



**DE SOTO
WETLAND COMPENSATION SITE**

ISGS #68

FAP 322

Sequence #264

Jackson County, near De Soto, Illinois

Primary Project Manager: Geoffrey E. Pociask

Secondary Project Manager: not assigned

SITE HISTORY

- Summer 2000: The wetland compensation site was constructed.
- August 2002: ISGS was tasked by IDOT to monitor wetland hydrology. Post-construction water-level monitoring was initiated in November 2002.
- July 2007: IDOT held a site review meeting and proposed closure of this site after the 2007 monitoring season.
- September 2007: ISGS was notified by IDOT to end monitoring.

WETLAND HYDROLOGY CALCULATION FOR 2007

We estimate that 2.2 ha (5.4 ac) out of the 2.4-ha (6.0-ac) site area satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2007, whereas 1.8 ha (4.4 ac) satisfied wetland hydrology for greater than 12.5% of 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 Carbondale, Illinois, is April 4 and lasts 203 days; 5% of the growing season is 10 days and 12.5% of the growing season is 25 days.
- Total precipitation for the reporting period from September 2006 through August 2007 was 101% of normal. Drier than normal conditions prevailed in March, April, May, July, and August 2007. Precipitation was at or above normal in September 2006 through February 2007.
- In 2007, all S-wells satisfied wetland hydrology criteria for greater than 5% of the growing season. Furthermore, wells 2S, 3S, 5S, 6S, 8S and 9S satisfied the wetland hydrology criteria for greater than 12.5% of the growing season.
- The water levels recorded at gauge A indicate that areas in the vicinity of that gauge below approximately 110.5 m (362.5 ft) were inundated for greater than both 5% and 12.5% of the growing season and therefore satisfy wetland hydrology criteria.

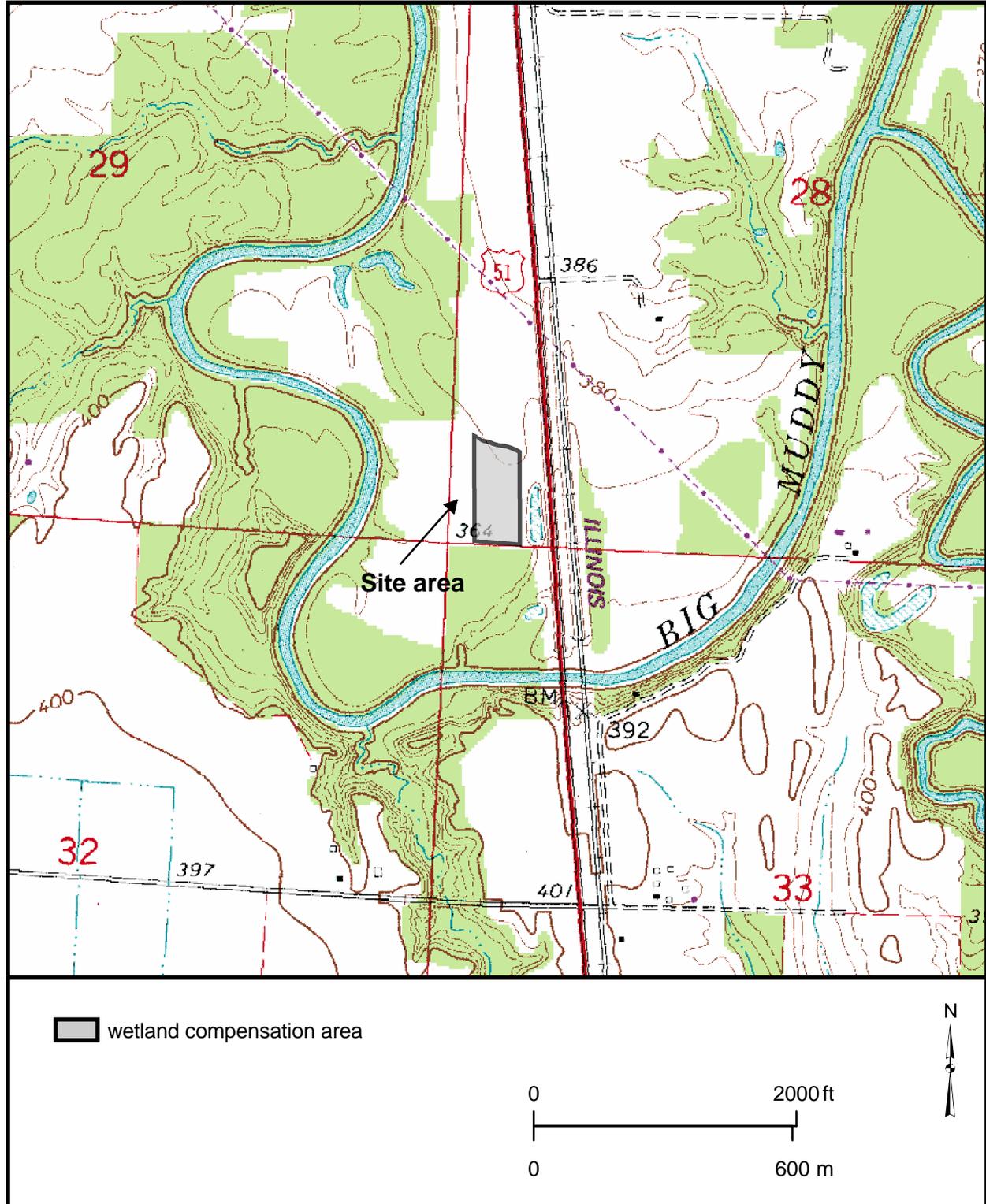
PLANNED FUTURE ACTIVITIES

- Water-level monitoring has been discontinued by IDOT. The ISGS will remove monitoring equipment during Fall 2007.

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General Study Area and Vicinity

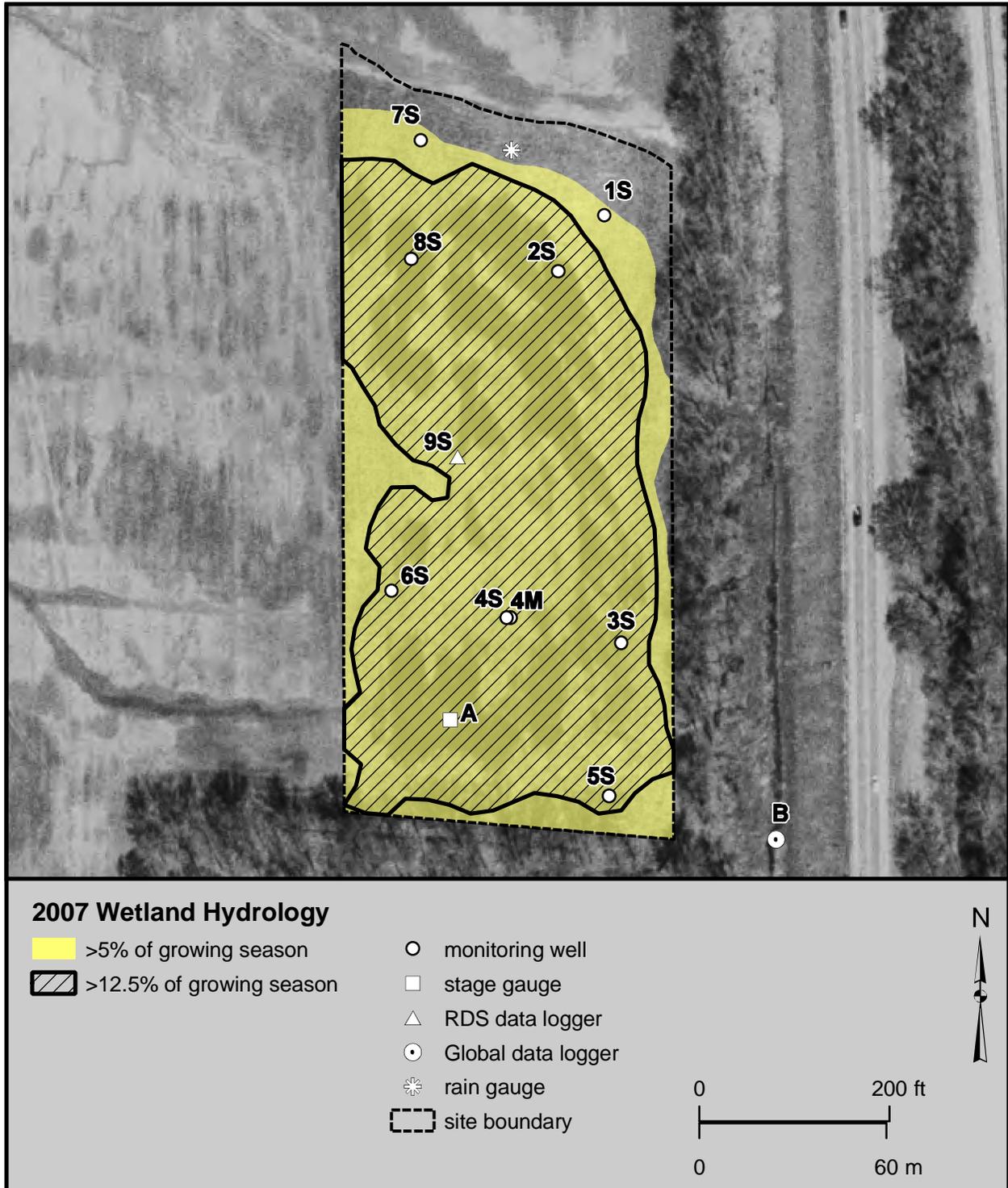
from the USGS Topographic Series, De Soto, IL 7.5-minute Quadrangle (USGS 1968; photorevised 1978)
contour interval is 10 feet



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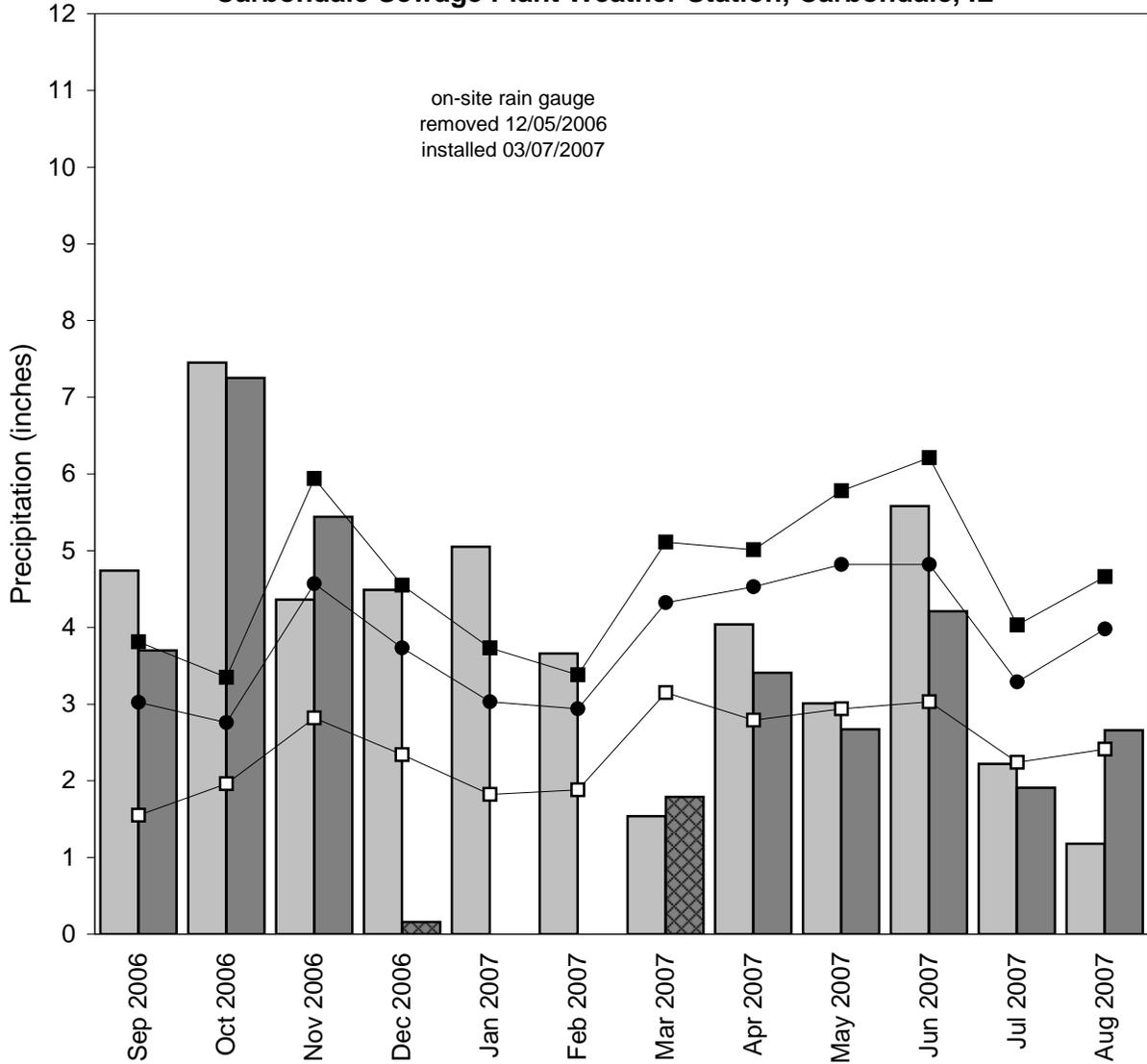
Estimated Areal Extent of 2007 Wetland Hydrology
based on data collected between September 1, 2006 and September 1, 2007

map based on USGS digital orthophotograph De Soto NW quarter quadrangle
from 3/31/2005 aerial photography and ISGS topography (ISGS 2006)



De Soto Wetland Compensation Site September 2006 through August 2007

Total Monthly Precipitation Recorded On Site and at the Carbondale Sewage Plant Weather Station, Carbondale, IL



- monthly precipitation recorded at weather station (Midwestern Regional Climate Center)
- monthly precipitation recorded on site by ISGS
- 1971-2000 monthly 30% above average threshold (National Water and Climate Center)
- 1971-2000 monthly average precipitation (National Water and Climate Center)
- 1971-2000 monthly 30% below average threshold (National Water and Climate Center)
- data incomplete