



TAMMS

ISGS #71

WETLAND COMPENSATION SITE

FAS 1907

Union County, near Tamms, Illinois

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SITE HISTORY

- June 2003: ISGS was tasked by IDOT to monitor wetland hydrology for the compensation site.
- November 2003: ISGS initiated monitoring activities at the compensation site.

WETLAND HYDROLOGY CALCULATION FOR 2004

We estimate that 2.5 ac (1.0 ha) out of 15.6 ac (2.4 ha) satisfied wetland hydrology criteria for greater than 5% of the growing season in 2004, whereas 0.6 ha (1.6 ac) satisfied wetland hydrology criteria 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 Tamms is March 31 and the season lasts 225 days; 5% of the growing season is 11 days and 12.5% of the growing season is 28 days.
- Total precipitation for the reporting period from September 2003 through August 2004 was 68% of normal. Drier than normal conditions prevailed in October and December 2003, January through April, and June through August 2004. Precipitation exceeded or was near the normal range in September and November 2003 and May 2004.
- In 2004, well 7S satisfied the wetland hydrology criteria of the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual for greater than 5% of the growing season. No wells satisfied wetland hydrology criteria for greater than 12.5% of the growing season.
- Surface-water data loggers RDS1 and Gauge D showed that ponding occurred in isolated portions of the site. Data from RDS1 showed that areas of the north portion of the site below 103.1 m (338.3 ft) satisfied wetland hydrology criteria for greater than 5% of the growing season, and areas below 102.9 m (337.6 ft) were inundated for greater than 12.5% of the growing season. Data from Gauge D showed that an area of the southeast portion of the site below 102.3 m (335.6 ft) satisfied wetland hydrology criteria for greater than 5% of the growing season. The same area also satisfied wetland hydrology criteria 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 (0.1-meter contour interval) rectified to GPS positions of water-level instruments and point features identifiable from a digital orthophotograph.
 - Instrument locations were determined using GPS in March 2004. The GPS positions of instruments were superimposed on digital orthophotography.

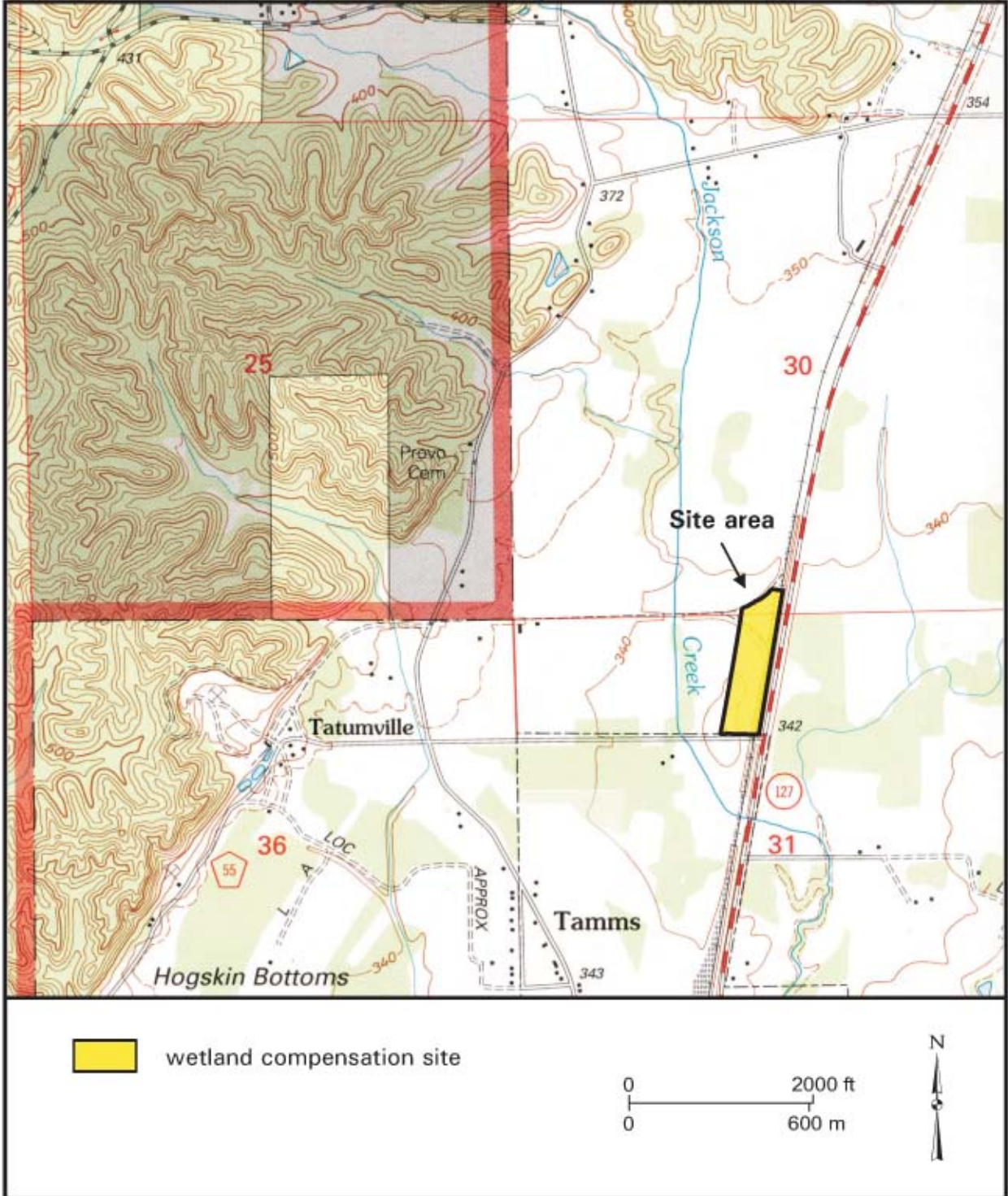
PLANNED FUTURE ACTIVITIES

- Monitoring is expected to continue through 2008 or until no longer required by IDOT.

Tamms Wetland Compensation Site (FAS 1907)

Site and Vicinity

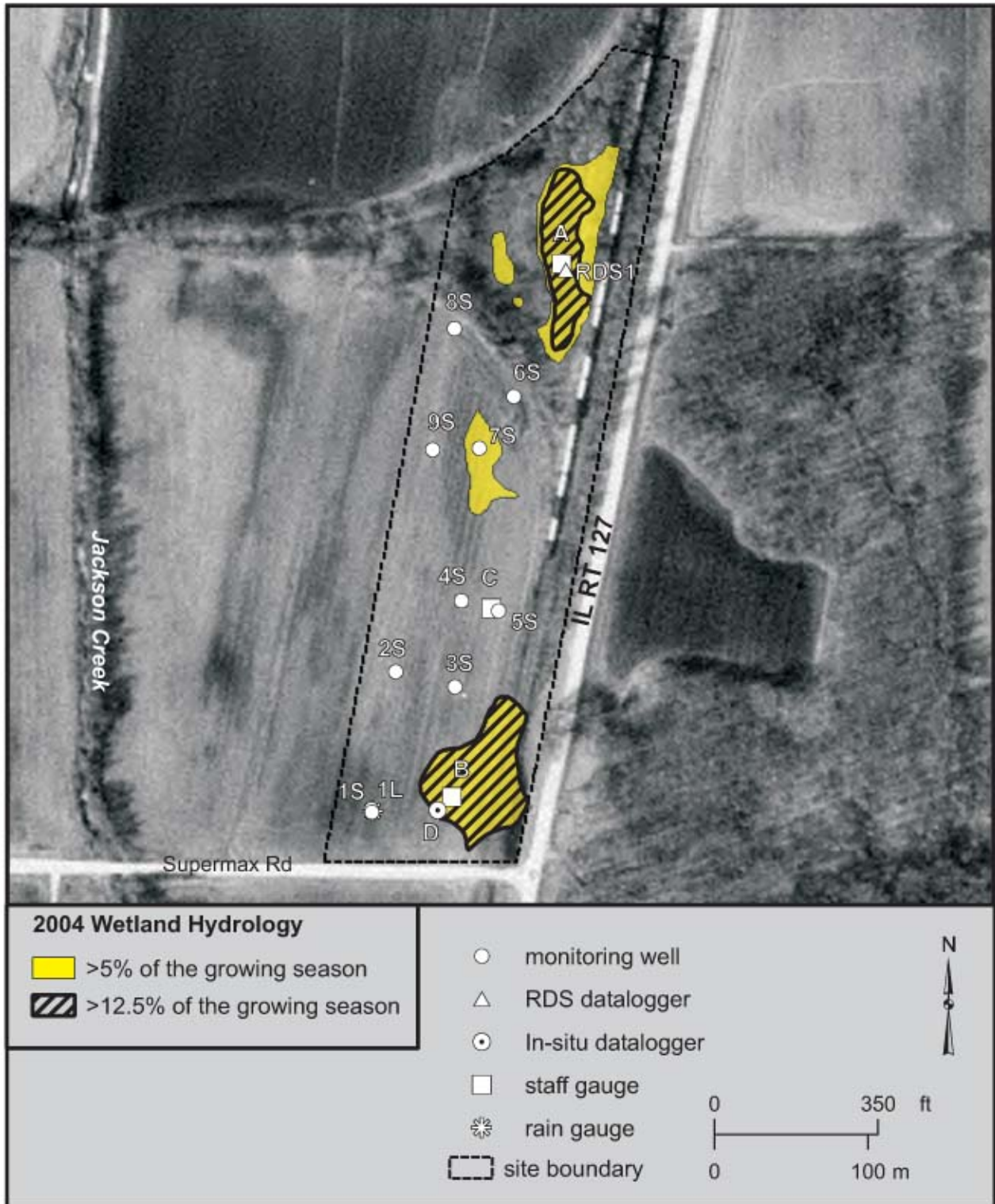
from the USGS Topographic Series, Mill Creek, IL 7.5-minute Quadrangle (USGS 1996).
contour interval is 20 feet



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Estimated Areal Extent of 2004 Wetland Hydrology

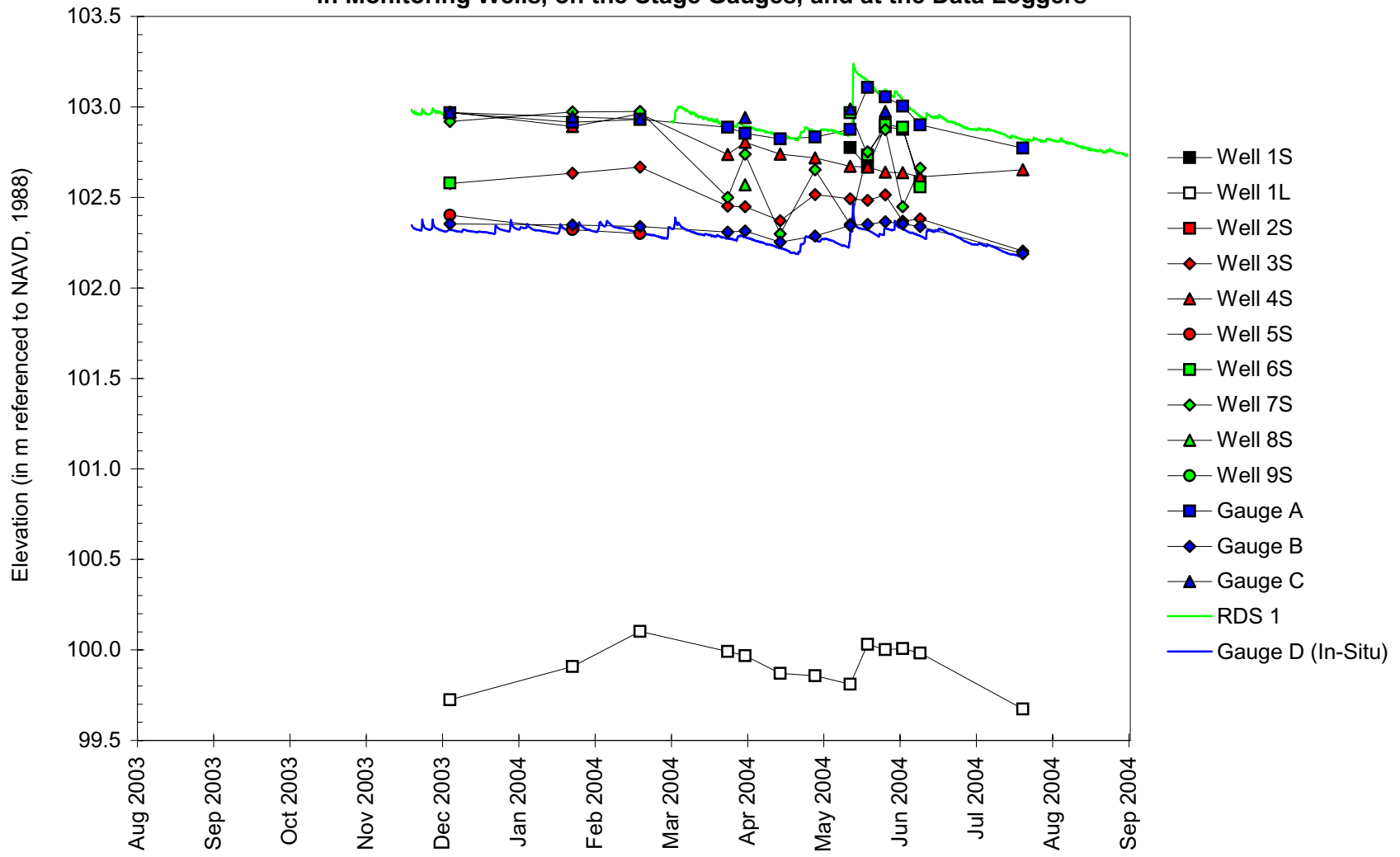
map based on IDOT design plans and ISGS topography recified to USGS ditigal orthophotograph
Mill Creek quarter quadrangle (ISGS 2004).



Tamms Wetland Compensation Site

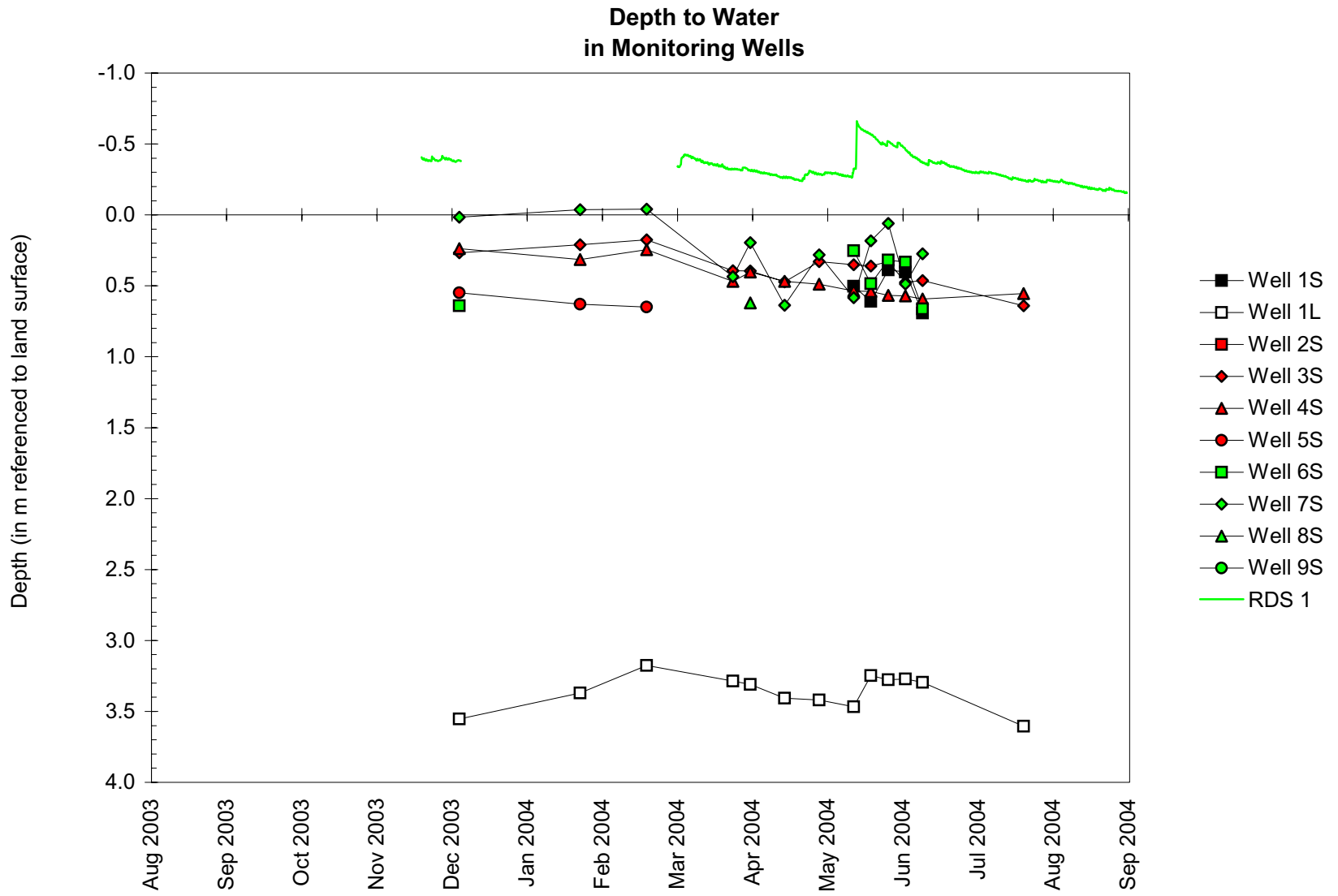
September 1, 2003 to September 1, 2004

Water-Level Elevations in Monitoring Wells, on the Stage Gauges, and at the Data Loggers



Tamms Wetland Compensation Site

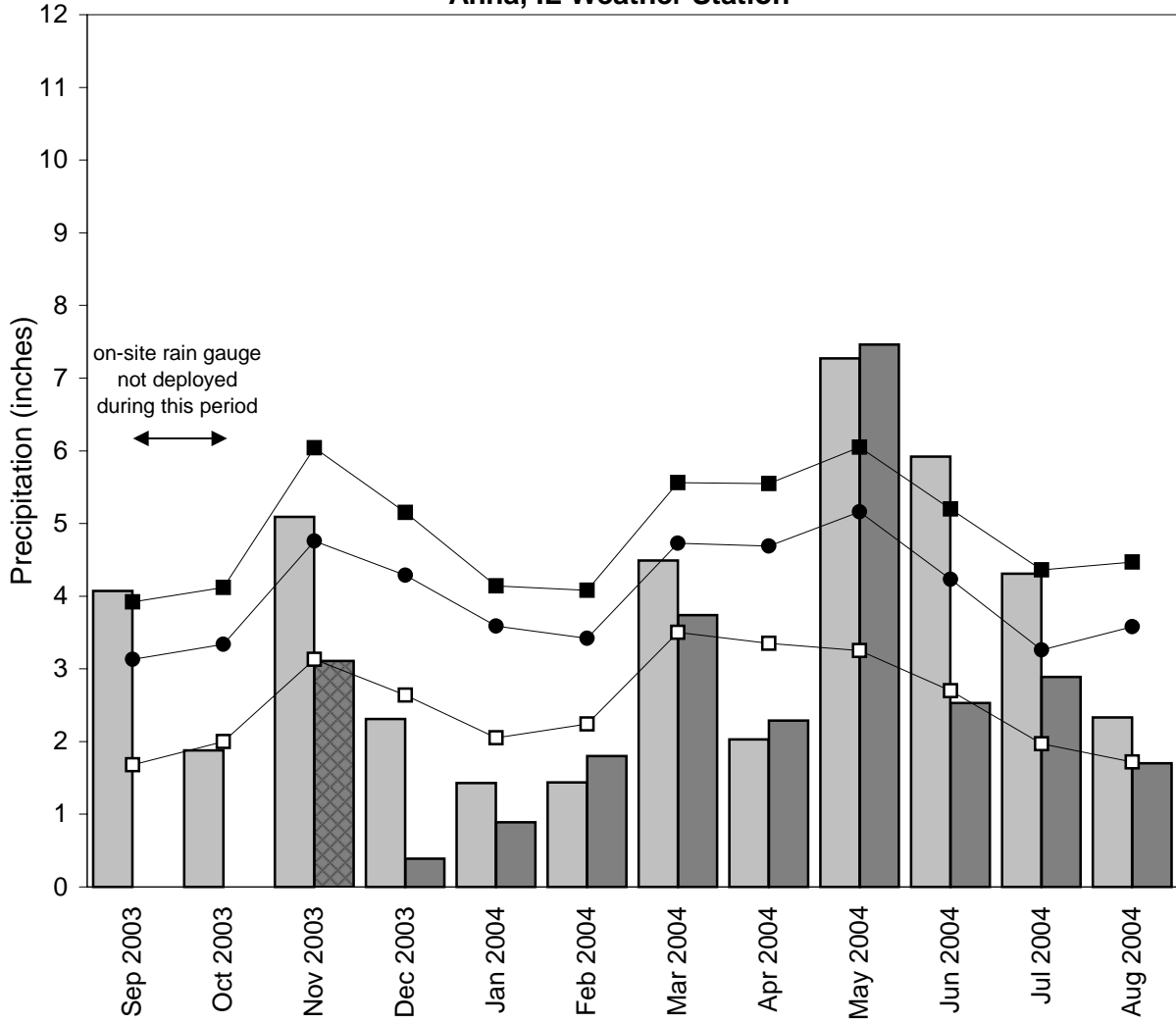
September 1, 2003 to September 1, 2004



Tamms Wetland Compensation Site

September 2003 through August 2004

**Total Monthly Precipitation Recorded On Site and at the
Anna, IL 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