



**SPRINGFIELD, IL ROUTE 29  
WETLAND COMPENSATION SITE**

**ISGS #54**

FAP 658

Sangamon County near Springfield, Illinois

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**SITE HISTORY**

- September 1996: ISGS conducted an Initial Site Evaluation of the proposed compensation site and reported findings to IDOT.
- June 2000: ISGS was tasked by IDOT to monitor wetland hydrology for the north portion of the compensation site. Monitoring activities began September 2000.
- September 2001: ISGS was tasked by IDOT to monitor wetland hydrology for the south portion of the compensation site. Monitoring activities began December 2001.
- April 2005: ISGS received a transmittal from IDOT to continue monitoring through 2007.

**WETLAND HYDROLOGY CALCULATION FOR 2005**

We estimate that 0.63 ha (1.6 ac) out of an excavation of 2.2 ha (5.4 ac) satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2005, whereas the area that satisfied wetland hydrology criteria for greater than 12.5% of the growing season was 0.57 ha (1.4 ac). The 2005 estimates are based on the following factors:

- According to the Midwestern Climate Center, the median date that the growing season begins in Springfield, Illinois, is April 6 and the season lasts 205 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 2004 through August 2005 was 87% of normal. Drier than normal conditions prevailed in September and December 2004 and February through August 2005. Conditions during March through June 2005 were particularly dry with only 46% of normal precipitation. Precipitation amounts were at or above normal for October and November 2004 and January 2005.
- Wells 13S, 14S, 15S, and 16S satisfied wetland hydrology criteria for greater than 5% of the growing season. Furthermore, these wells also satisfied the wetland hydrology criteria for greater than 12.5% of the growing season.
- The surface-water data logger, RDS 1, indicated that surface-water inundation occurred to 156.6 m (513.8 ft) for a duration sufficient to satisfy wetland hydrology criteria for greater than 5% of the growing season in the closed depression in the north end of the site. No area was inundated for greater than 12.5% of the growing season.

- Limitations of the wetland hydrology determination are as follows:
  - The area of wetland hydrology was calculated using GIS methods. The wetland-hydrology polygon was drawn from an ISGS topographic map (0.2-meter contour interval) rectified to GPS positions of water-level instruments and point features identifiable from digital orthophotography.

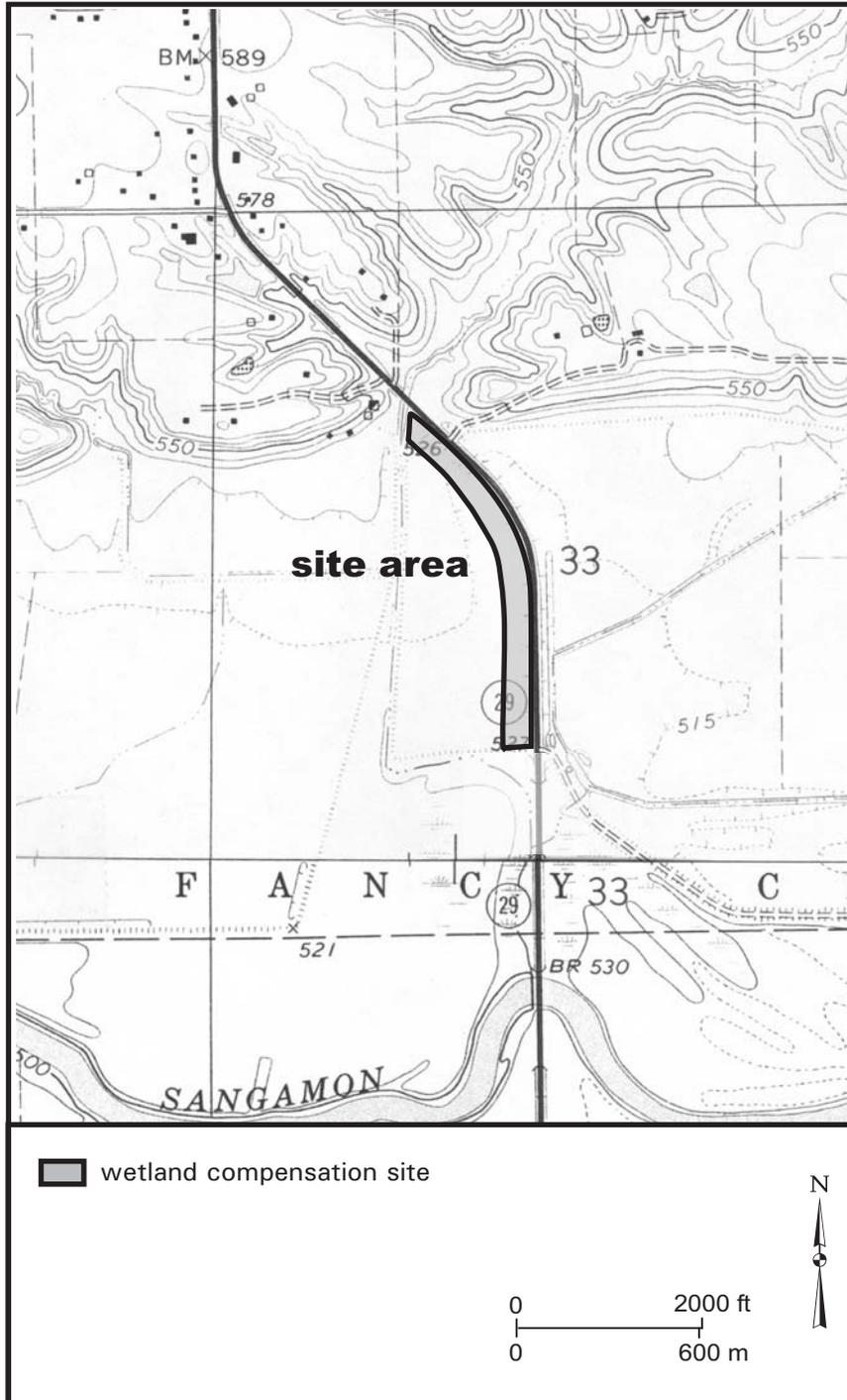
#### PLANNED FUTURE ACTIVITIES

- Monitoring will continue through 2007 or until no longer required by IDOT.

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## General Study Area and Vicinity

from the USGS Topographic Series, Athens, IL (USGS 1966; photorevised 1971 and 1976) and  
Springfield West, IL (USGS 1965; photorevised 1971 and 1976) 7.5-minute Quadrangles  
contour interval is 10 feet



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## Estimated Areal Extent of 2005 Wetland Hydrology

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

Map based on IDOT design plans and ISGS topography rectified to USGS digital orthophotograph  
Athens SW quarter quadrangle from 03/29/1998 aerial photography (ISGS 2001)



### 2005 Wetland Hydrology

 >5% of the growing season

 >12.5% of the growing season

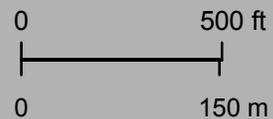
 monitoring well

 stage gauge

 RDS data logger

 rain gauge

 site boundary

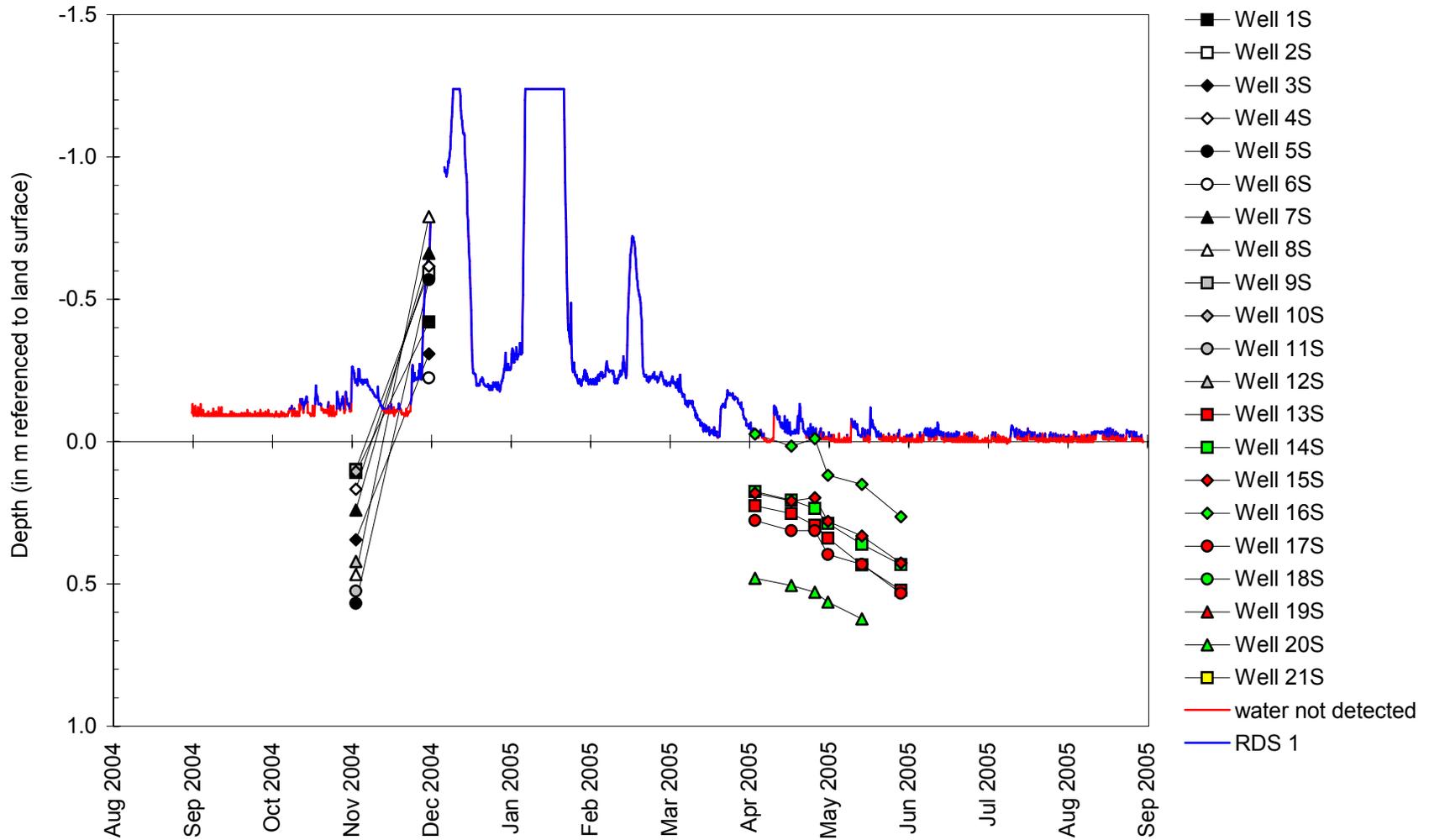




# Springfield, IL Route 29 Wetland Compensation Site

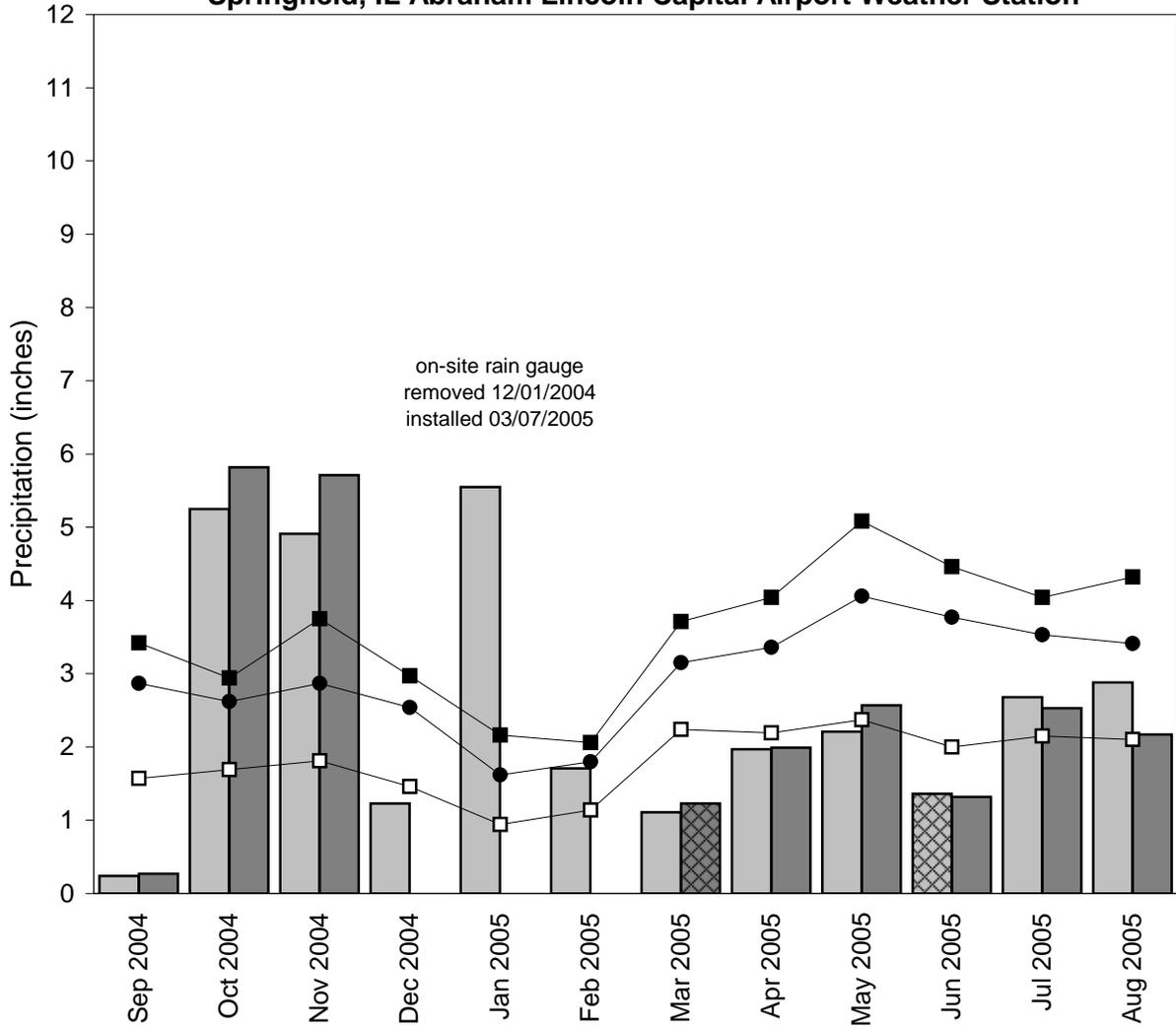
September 1, 2004 to September 1, 2005

## Depth to Water



# Springfield, IL Route 29 Wetland Compensation Site September 2004 through August 2005

**Total Monthly Precipitation Recorded On Site and at the  
Springfield, IL Abraham Lincoln Capital Airport Weather Station**



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