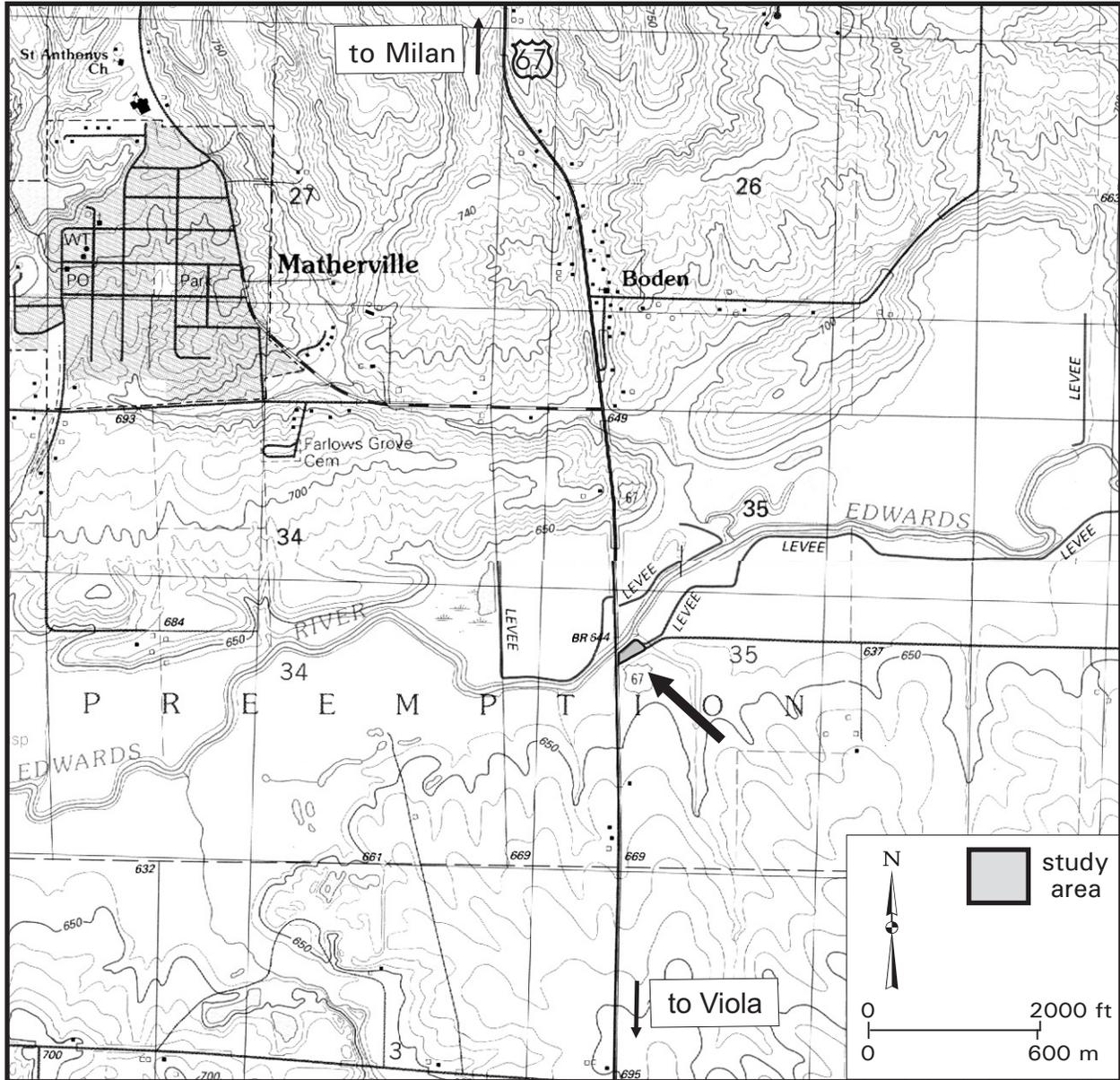
PLANNED FUTURE ACTIVITIES

- Monitoring of hydrology and sediment deposition will continue until no longer required by IDOT.

Edwards River, Mercer County Wetland Compensation Site (FAP 310)

General Study Area and Vicinity

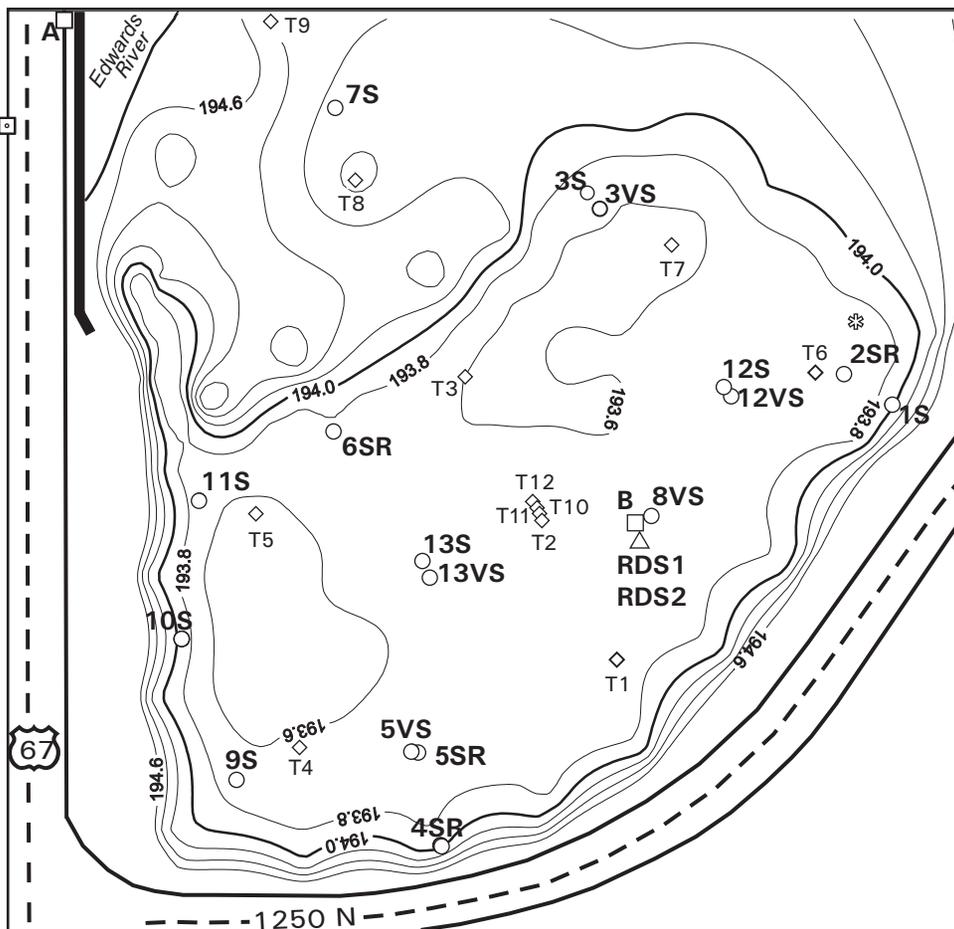
from the USGS Topographic Series, Viola, IL (USGS 1992) and
Matherville, IL (USGS 1991) 7.5-minute Quadrangles
contour interval is 10 ft



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Estimated Areal Extent of 2006 Wetland Hydrology
 based on data collected between September 1, 2005 and September 1, 2006
 Map based on 2002 ISGS elevation survey referenced to NGVD, 1929

contour interval is 0.2 meters



2006 Wetland Hydrology

-  > 12.5% of the growing season
-  > 5% of the growing season

-  soil-zone wells
-  Infinities sonic data logger
-  stage gauge
-  RDS data logger
-  rain gauge
-  sediment trap

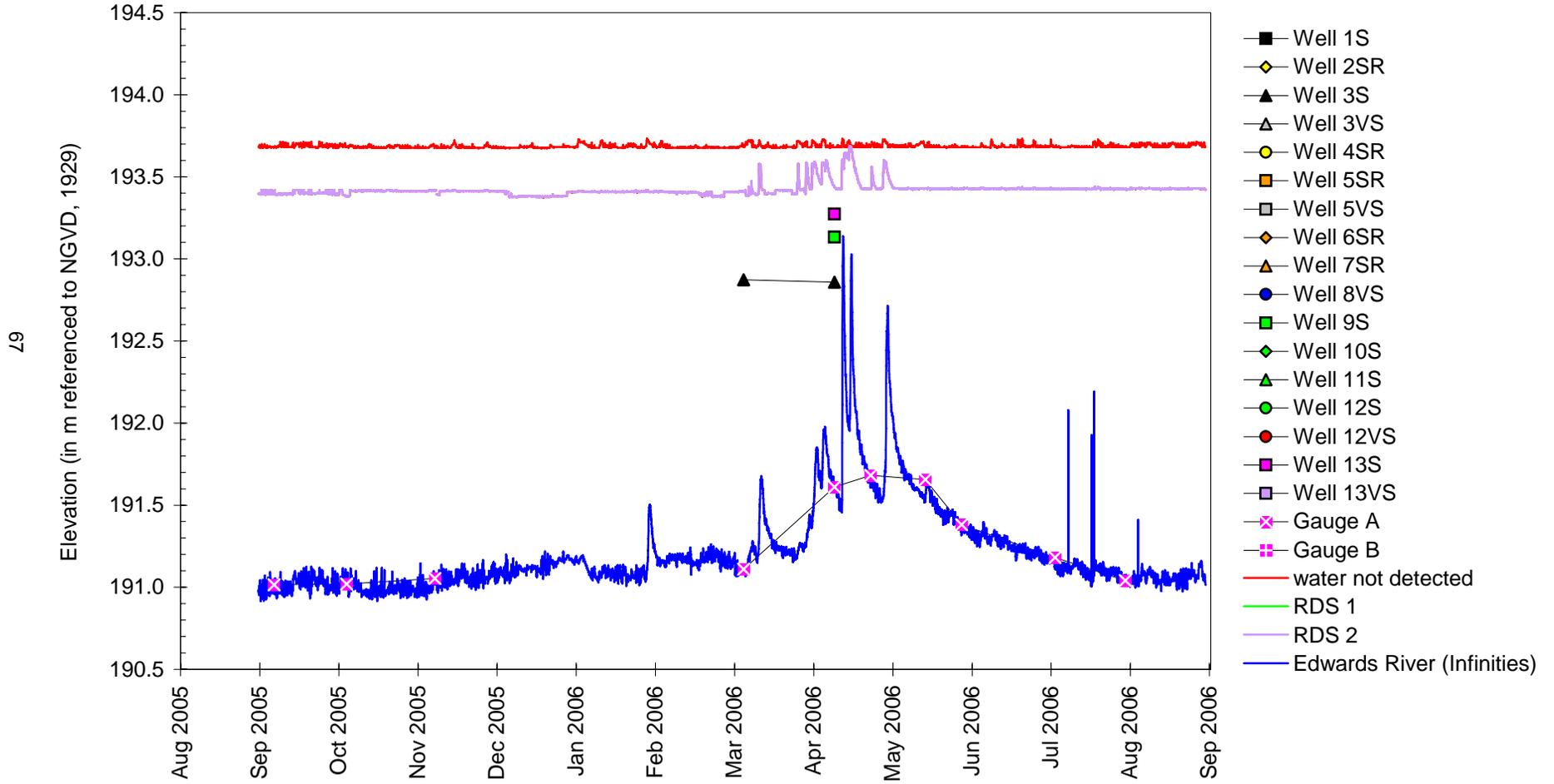




Edwards River, Mercer County Wetland Compensation Site

September 1, 2005 to September 1, 2006

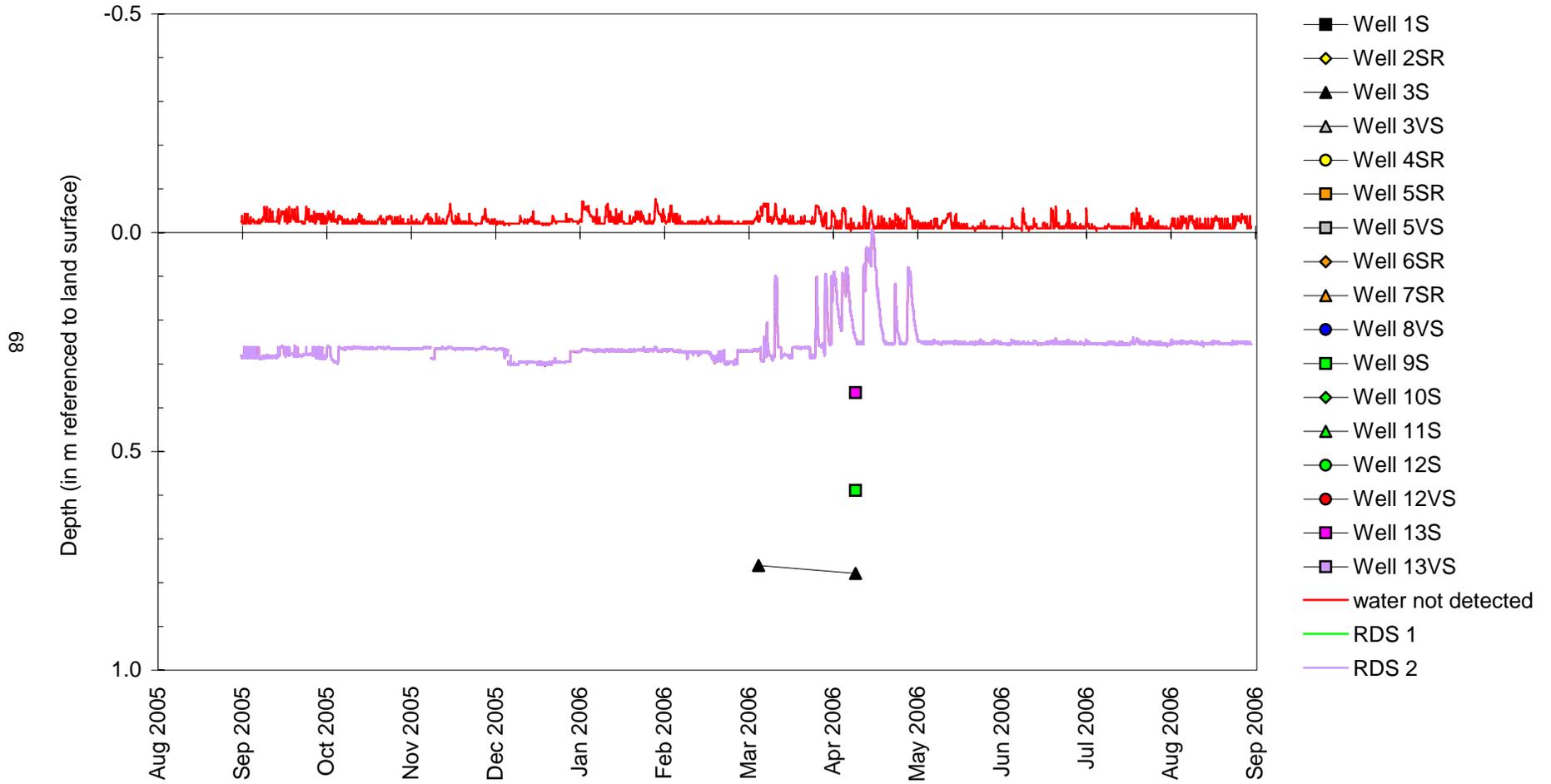
Water-Level Elevations



Edwards River, Mercer County Wetland Compensation Site

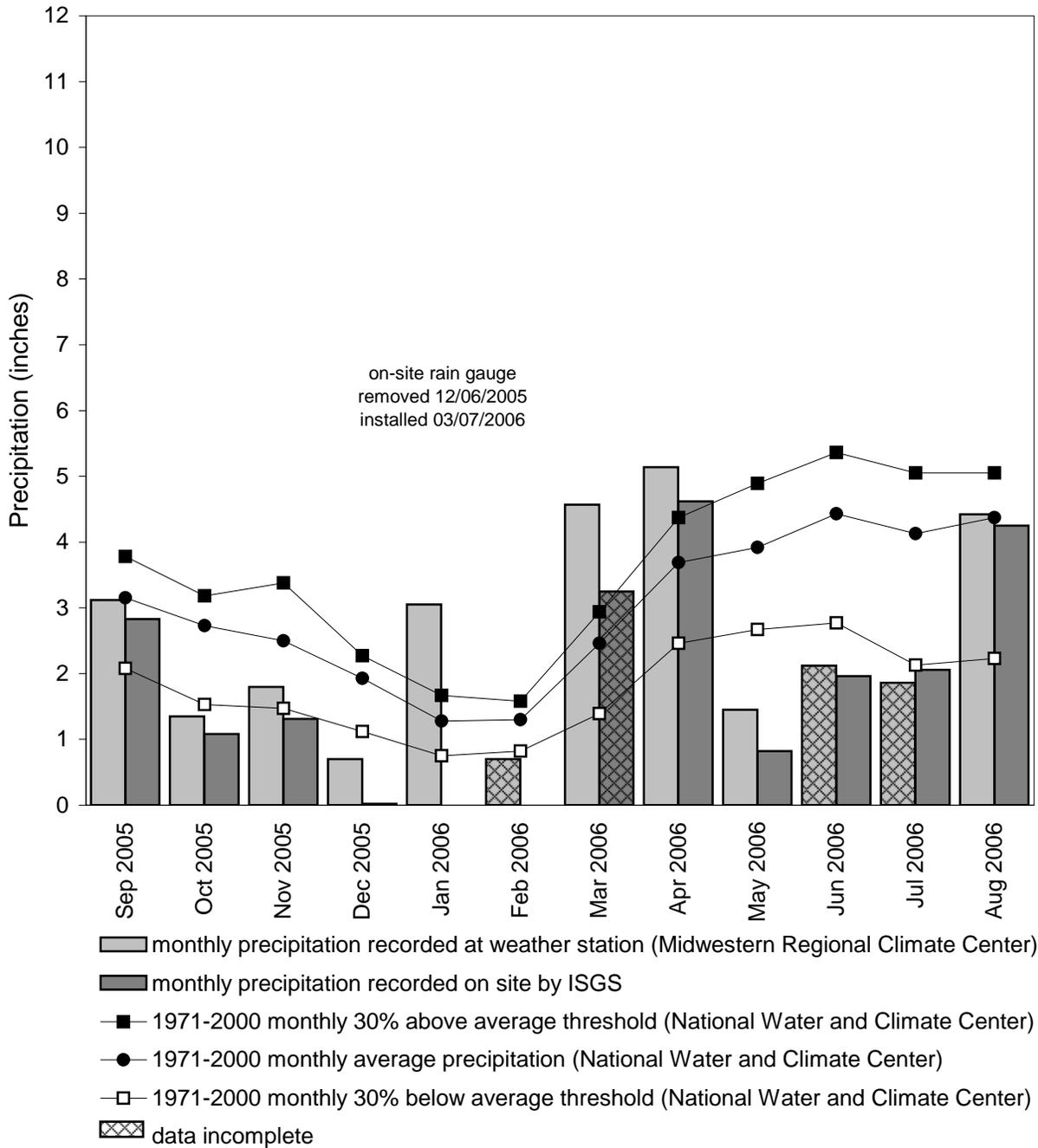
September 1, 2005 to September 1, 2006

Depth to Water



Edwards River, Mercer County Wetland Compensation Site September 2005 through August 2006

**Total Monthly Precipitation Recorded On Site and at the
Aledo, IL Weather Station**



Graph last updated October 13, 2006