



**PYATTS BLACKTOP
WETLAND COMPENSATION SITE**

ISGS #67

FAP 42

Sequence #409

Perry County, near Pyatts, Illinois

Primary Project Manager: Geoffrey E. Pociask

Secondary Project Manager: not assigned

SITE HISTORY

- Fall 1998: The wetland compensation site was constructed.
- April 2002: ISGS was tasked by IDOT to monitor wetland hydrology. Post-construction water-level monitoring was initiated in May 2002.
- May 2006: IDOT held a site review meeting and proposed closure of this site after the 2006 monitoring season.

WETLAND HYDROLOGY CALCULATION FOR 2006

We estimate that the total area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2006 was 2.0 ha (4.8 ac) of the 6.7-ha (16.4-ac) site, whereas 0.4 ha (1.0 ac) satisfied wetland hydrology for greater than 12.5% of the growing season. These estimates are based on the following factors:

- According to the Midwestern Climate Center, the median date that the growing season begins in nearby Du Quoin, Illinois, is April 5 and the season lasts 207 days; 5% of the growing season is 10 days and 12.5% of the growing season is 26 days.
- Total precipitation for the reporting period from September 2005 through August 2006 was 91% of normal. Drier than normal conditions prevailed in October and December 2005, and in February, April, and June through August 2006. Precipitation was at or above normal in September and November 2005 and in January, March, and May 2006.
- Wells 1S, 2S, 3S, 4S, 5S, 7S, 8S, 9S, 12S, and 12VS satisfied the wetland hydrology criteria for 5% of the growing season. Furthermore, wells 3S, 4S, 7S, 12S, and 12VS also satisfied wetland hydrology criteria for greater than 12.5% of the growing season.
- A data logger in well 15S revealed that water levels dropped below the wetland hydrology depth-to-water range (within 30 cm (1.0 ft) of land surface) for 5 days within the 14-day period between manual readings. Therefore this location did not satisfy wetland hydrology criteria despite two consecutive manual measurements in well 15VS that indicated water levels within 30 cm (1 ft) of land surface.
- Surface-water levels recorded at Gauge D indicated that water levels in the creek remained well below the elevation of the mitigation area, although isolated areas of inundation were observed near wells 3S, 4S, and 12S.
- For the entire post-construction monitoring period of 2002–2006, wells 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 12S and 12VS satisfied the wetland hydrology criteria for greater than 5% of the

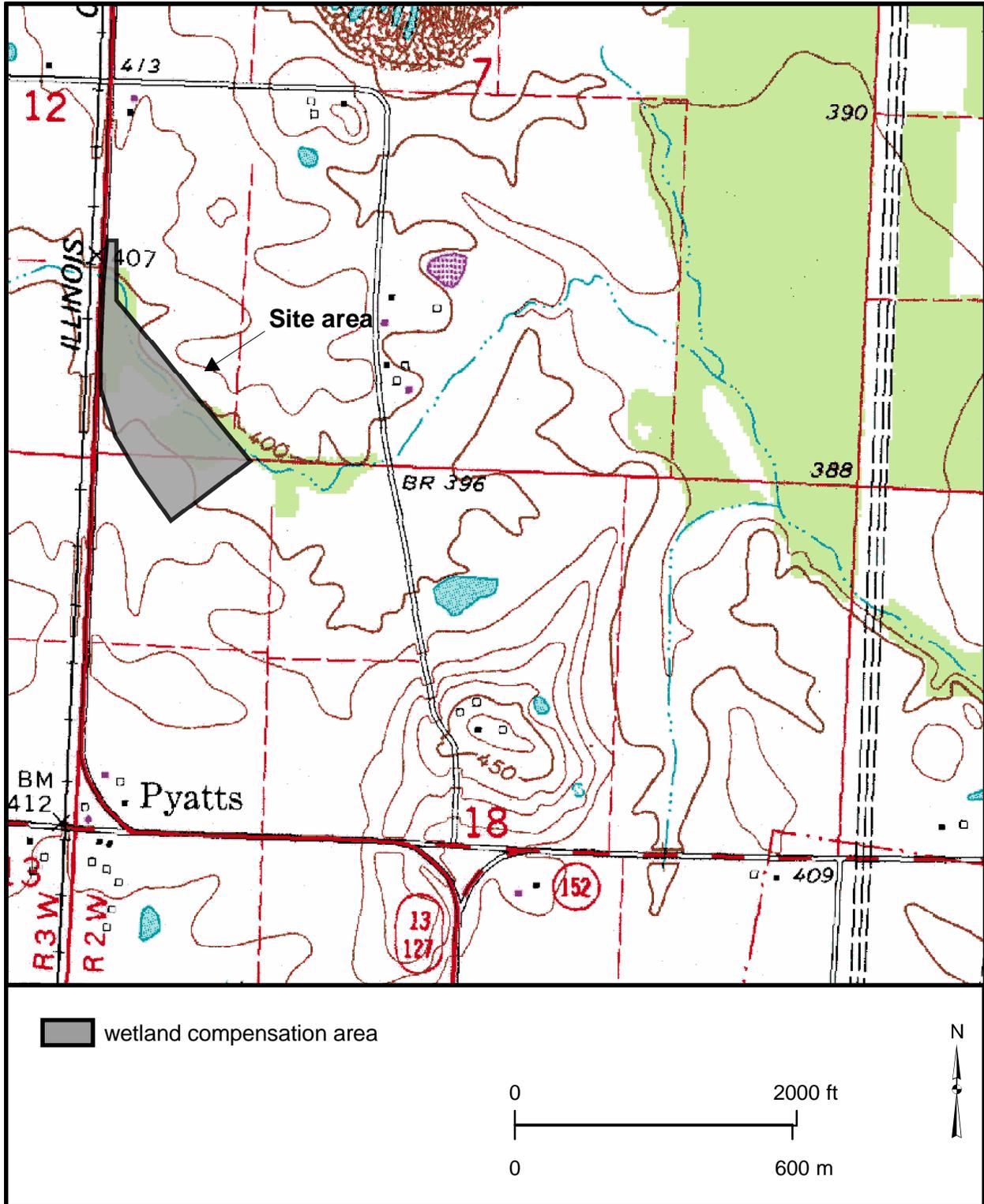
growing season in at least 3 of 5 years. Furthermore, wells 3S, 4S, 7S also satisfied the wetland hydrology criteria for greater than 12.5% of the growing season in at least 3 of 5 years, and wells 12S and 12VS satisfied the 12.5% criteria in at least 2 of 3 years. We estimate that 2.1 ha (5.1 ac) of the 6.7-ha (16.4-ac) site satisfies wetland hydrology criteria for greater than 5% of the growing season, whereas 0.7 ha (1.7 ac) satisfied wetland hydrology for greater than 12.5% of the growing season.

PLANNED FUTURE ACTIVITIES

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

Pyatts Blacktop Wetland Compensation Site (FAP 42) General Study Area and Vicinity

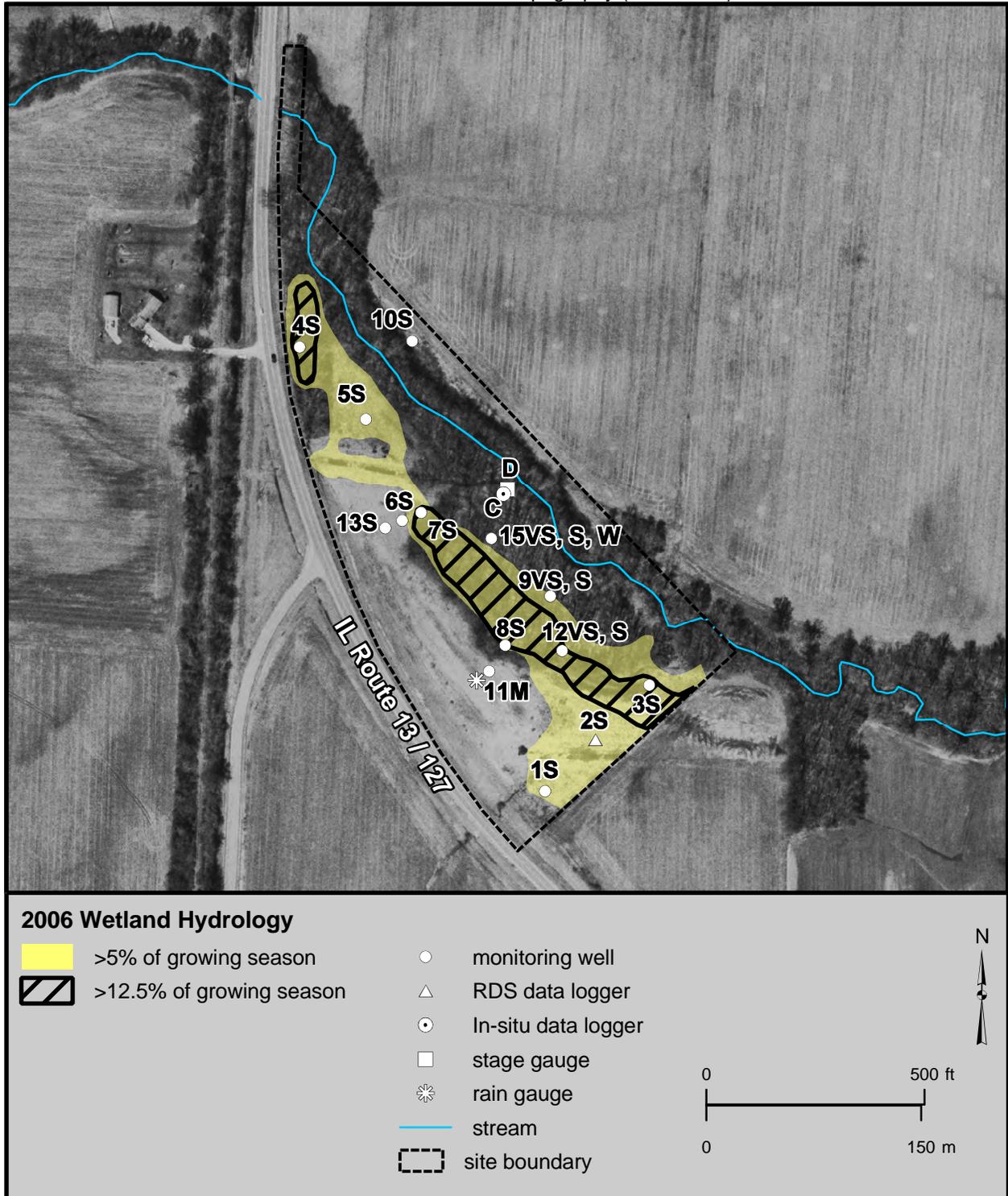
from the USGS Topographic Series, Pyatts, IL (USGS 1974; photorevised 1982) 7.5-minute Quadrangle
contour interval is 10 feet



Pyatts Blacktop Wetland Compensation Site (FAP 42)

Estimated Areal Extent of 2006 Wetland Hydrology
based on data collected between September 1, 2005 and September 1, 2006

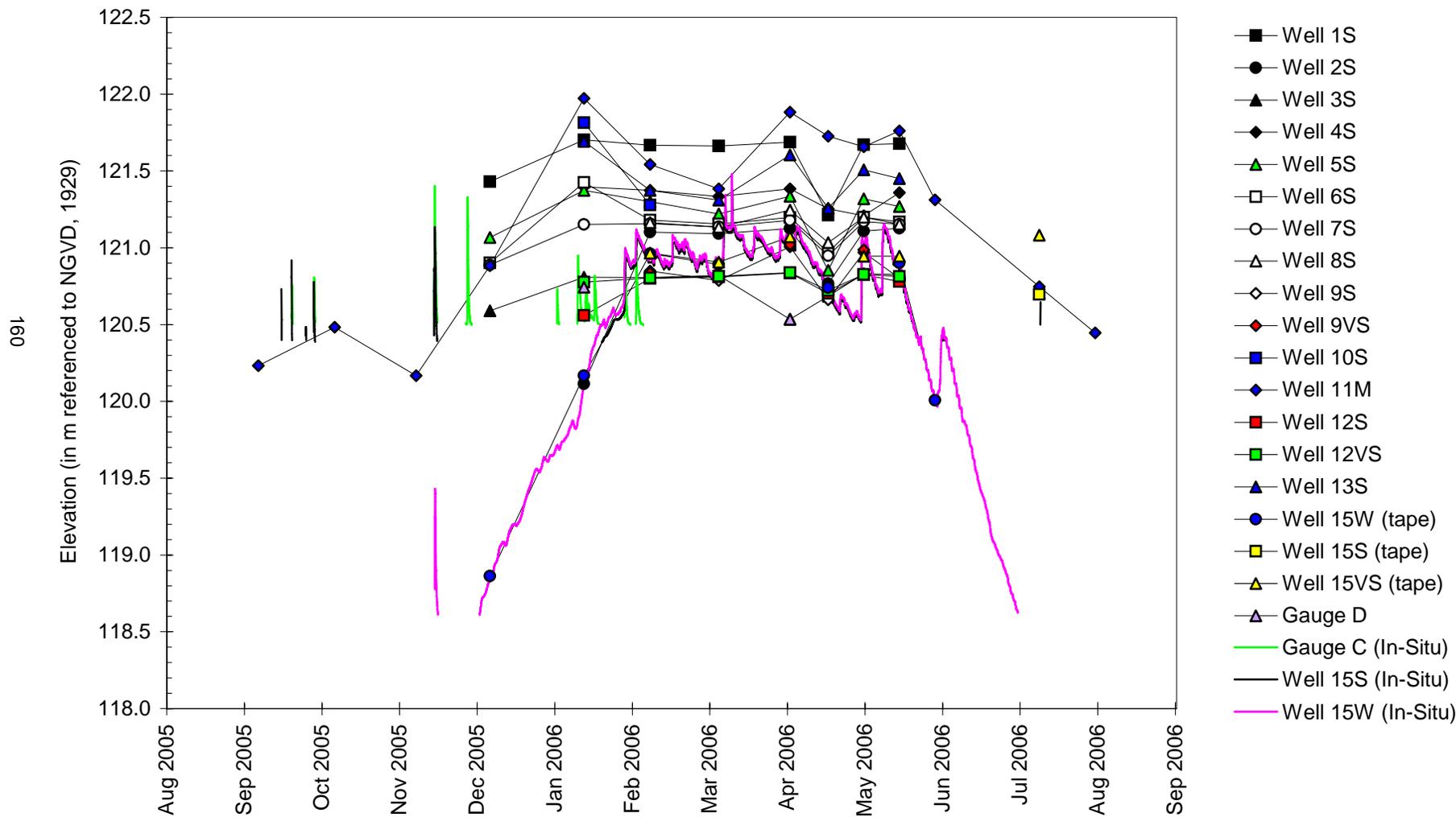
Map based on USGS digital orthophotograph, Pyatts SW quarter quadrangle
from 3/31/2005 and ISGS topography (ISGS 2006)



Pyatts Blacktop Wetland Compensation Site

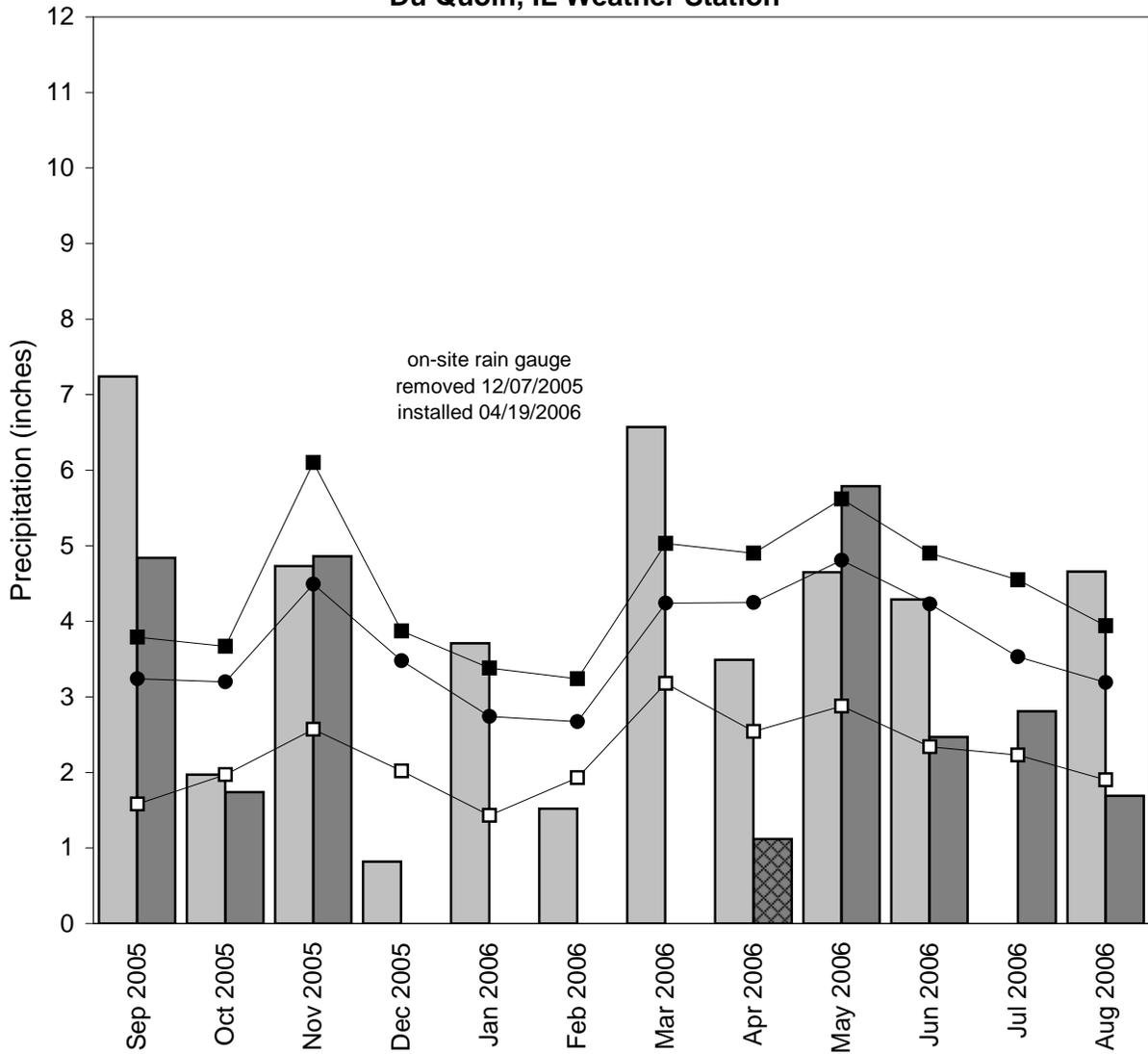
September 1, 2005 to September 1, 2006

Water-Level Elevations



Pyatts Blacktop Wetland Compensation Site September 2005 through August 2006

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



- ▒ 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)
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- 1971-2000 monthly 30% below average threshold (National Water and Climate Center)
- ▒ data incomplete

Graph last updated October 13, 2006