

**PYRAMID SITE EC25  
WETLAND COMPENSATION SITE**

**ISGS #77**

Pyatts Blacktop  
Sequence #9778  
Perry County, near Pinckneyville, Illinois  
**Primary Project Manager: Eric T. Plankell**  
**Secondary Project Manager: not assigned**

**SITE HISTORY**

- June 2007: ISGS was tasked by IDOT to monitor wetland hydrology.
- April 2008: ISGS began on-site monitoring with the installation of a monitoring network.

**WETLAND HYDROLOGY CALCULATION FOR 2008**

The estimated area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2008 growing season is 5.1 ha (12.6 ac) out of a total mitigation area of approximately 5.3 ha (13.1 ac). The estimated area that satisfied wetland hydrology criteria for greater than 12.5% of the 2008 growing season is 1.6 ha (3.9 ac).

- According to the MRCC, 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 monitoring period, as recorded at the weather station in Du Quoin, Illinois, was 117% of normal. Precipitation was normal or above normal in the months of October and December 2007, and February, March, April, May, and July 2008. Precipitation was below normal for the remaining months in the monitoring period. Precipitation recorded at the Du Quoin weather station for the months of February through May 2008 was 181% of normal for those months.
- Gauge B, installed in Little Galum Creek on April 22, 2008, recorded three separate flood events in May and a fourth event in July that were sufficient to inundate the entire site. However, these floods were of short duration, with peaks lasting only a few hours before the creek once again dropped within its banks. Current site conditions allow water to flow from Little Galum Creek across the northern tip of the site and into the ditch along the western site boundary. From there, the water flows south until it crosses back onto the site north of wells 4S/VS, then flows toward well 13VS, and finally flows towards a ditch near the center of the southern edge of the field. This unrestricted flow allows much of the surface water to quickly drain from the site, and thus potentially reduces the amount of acreage that will meet wetland hydrology criteria in subsequent years with more normal precipitation levels.
- In 2008, water levels measured in all soil-zone (S and VS) monitoring wells, except well 2VS, satisfied the wetland hydrology criteria for greater than 5% of the growing season. In addition, water levels in wells 7VS, 7S, 8VS, 9VS, 12VS, and 13VS satisfied wetland hydrology criteria for greater than 12.5% of the growing season.

- For the purposes of this report, the boundary of the mitigation area was derived from Exhibit 7 of the Wetland Compensation Plan (Perry County Highway Department and Illinois Department of Transportation 2006) and best fit to site features.

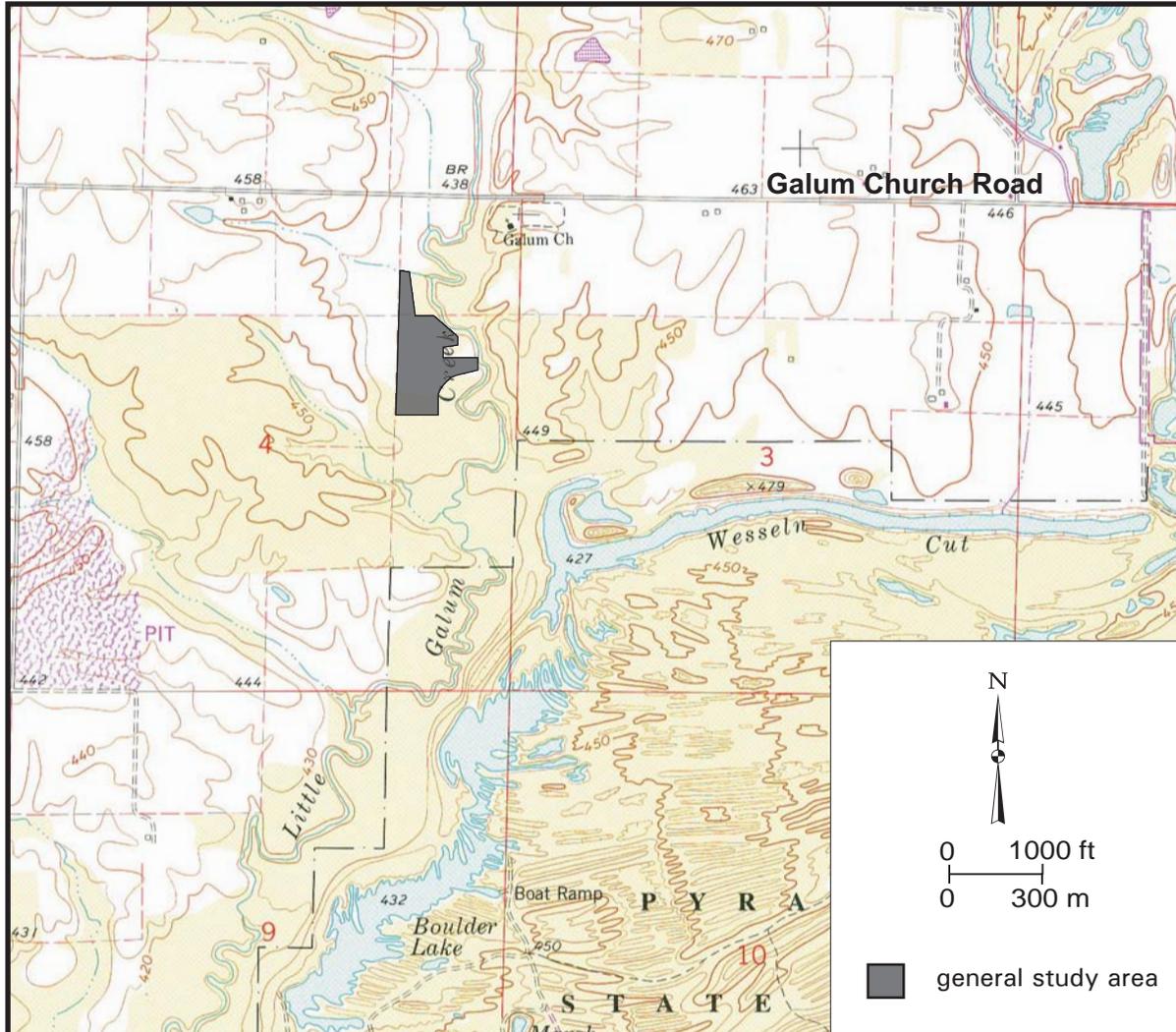
#### PLANNED FUTURE ACTIVITIES

- Additional wells and an on-site surface-water monitoring station will be added during Fall 2008 to better assess the hydrologic aspects of the site.
- Hydrogeologic monitoring will continue at the site until no longer required by IDOT.

# Pyramid Site EC25 Wetland Compensation Site [FAS 864 (Pyatt's Blacktop)]

## General Study Area and Vicinity

from the USGS Topographic Series, Pinckneyville, IL 7.5-minute Quadrangle (USGS 1982)  
contour interval is 10 feet

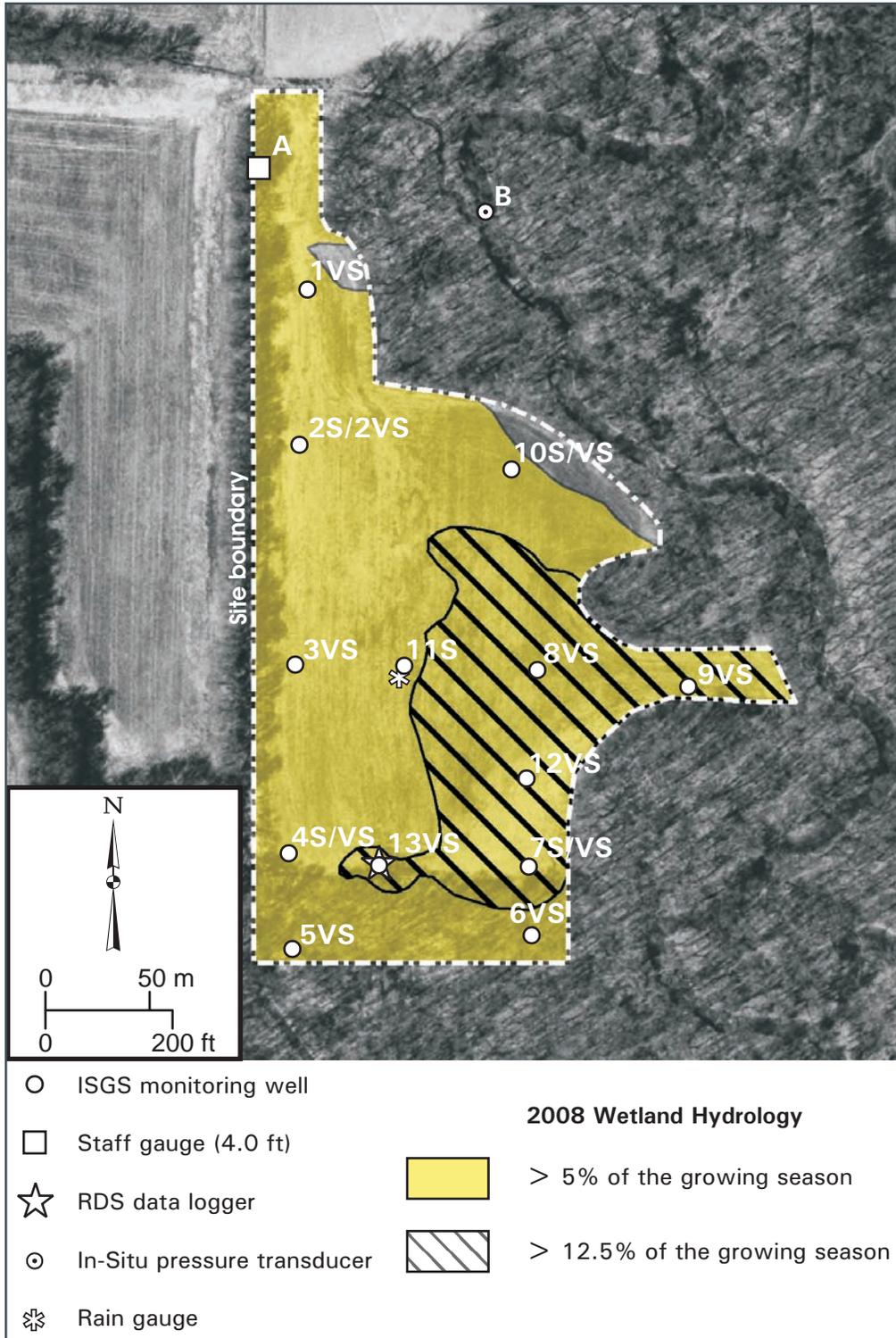


# Pyramid Site EC25 Wetland Compensation Site FAS 864, Pyatt's Blacktop

## Estimated Areal Extent of 2008 Wetland Hydrology

based on data collected between September 1, 2007 and September 1, 2008

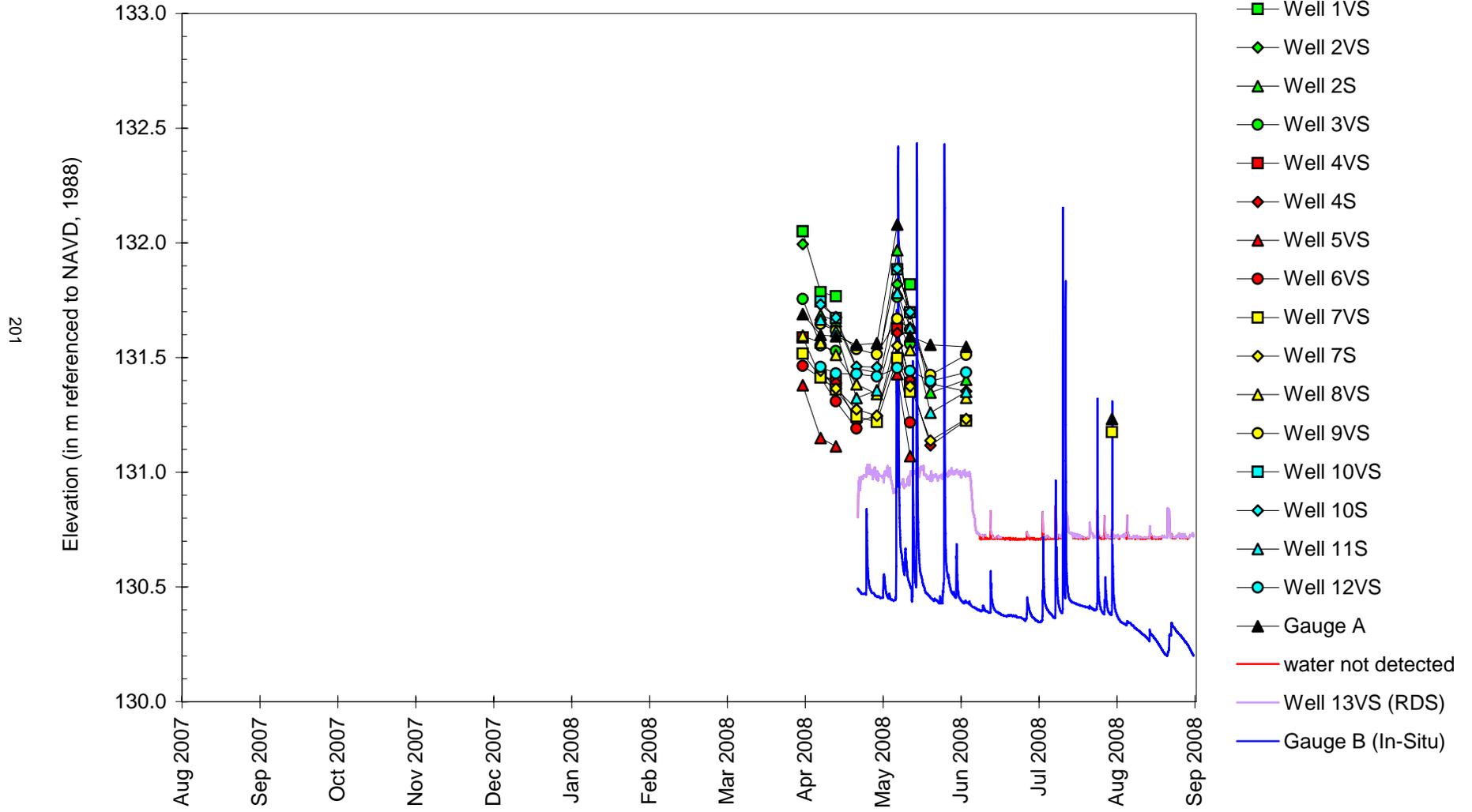
Map based on USGS digital orthophotograph, Pinckneyville, SE quarter quadrangle (ISGS 2005)



# Perry County Wetland Compensation Site, Pyramid Site EC25

September 1, 2007 to September 1, 2008

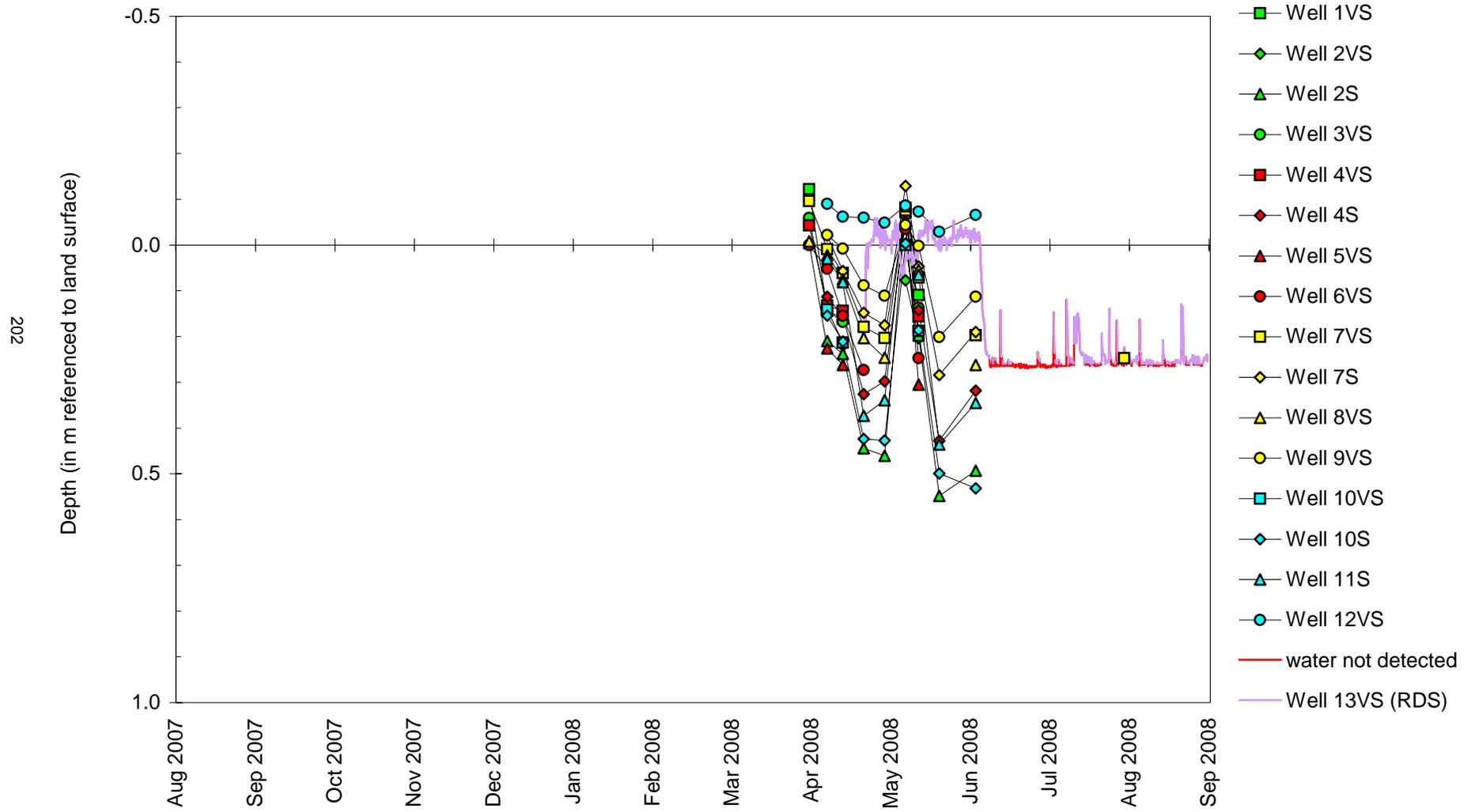
## Water-Level Elevations



# Perry County Wetland Compensation Site, Pyramid Site EC25

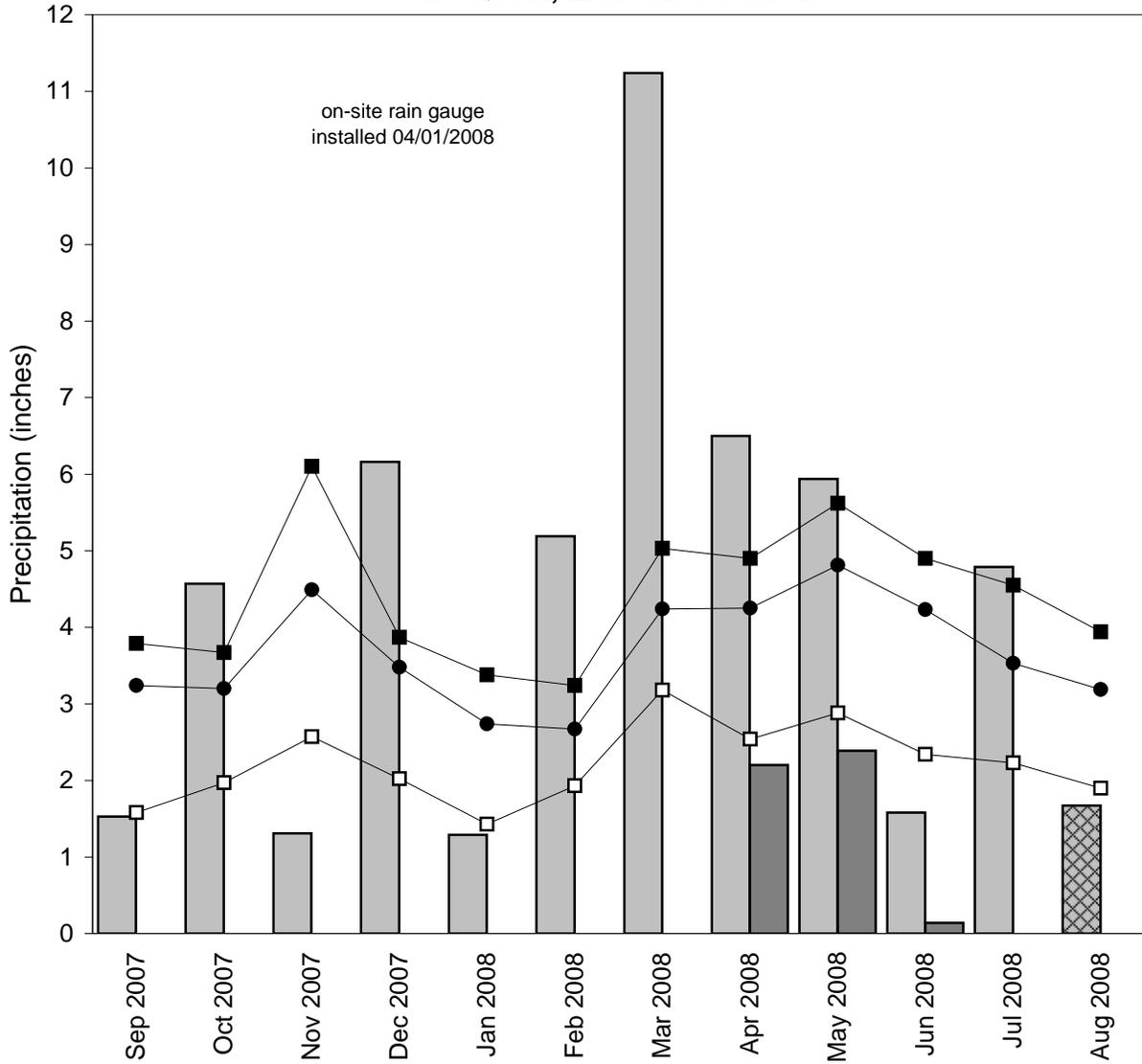
September 1, 2007 to September 1, 2008

## Depth to Water



# Perry County Wetland Compensation Site, Pyramid Site EC25 September 2007 through August 2008

## 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 7, 2008