



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

ISGS #54

FAP 658

Sangamon County near Springfield, Illinois

Primary Manager: Geoffrey E. Pociask

Secondary Manager: Eric T. Plankell

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.

WETLAND HYDROLOGY CALCULATION FOR 2004

We estimate that 2.4 ac (1.0 ha) out of an excavation of 5.4 ac (2.2 ha) satisfied wetland hydrology criteria for greater than 5% of the growing season in 2004, whereas the area that satisfied wetland hydrology criteria for greater than 12.5% of the growing season was 1.4 ac (0.6 ha). The 2004 estimates are based on the following factors.

- According to the Midwestern Climate Center, the median date that the growing season begins in Springfield 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 2003 through August 2004 was 93% of normal. Drier than normal conditions prevailed in September 2003, December 2003 through February 2004, April through June 2004, and in August 2004. Precipitation amounts were at or above normal for October and November 2003 and in March and July 2004.
- Wells 1S, 2S, 4S, 9S, 10S, 11S and 12S satisfied wetland hydrology criteria of the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual for greater than 5% of the growing season. Furthermore, wells 9S, 10S, 11S and 12S, also satisfied the wetland hydrology criteria for greater than 12.5% of the growing season.
- The surface-water data logger, RDS1, indicated that surface-water inundation occurred to 156.6 m (513.8 ft) for a duration sufficient to satisfy wetland hydrology criteria for 5% of the growing season in the closed depression in the north end of the site. No area was inundated for 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 (0.1-meter contour interval) rectified to GPS positions of water-level instruments and point features identifiable from digital orthophotography.

- GPS coordinates of the water-level instruments were determined during July 2002.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue through 2005 or until no longer required by IDOT.

Springfield, IL Route 29 Wetland Compensation Site (FAP 658)

General Study Area and Vicinity

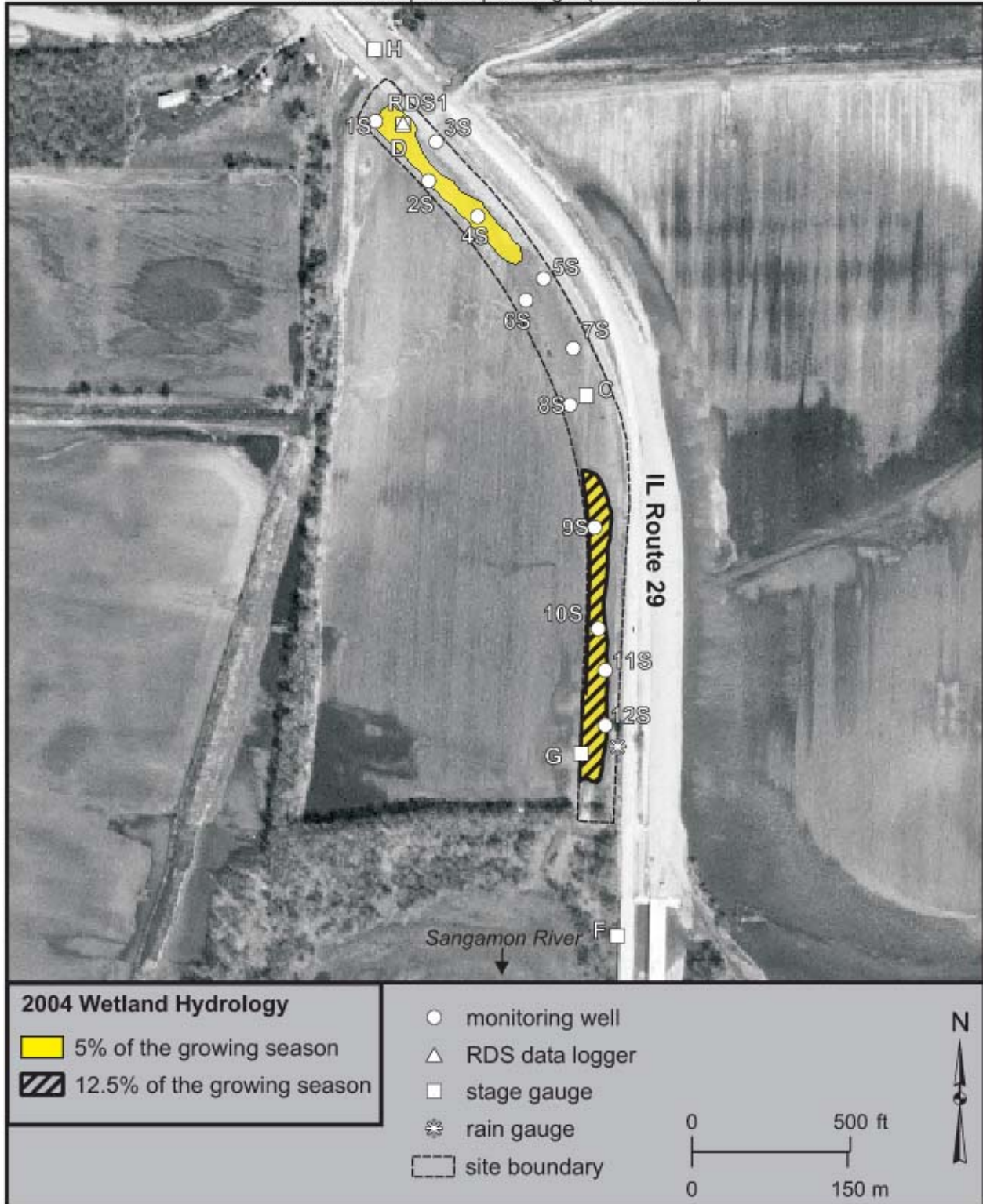
from the USGS Topographic Series, Athens, IL (USGS 1966; photorevised 1971 and 1976) and
Springfield West, IL (USGS 1965; photorevised 1971 and 1976) 7.5-minute Quadrangles
contour interval is 10 feet



Springfield, IL Route 29 Wetland Compensation Site (FAP 658)

Estimated Areal Extent of 2004 Wetland Hydrology

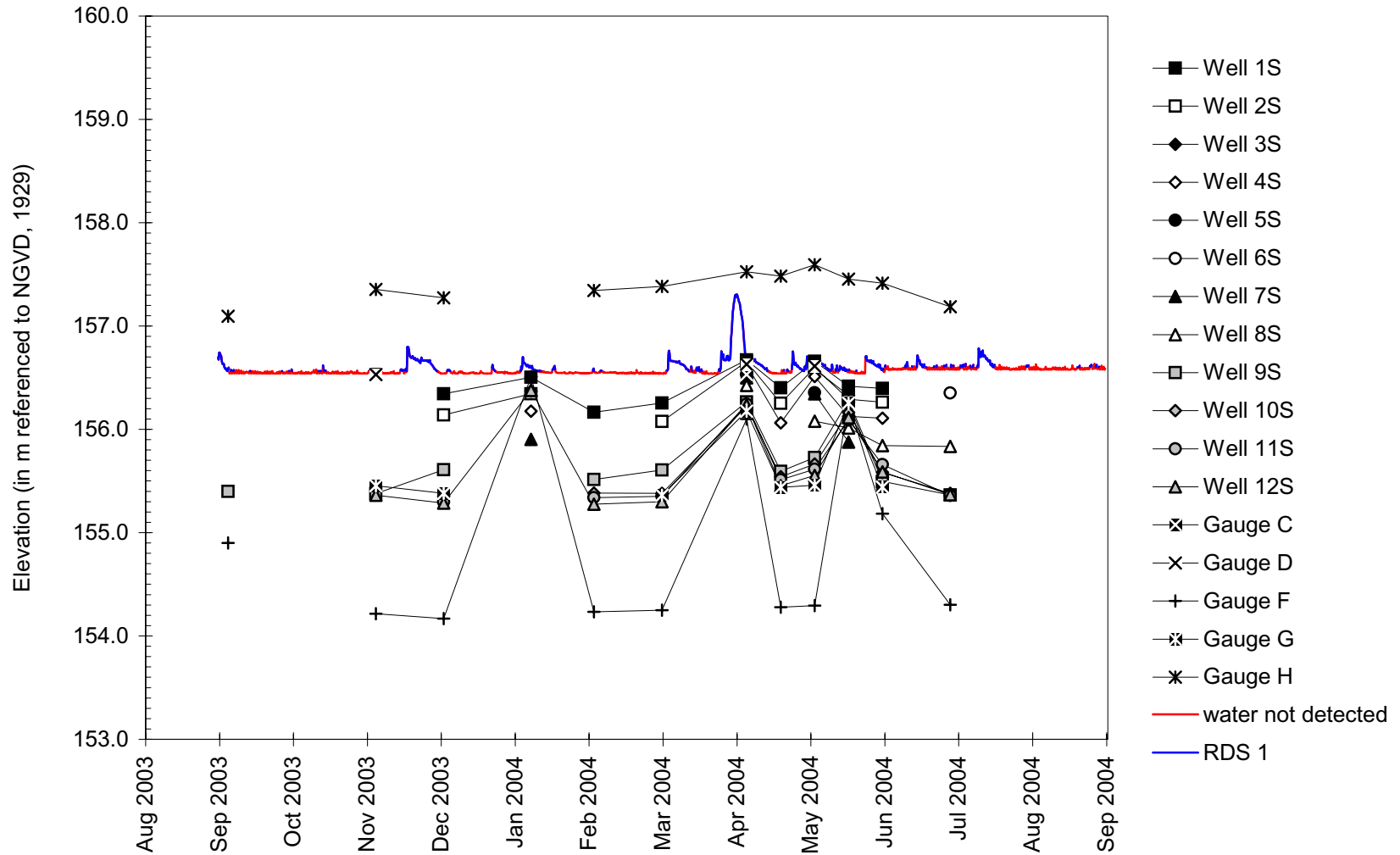
map based on IDOT design plans and ISGS topography rectified to USGS digital orthophotograph Athens SW quarter quadrangle (ISGS 2004)



Springfield, IL Route 29 Wetland Compensation Site

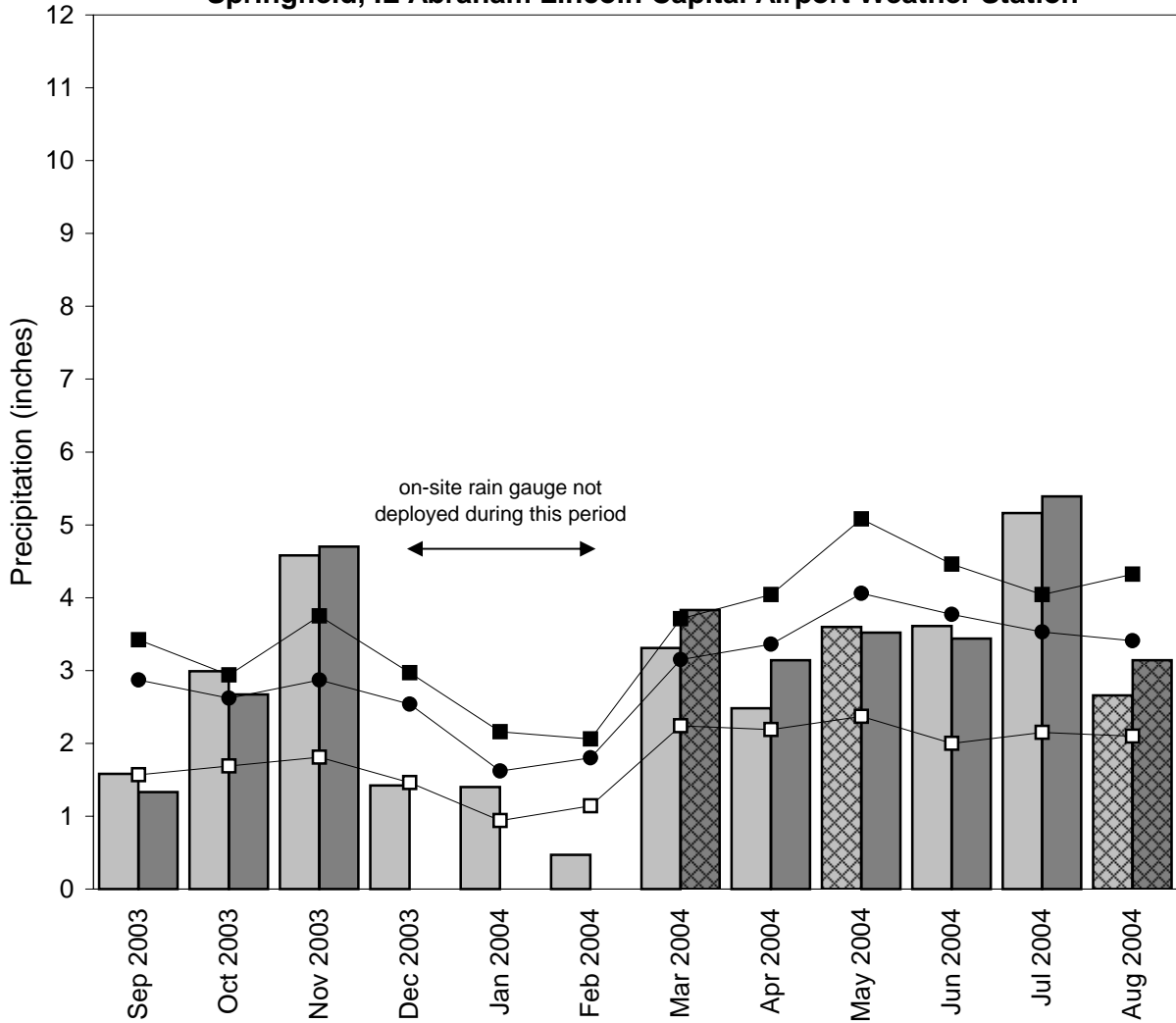
September 1, 2003 to September 1, 2004

Water-Level Elevations



Springfield, IL Route 29 Wetland Compensation Site September 2003 through August 2004

**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