



**HANCOCK COUNTY NEAR CARTHAGE
POTENTIAL WETLAND COMPENSATION SITE**

ISGS #42

FAP 315 & 10

Hancock County, near Carthage, Illinois

Primary Project Manager: Steven E. Benton

Secondary Project Manager: not assigned

SITE HISTORY

- March 1997: IDOT tasked ISGS to monitor the site.
- February 1998: ISGS installed monitoring wells and began a Level II hydrogeologic characterization of the site.
- August 2000: ISGS presented a summary of hydrologic data gathered to-date and participated in general site discussion at a planning meeting with IDOT and Christopher B. Burke Engineering, Ltd. The meeting included discussion of wetland design concerns and construction ideas for the final compensation plan at the site.
- August 2004: A Level II hydrogeologic characterization report was submitted to IDOT (ISGS Open File Series 2004-13).

WETLAND HYDROLOGY CALCULATION FOR 2005

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for more than 5% of the 2005 growing season was estimated to be 6.0 ha (14.9 ac) out of an area of 17.9 ha (44.3 ac). The area of the site that satisfied wetland hydrology criteria for more than 12.5% of the growing season was estimated to be 5.7 ha (14.1 ac). These estimates are based on the following factors:

- According to the Midwestern Climate Center, the median date that the growing season begins in nearby La Harpe, Illinois, is April 9 and the season lasts 196 days; 5% of the growing season is 10 days and 12.5% of the growing season is 25 days.
- Total precipitation recorded at Bentley, Illinois during the 2005 monitoring period was 35.88 inches, which was 97% of normal. Precipitation in October 2004, November 2004, January 2005, February 2005, April 2005, and August 2005 was at or above normal, although precipitation for the period of March 2005 to August 2005 was only 72% of normal.
- In 2005, water levels measured in wells 1U, 2U, 3U, 4U, 5U, 6U, 7S, 8U, 14S, and 16S satisfied the wetland hydrology criteria for more than 5% of the growing season, and, except for 7S, water levels measured in these wells also satisfied the wetland hydrology criteria for more than 12.5% of the growing season.
- Surface-water elevations measured at RDS 1 reveal that inundation occurred at an elevation of 165.35 m (542.49 ft) for more than 12.5% of the growing season, and at 165.37 m (542.55 ft) for more than 5% of the growing season. At RDS 2, inundation occurred at an elevation of 165.57 m (543.21 ft) for more than 12.5% of the growing

season, and at an elevation of 165.65 m (543.47 ft) for more than 5% of the growing season. At RDS 3, inundation did not occur for any significant period of time.

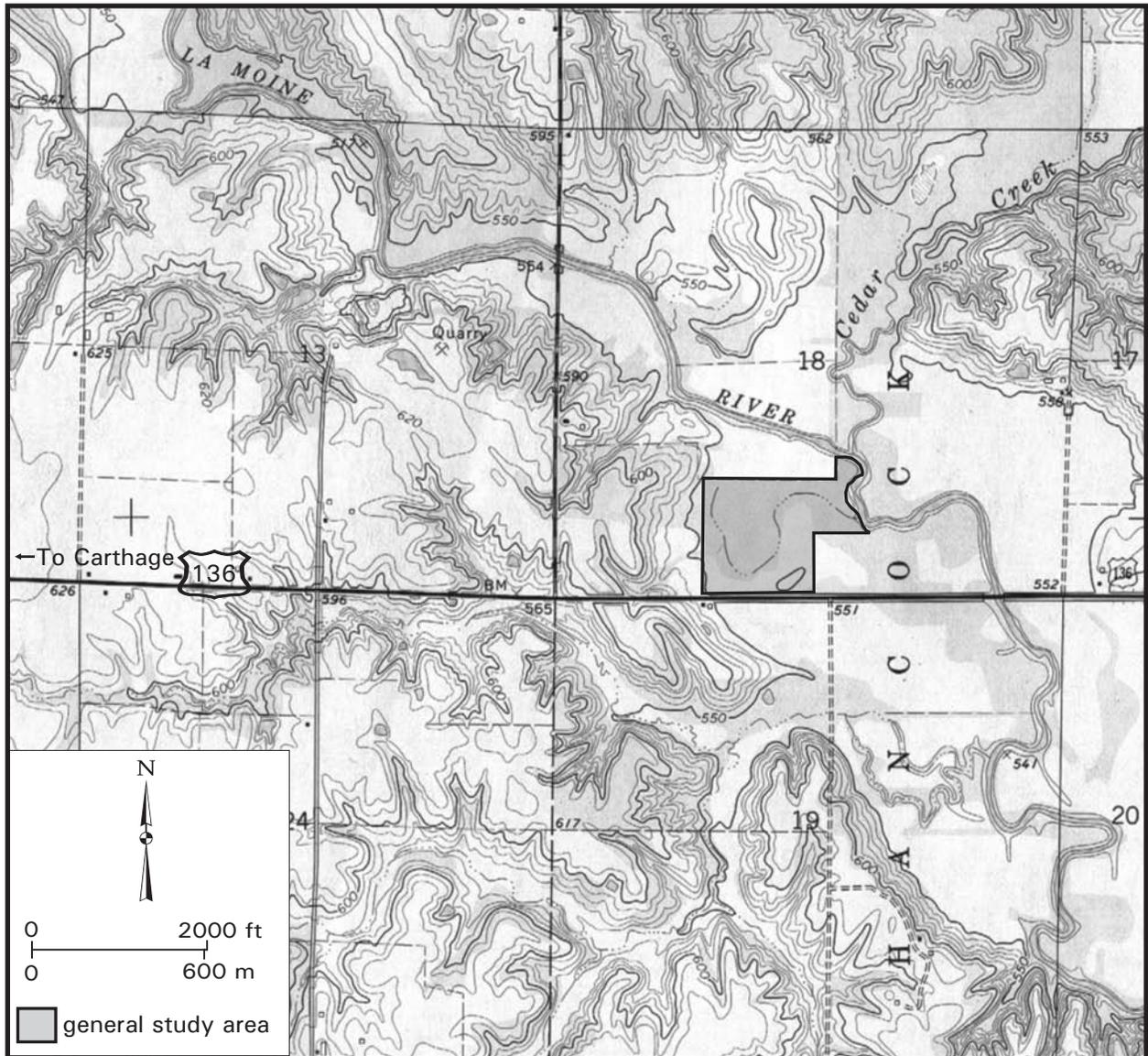
PLANNED FUTURE ACTIVITIES

- Monitoring of the site will continue until no longer required by IDOT.

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(FAP 315 and FAP 10)**

General Study Area and Vicinity

from the USGS Topographic Series, Carthage East, IL 7.5-minute Quadrangle (USGS 1974)
contour interval is 10 feet

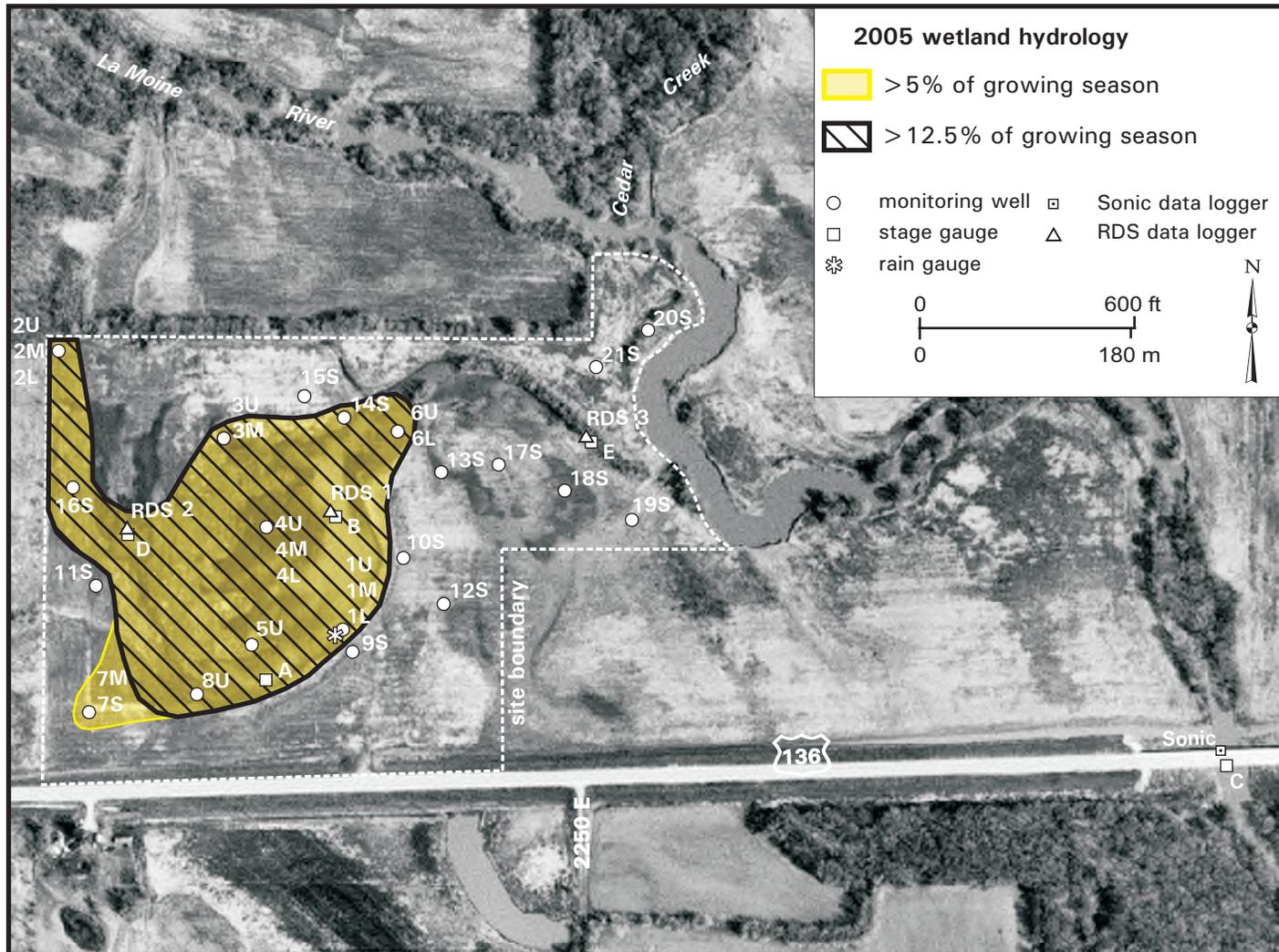


Hancock County near Carthage Potential Wetland Compensation Site (FAP 315 and FAP 10)

Extent of 2005 Wetland Hydrology

based on data collected between September 1, 2004 and September 1, 2005

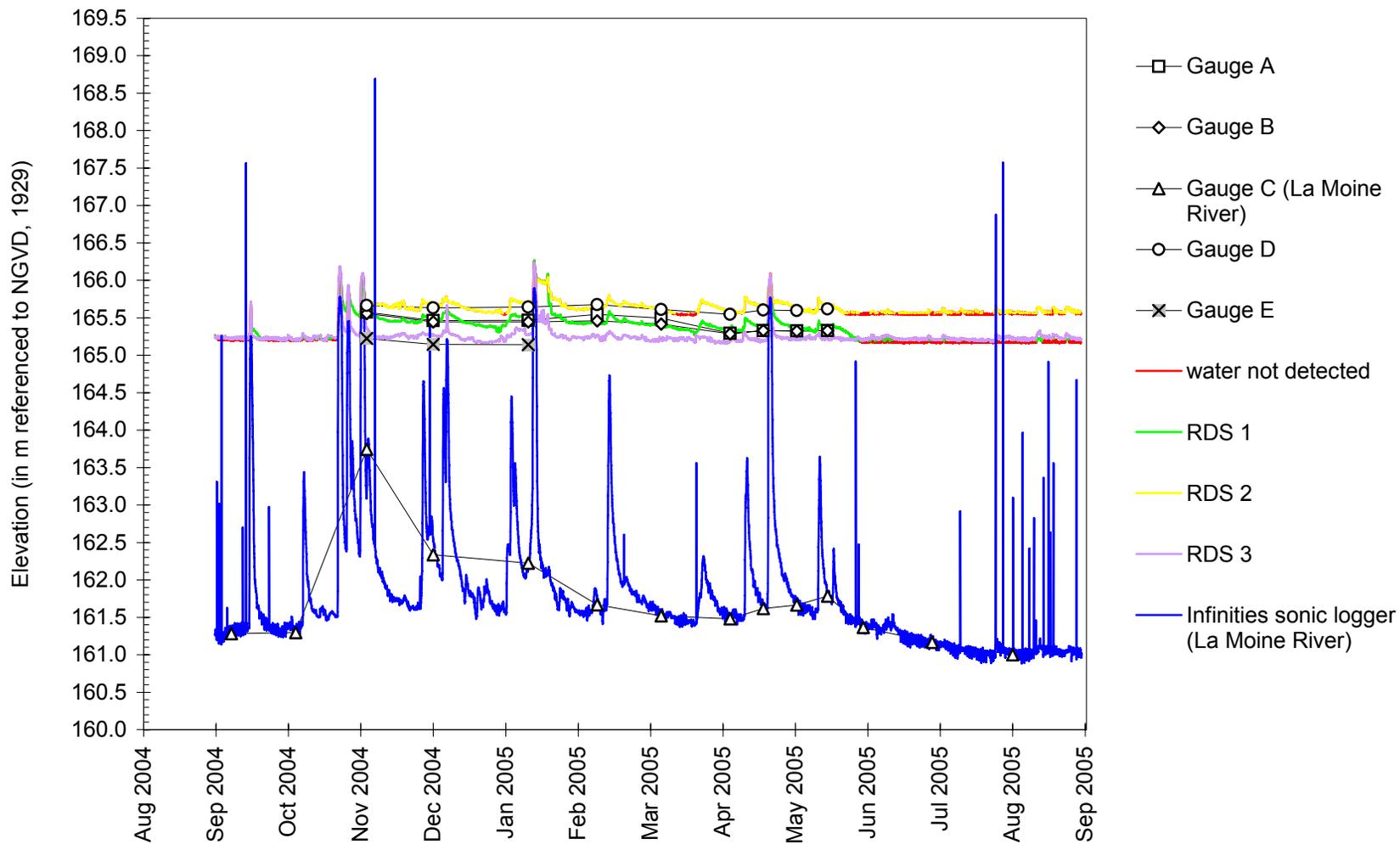
Map based on USGS digital orthophotograph Carthage East, SE quarter quadrangle
produced from 4/14/98 aerial photography (ISGS 2002)



Hancock County near Carthage Potential Wetland Compensation Site

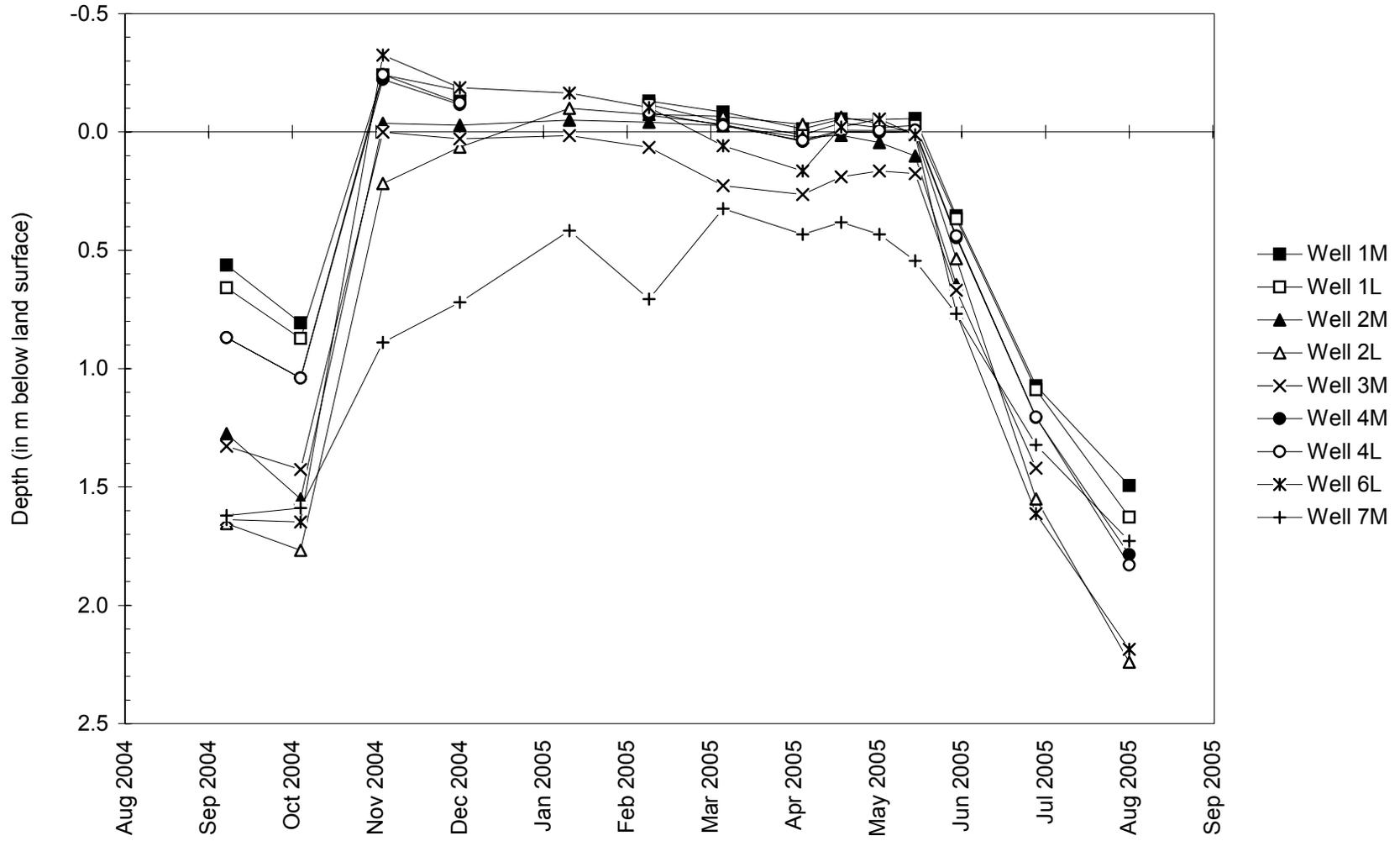
September 1, 2004 to September 1, 2005

Water-Level Elevations on Stage Gauges and at Data Loggers



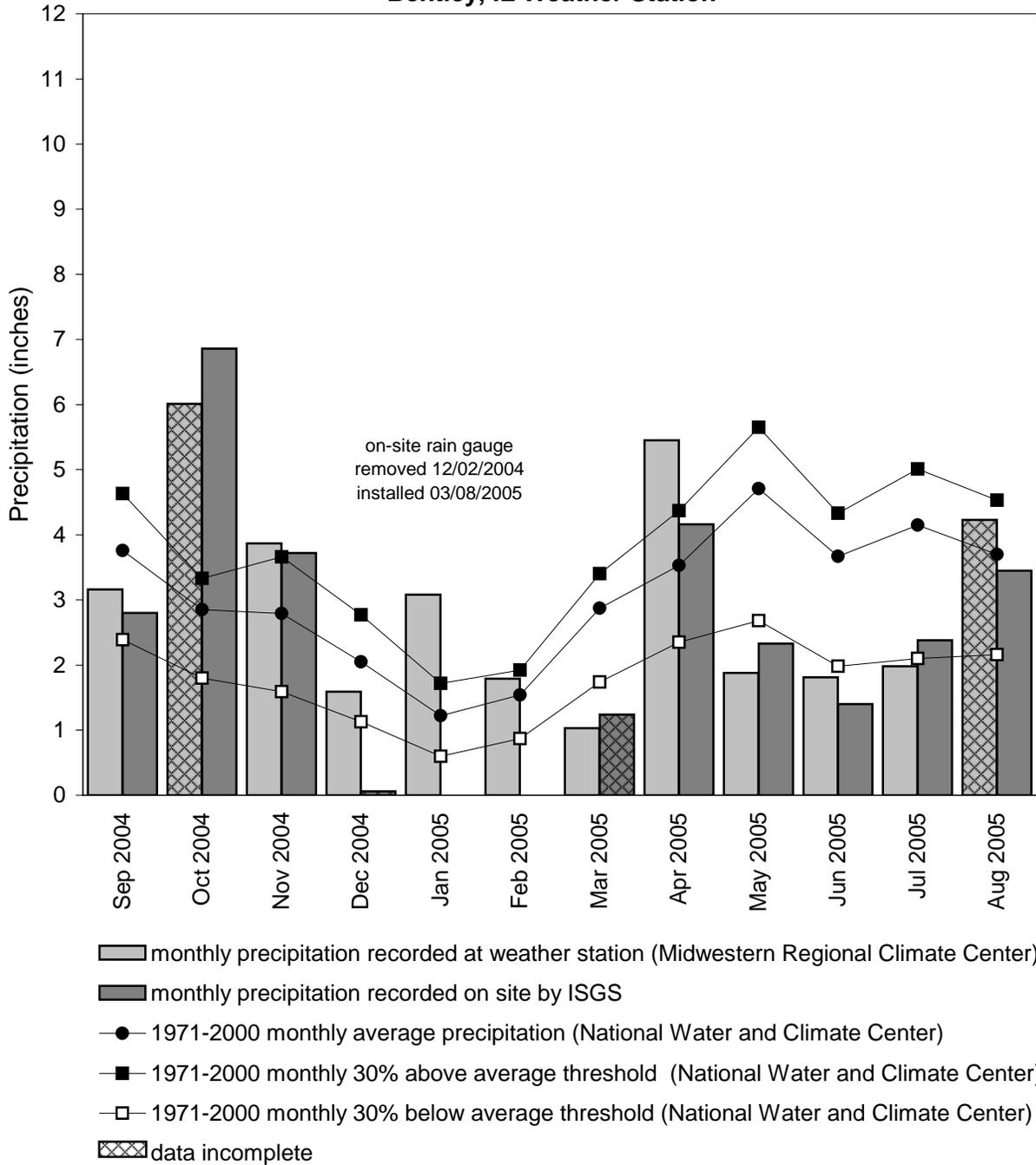
Hancock County near Carthage Potential Wetland Compensation Site September 1, 2004 to September 1, 2005

Depth to Water in Deeper Monitoring Wells



Hancock County near Carthage Potential Wetland Compensation Site September 2004 through August 2005

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



Graph last updated October 24, 2005