

**LA GRANGE  
WETLAND MITIGATION BANK**

**ISGS #52**

Sequence #9579

Brown County, near La Grange, Illinois

**Primary Project Manager: Keith W. Carr**

**Secondary Project Manager: Geoffrey E. Pociask**

**SITE HISTORY**

- February 2000: ISGS was tasked by IDOT to conduct a Level II hydrogeologic assessment of the site.
- January 2003: ISGS submitted a wetland banking instrument to IDOT.
- January 2005: A Level II hydrogeologic characterization report was submitted to IDOT (ISGS Open-File Series 2005–02).
- Fall 2005 and 2006: Extensive earthworks were undertaken by IDOT, including filling and plugging of several ditches, reshaping of the east levee, constructing a raised access road, and excavating a large basin in the north-central area of the site.
- Summer 2011: Further earthworks were undertaken at the site. The former basin of Amelia Barker Lake was widened and the fill utilized for road construction. Similar to 2010, large magnitude and long-duration floods affected the site. The site remained flooded over most of its area from late April to early July.

**WETLAND HYDROLOGY CALCULATION FOR 2011**

We estimate that the total area of the site that satisfied wetland hydrology criteria for greater than 5% of the growing season in 2011 was 578 ha (1,428 ac) out of a total site area of 666 ha (1,645 ac); 564 ha (1,393 ac) also satisfied wetland hydrology criteria for greater than 12.5% of the growing season, according to the 1987 Manual. Using the 2010 Midwest Region Supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 575 ha (1,420 ac) satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. These estimates are based on the following factors:

- The median date that the growing season begins in nearby Rushville, Illinois, is April 6, and the season lasts 208 days (MRCC 2011); 5% of the growing season is 10 days, and 12.5% of the growing season is 26 days, according to the 1987 Manual. According to methods outlined in the 2010 Midwest Region Supplement, we estimate that March 3 was the starting date of the 2011 growing season, based on measurements from an on-site soil-temperature data logger.
- Total precipitation for the monitoring period at the Rushville, IL, weather station was 101% of normal. During the March to May period, precipitation was 92% of normal. As in previous years, large precipitation events upstream in the watershed led to widespread and sustained flooding of the site during this period. Precipitation in June, however, was 243% of normal, which contributed to sustained flooding into July.
- In 2011, wells 41S and 42S satisfied wetland hydrology criteria for greater than 5% of the growing season and also for greater than 12.5% of the growing season,

according to the 1987 Manual. According to the 2010 Midwest Region Supplement, wells 41S and 42S also satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. Wells 2S and 14S did not satisfy wetland hydrology criteria.

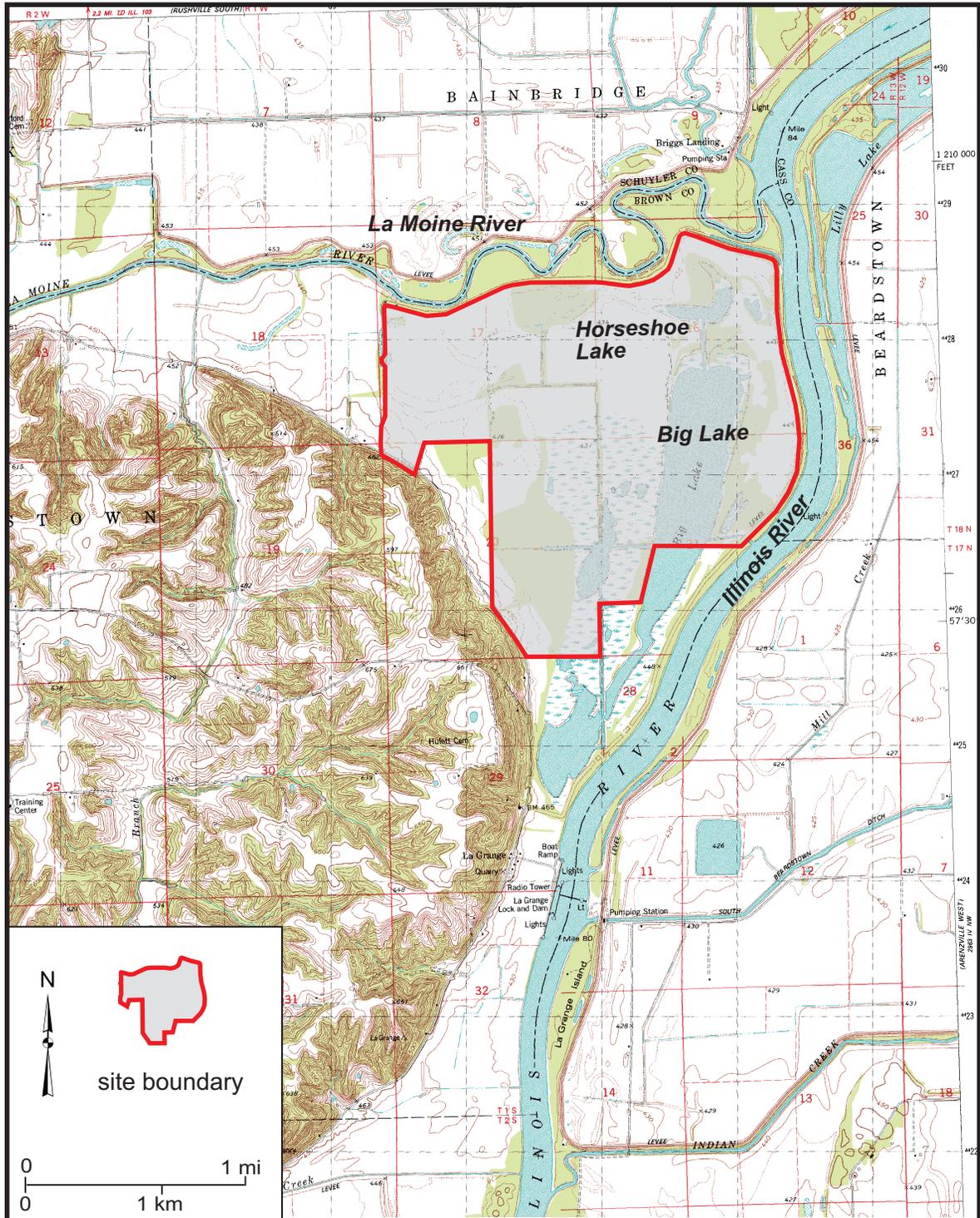
- Two long-duration flood events occurred during the growing season in 2011. According to the U.S. Army Corps of Engineers gauge at the nearby La Grange lock and dam and one on-site data logger in a monitoring well (Well 41S), the site was inundated for a period sufficient to satisfy wetland hydrology criteria at an elevation of at least 134.10 m (439.96 ft) for greater than 5% of the growing season and at an elevation of at least 133.50 m (437.99 ft) for greater than 12.5% of the growing season, according to the 1987 Manual. According to the 2010 Midwest Region Supplement, surface-water levels at the USACE gauge and the Well 41S data logger also satisfied wetland hydrology criteria at an elevation of at least 133.90 m (439.30 ft) for 14 or more consecutive days during the growing season.

#### PLANNED FUTURE ACTIVITIES

- Additional flood-resistant data loggers will be added to the site in the Fall of 2011.
- Monitoring of hydrology will continue until no longer required by IDOT.

# La Grange Wetland Mitigation Bank General Study Area and Vicinity

from the USGS Topographic Series, Cooperstown, IL, 7.5-minute Quadrangle (USGS 1980)  
contour interval is 10 feet

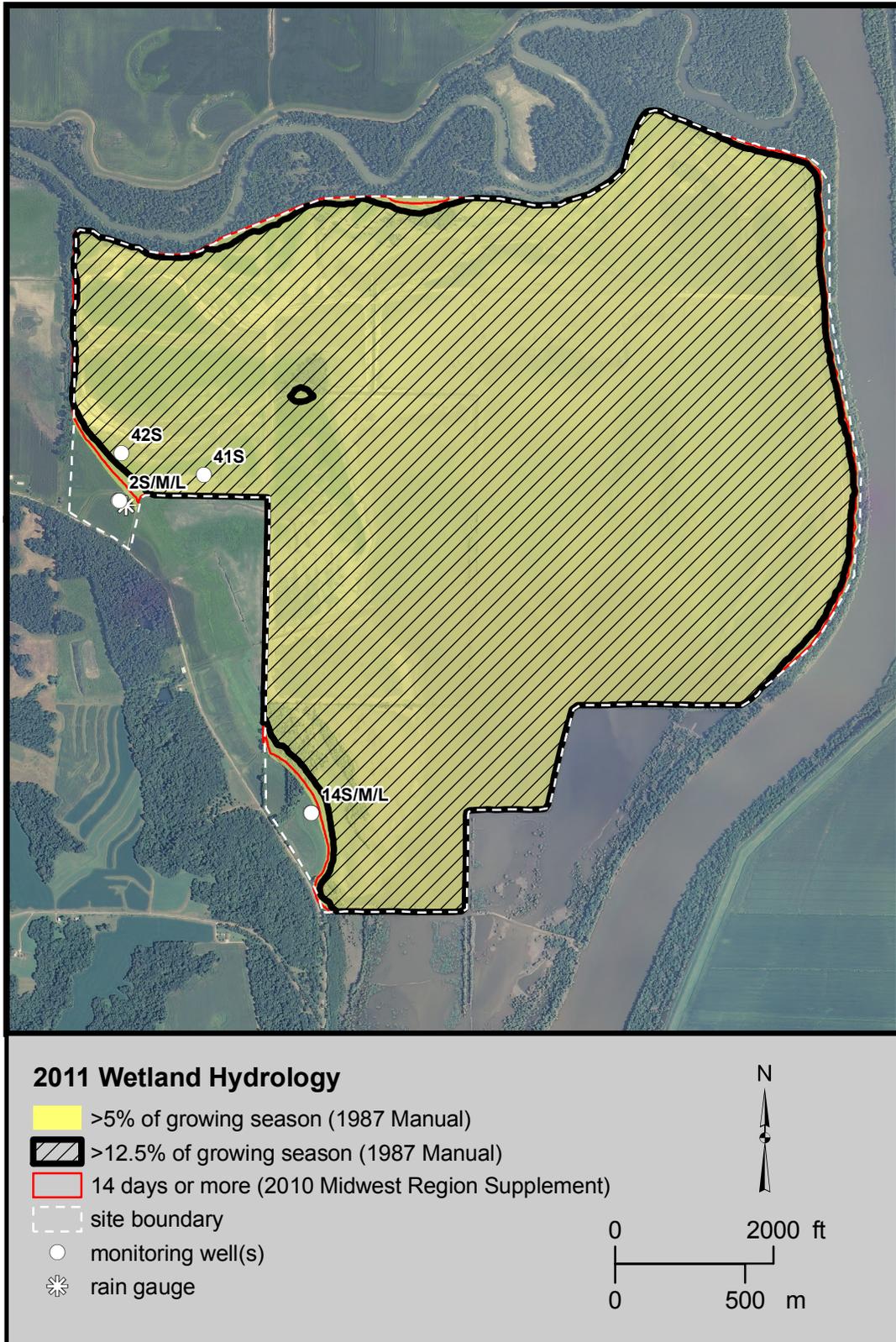


# La Grange Wetland Mitigation Bank

## Estimated Areal Extent of 2011 Wetland Hydrology

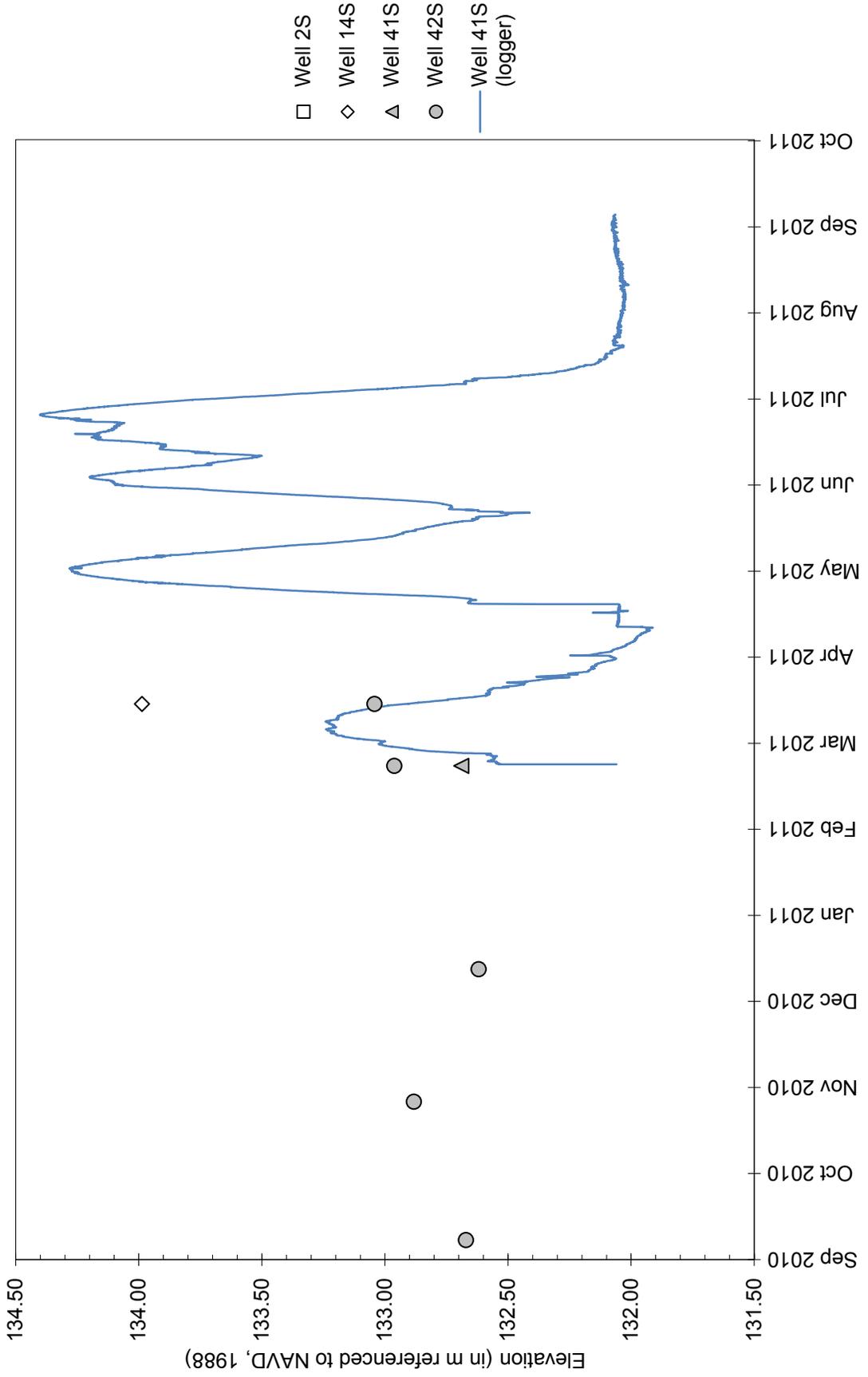
September 1, 2010 through August 31, 2011

Map based upon Illinois National Agriculture Imagery Program (NAIP) digital orthophotograph, Cooperstown NE quarter quadrangle, taken August 8, 2010 (USDA-FSA 2010)



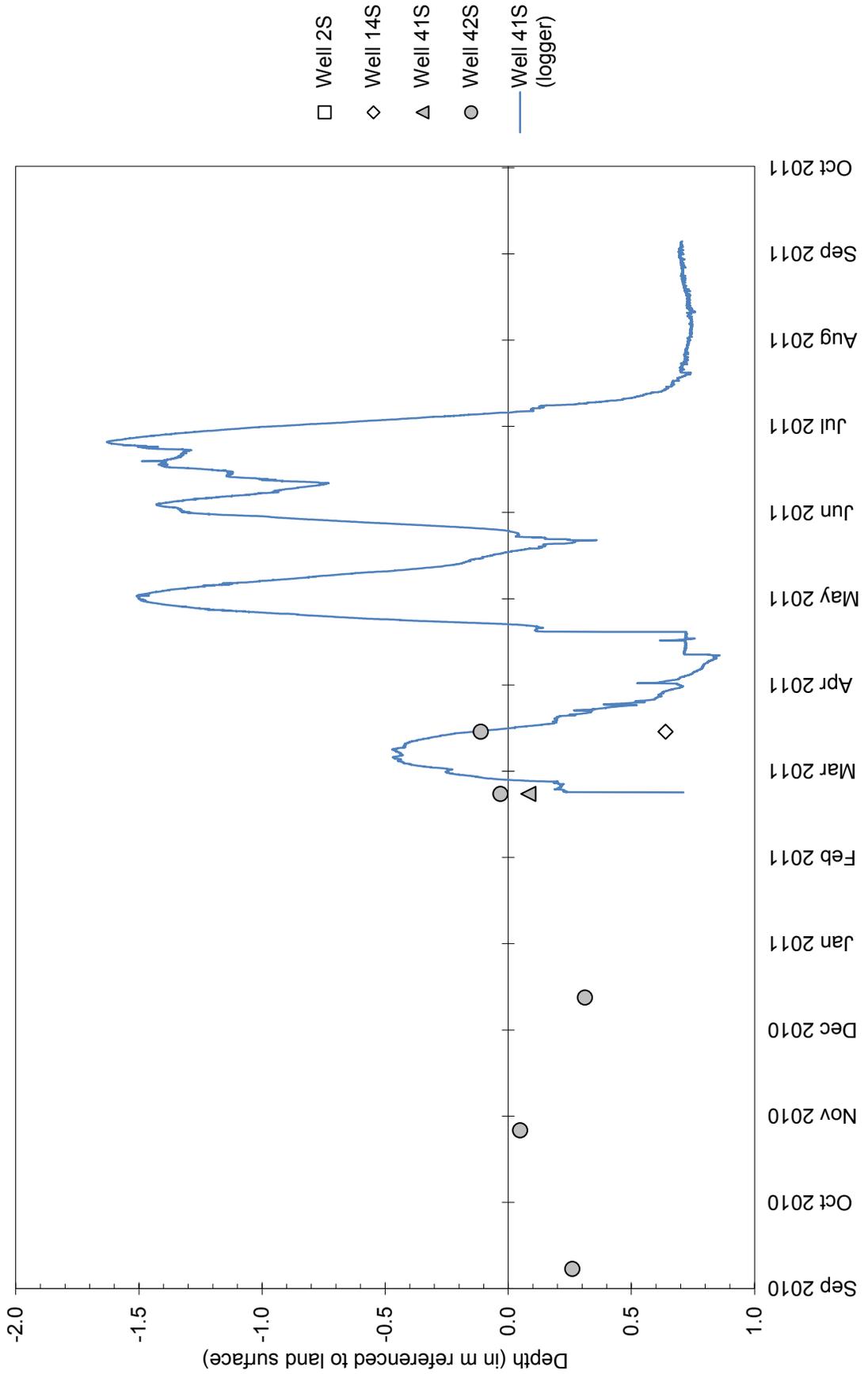
**La Grange Wetland Mitigation Bank**  
**September 1, 2010 through October 1, 2011**

**Water-Level Elevations in Shallow Monitoring Wells**



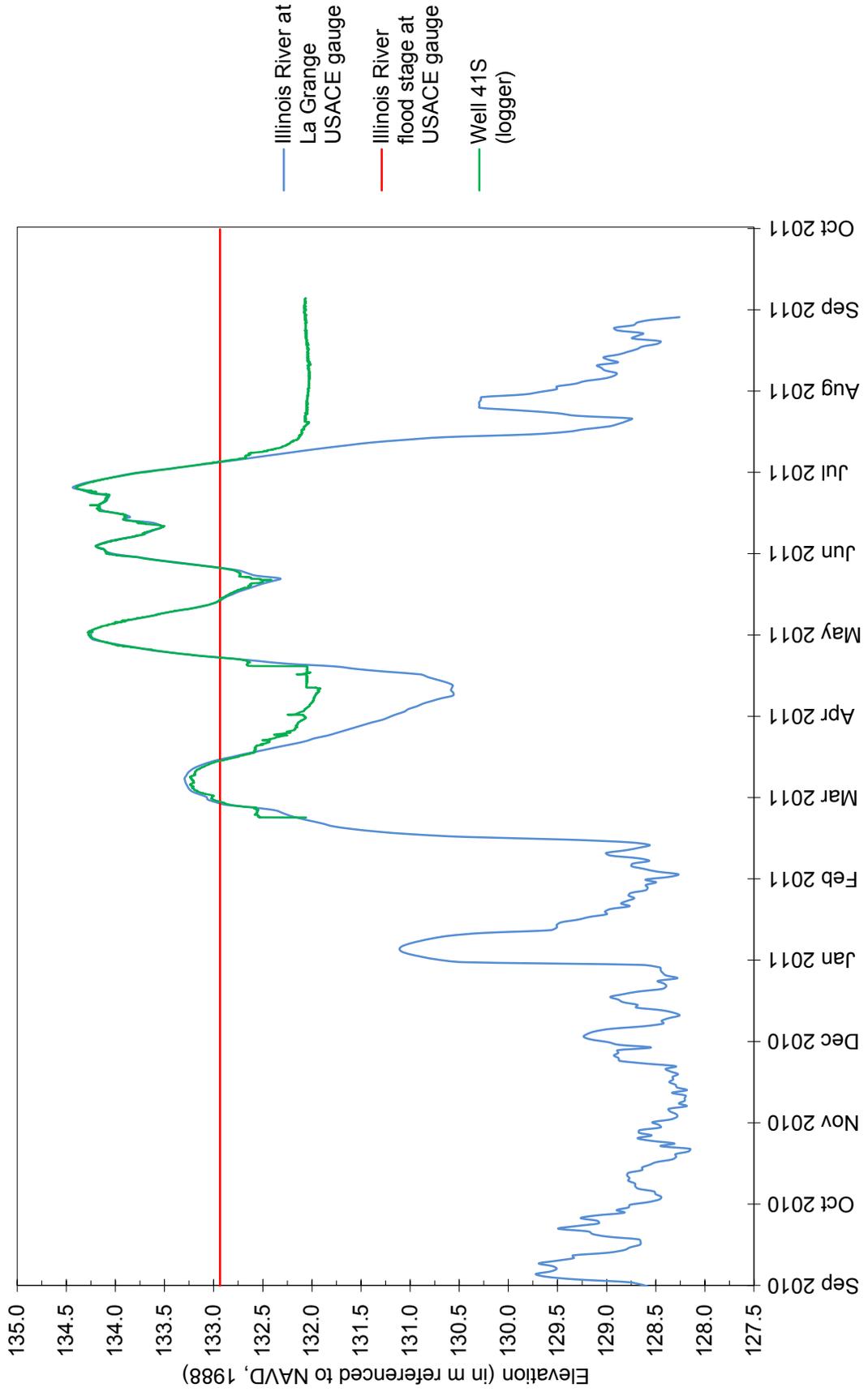
**La Grange Wetland Mitigation Bank  
September 1, 2010 through October 1, 2011**

**Depth to Water in Shallow Monitoring Wells**



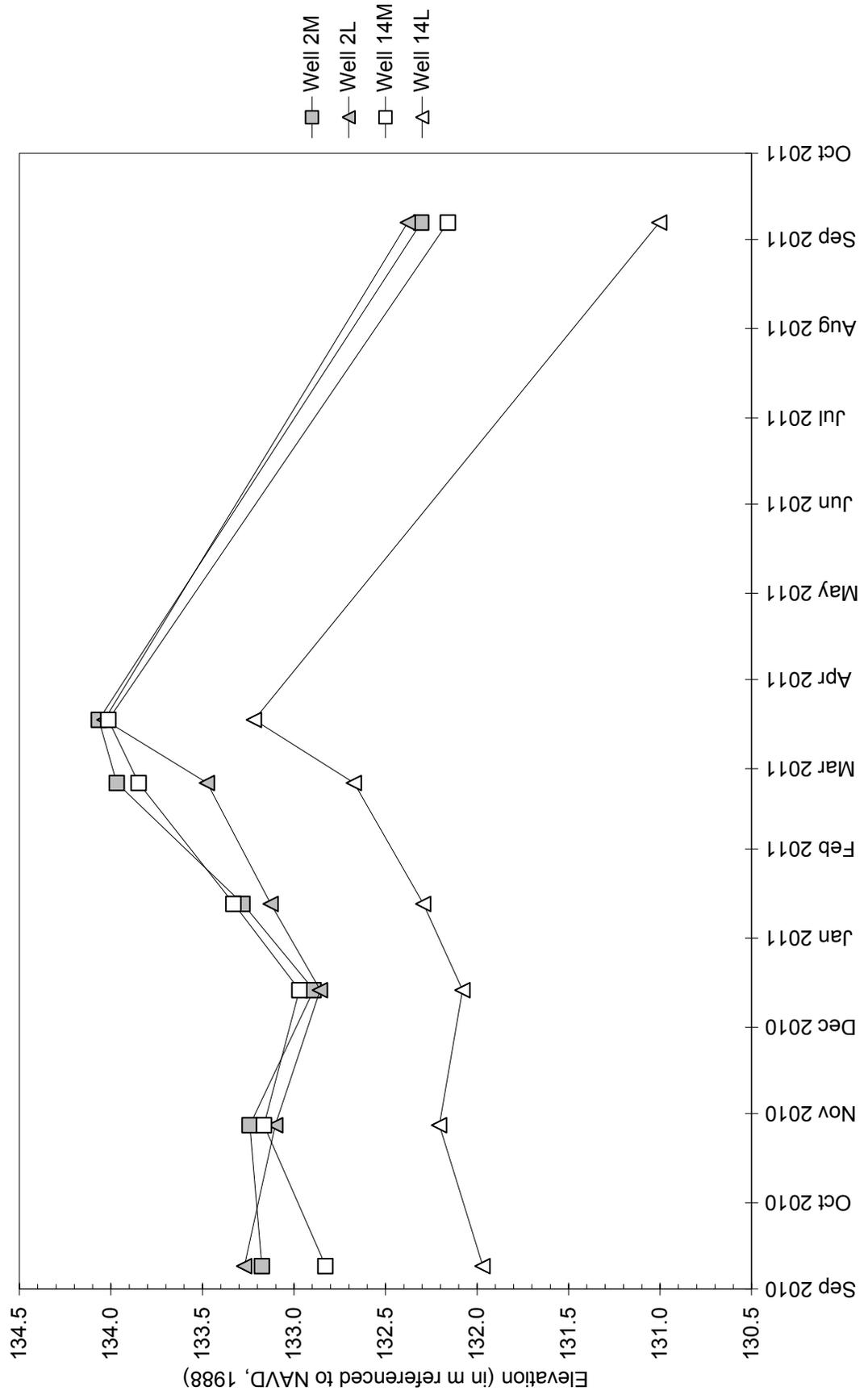
**La Grange Wetland Mitigation Bank  
September 1, 2010 through October 1, 2011**

**Water-Level Elevations at the La Grange USACE Gauge and an On-Site Data Logger**



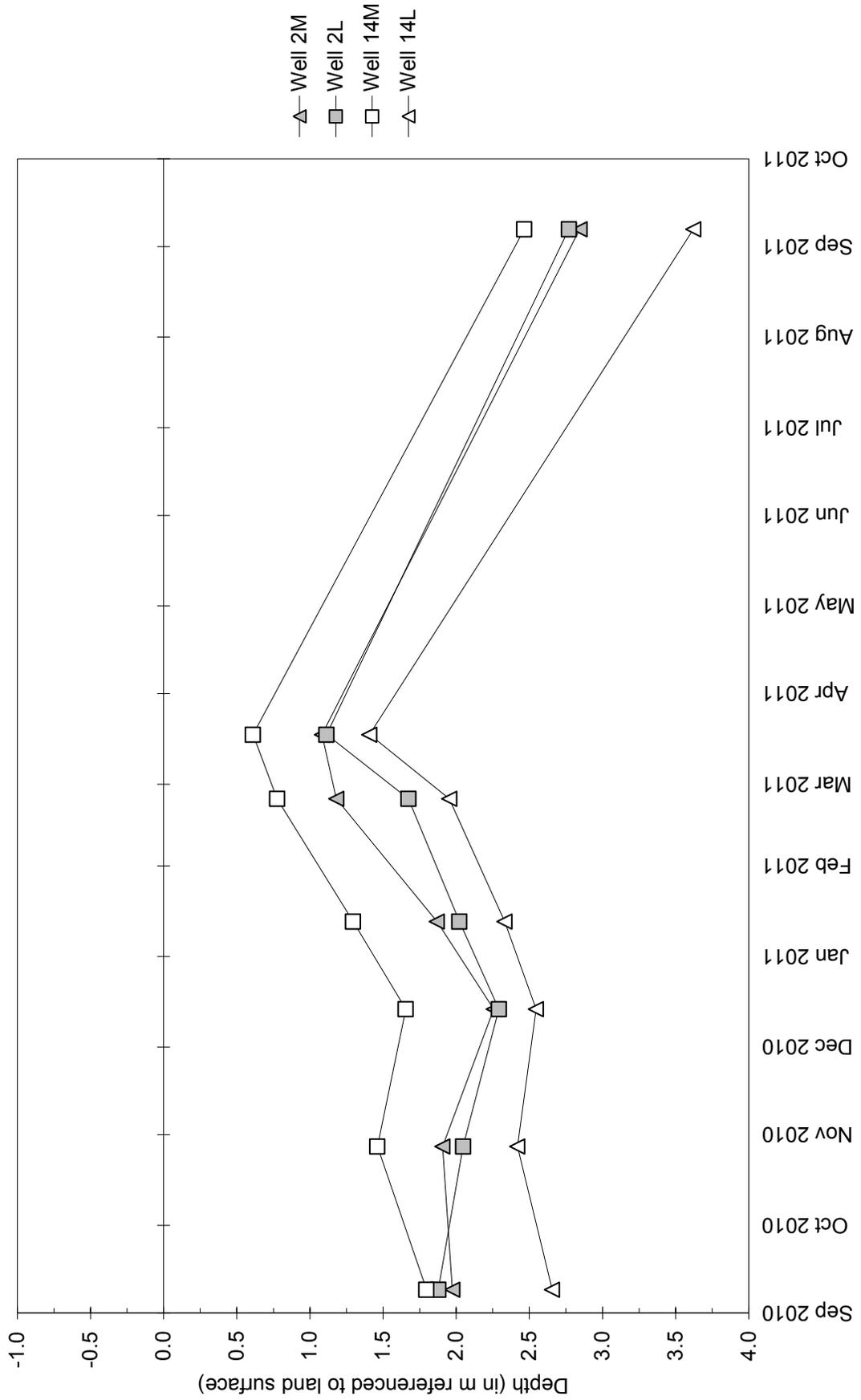
# La Grange Wetland Mitigation Bank September 1, 2010 through October 1, 2011

## Water-Level Elevations in Deeper Monitoring Wells



**La Grange Wetland Mitigation Bank  
September 1, 2010 through October 1, 2011**

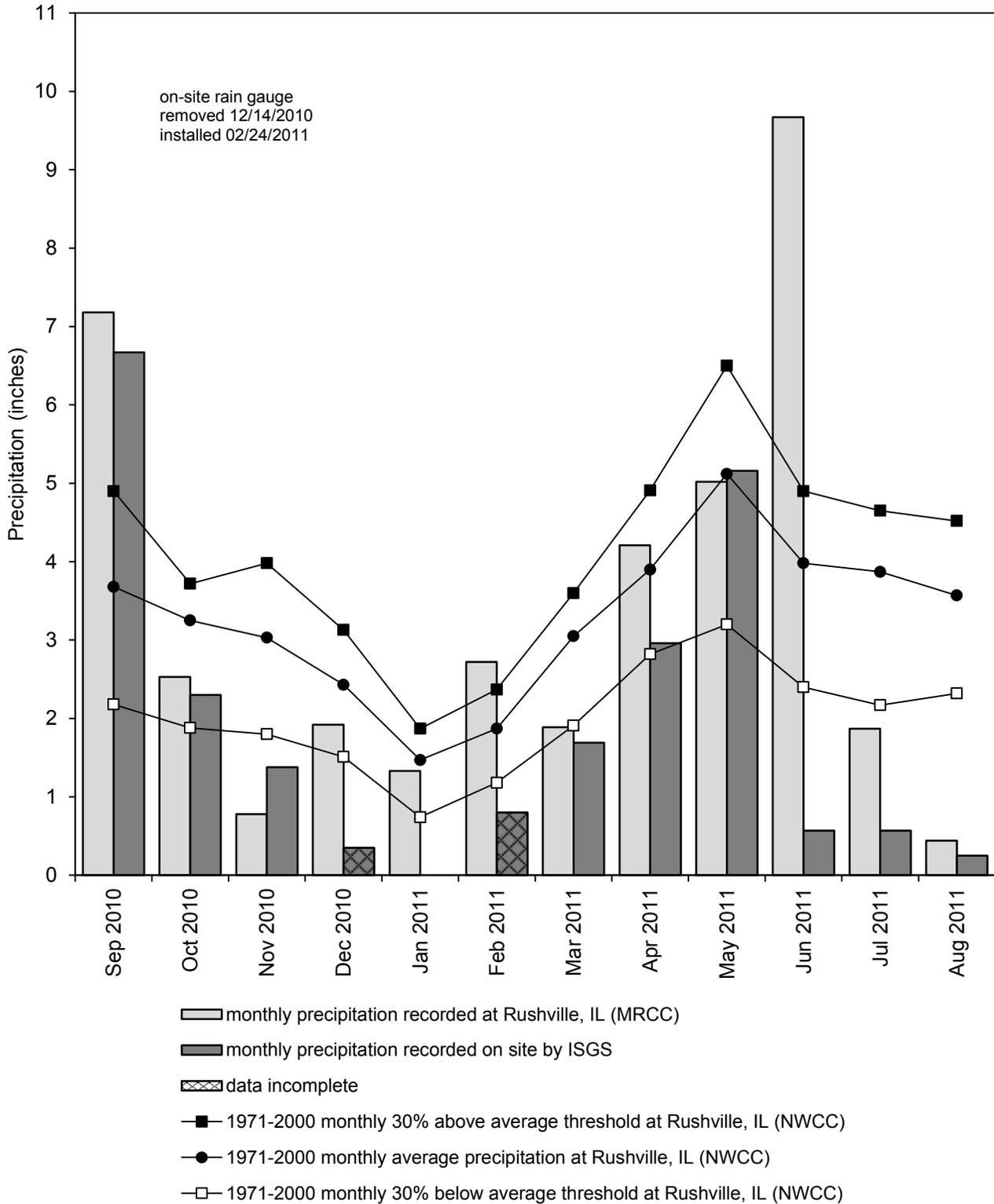
**Depth to Water in Deeper Monitoring Wells**



# La Grange Wetland Mitigation Bank

## September 2010 through August 2011

### Total Monthly Precipitation Recorded on Site and at Rushville, IL



Graph last updated 10/31/2011