



**FORMER WESSEL PROPERTY
LA GRANGE WETLAND BANK SITE**

ISGS #52

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, and began on-site activities in the Spring of 2000.
- August 2002: IDOT tasked ISGS and INHS to prepare a draft wetland banking instrument, which was submitted to IDOT in January 2003.
- January 2005: A Level II report was submitted to IDOT (ISGS Open-File Series 2005–02).
- Fall 2005 and Spring 2006: Extensive earthworks were undertaken by IDOT, including filling and plugging of several ditches, reshaping of the east levee, construction of a raised access road, and the excavation of a large basin in the north–central area of the site. Two large drainage tiles were located and removed by IDOT. A partial repair of the south levee breach was also completed by an adjacent landowner.
- Fall 2006: A total of 2,849 primarily oak and hickory trees were planted in Fields 4 and 7. Protective baskets, support poles, and weed mats were also installed.
- Winter and Spring 2007: A combination of winter and spring floods inundated most of the site, and ice and wave action caused some damage to planted trees. A total of 12 ISGS soil-zone wells were also destroyed. Trees were righted and baskets were repaired by the end of May.

WETLAND HYDROLOGY CALCULATION FOR 2007

We estimate that the total area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2007 was 487.8 ha (1205.4 ac) out of a total site area of 666 ha (1645 ac). Further, 451.0 ha (1114.4 ac) also satisfied wetland hydrology criteria for greater than 12.5% of the growing season. These estimates are based on the following factors:

- According to the MRCC, the median date that the growing season begins in nearby Rushville, Illinois is April 6 and the season lasts 208 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 was 78% of normal. During the four-month period from December 2006 to March 2007, precipitation was 101% of normal, resulting in normal conditions entering the growing season and a fairly typical early spring flood. In the critical April to July period, however, precipitation dropped off sharply to only 54% of normal. This below-normal spring and summer precipitation did not reduce the extent of wetland hydrology in this monitoring year due to the spring flood.

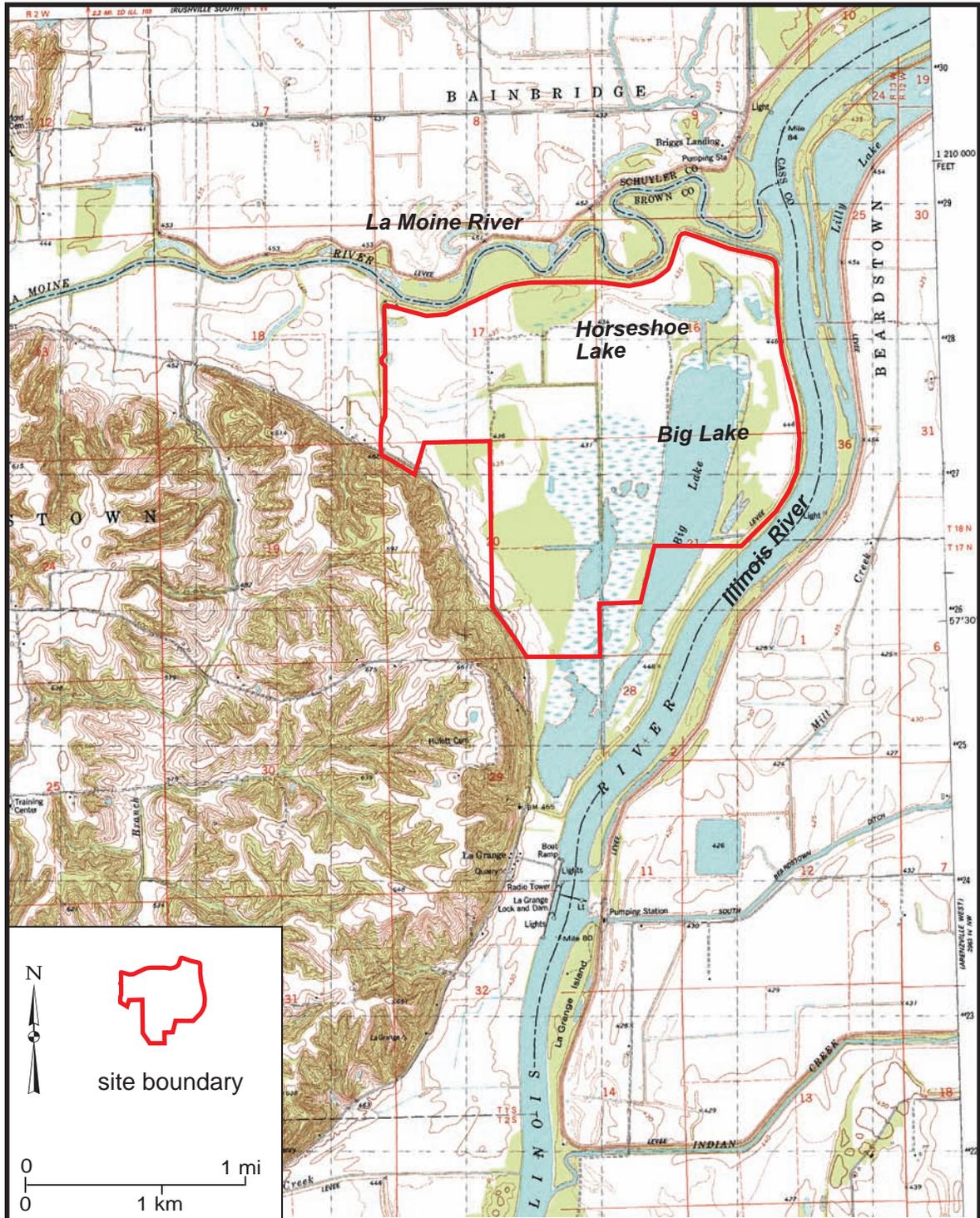
- Of the 25 undamaged soil-zone wells on site, 22 wells satisfied wetland hydrology criteria for greater than 5% of the growing season. These were 3S, 4S, 5S, 6S, 7S, 8S, 10S, 11S, 12S, 13S, 15S, 16S, 17S, 18S, 20S, 21S, 22S, 23S, 26S, 29S, 35S, and 36S. Further, 17 of the undamaged soil-zone wells satisfied wetland hydrology criteria for greater than 12.5% of the growing season. These were 6S, 7S, 8S, 10S, 11S, 12S, 13S, 15S, 16S, 17S, 18S, 20S, 21S, 22S, 23S, 35S, and 36S.
- Water levels recorded at all eight stage gauges on site satisfied wetland hydrology criteria for greater than both 5% and 12.5% of the growing season. A combination of data from these on-site gauges and from the USACE La Grange stream gauging station showed surface-water inundation for a period sufficient to satisfy wetland hydrology criteria at an elevation of at least 132.50 m (434.71 ft) for greater than 5% of the growing season, and at an elevation of at least 132.25 m (433.89 ft) for greater than 12.5% of the growing season.

PLANNED FUTURE ACTIVITIES

- Two flood-resistant data loggers will be added to the site in the spring of 2008. Soil-zone wells damaged in the 2007 flooding will also be replaced prior to the start of the growing season.
- Monitoring of hydrology will continue until no longer required by IDOT.

Former Wessel Property, La Grange Wetland Bank Site General Study Area and Vicinity

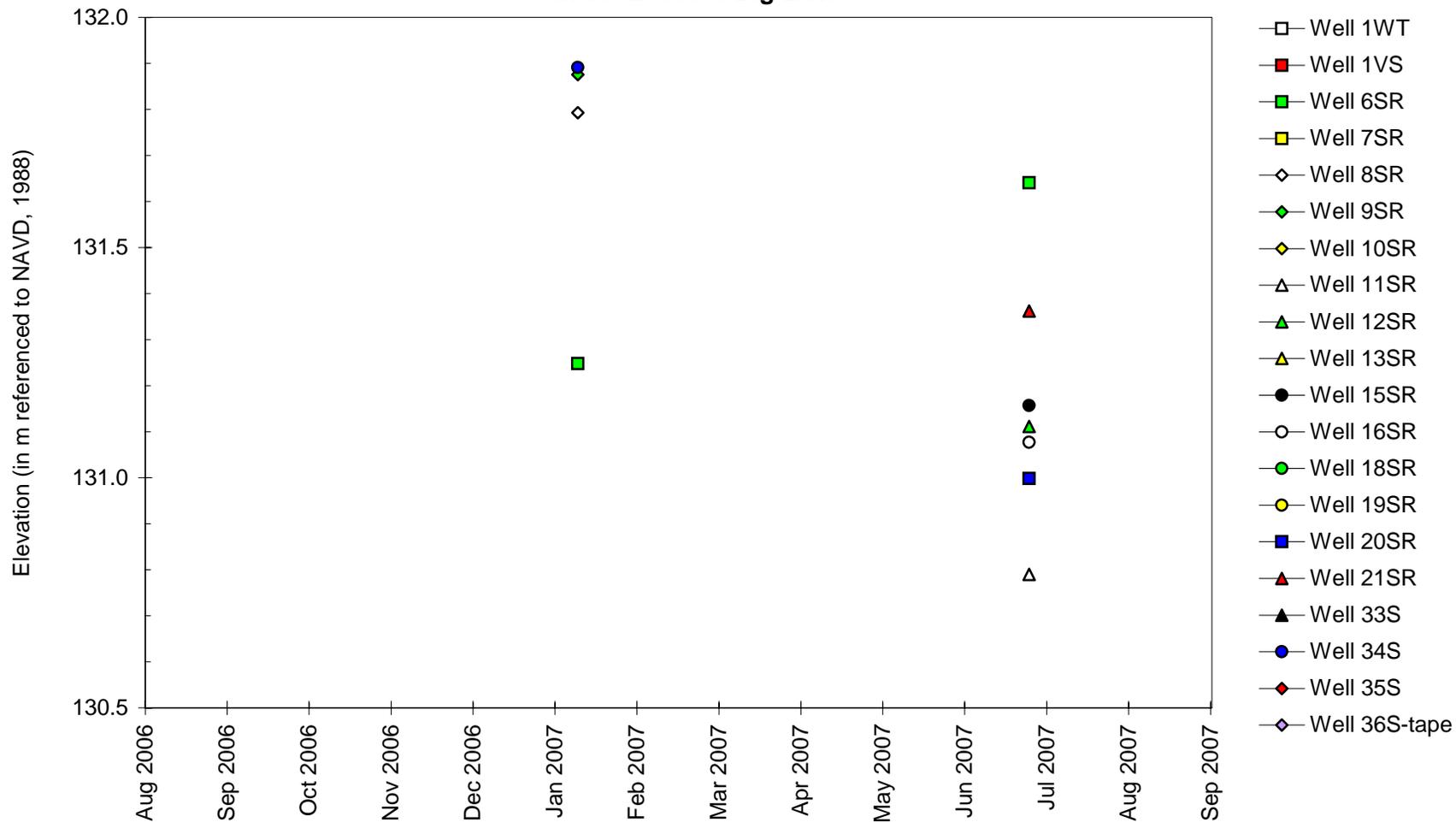
from the USGS Topographic Series, Cooperstown, IL 7.5-minute Quadrangle (USGS 1980)
contour interval is 10 feet



Former Wessel Property, La Grange Wetland Bank Site

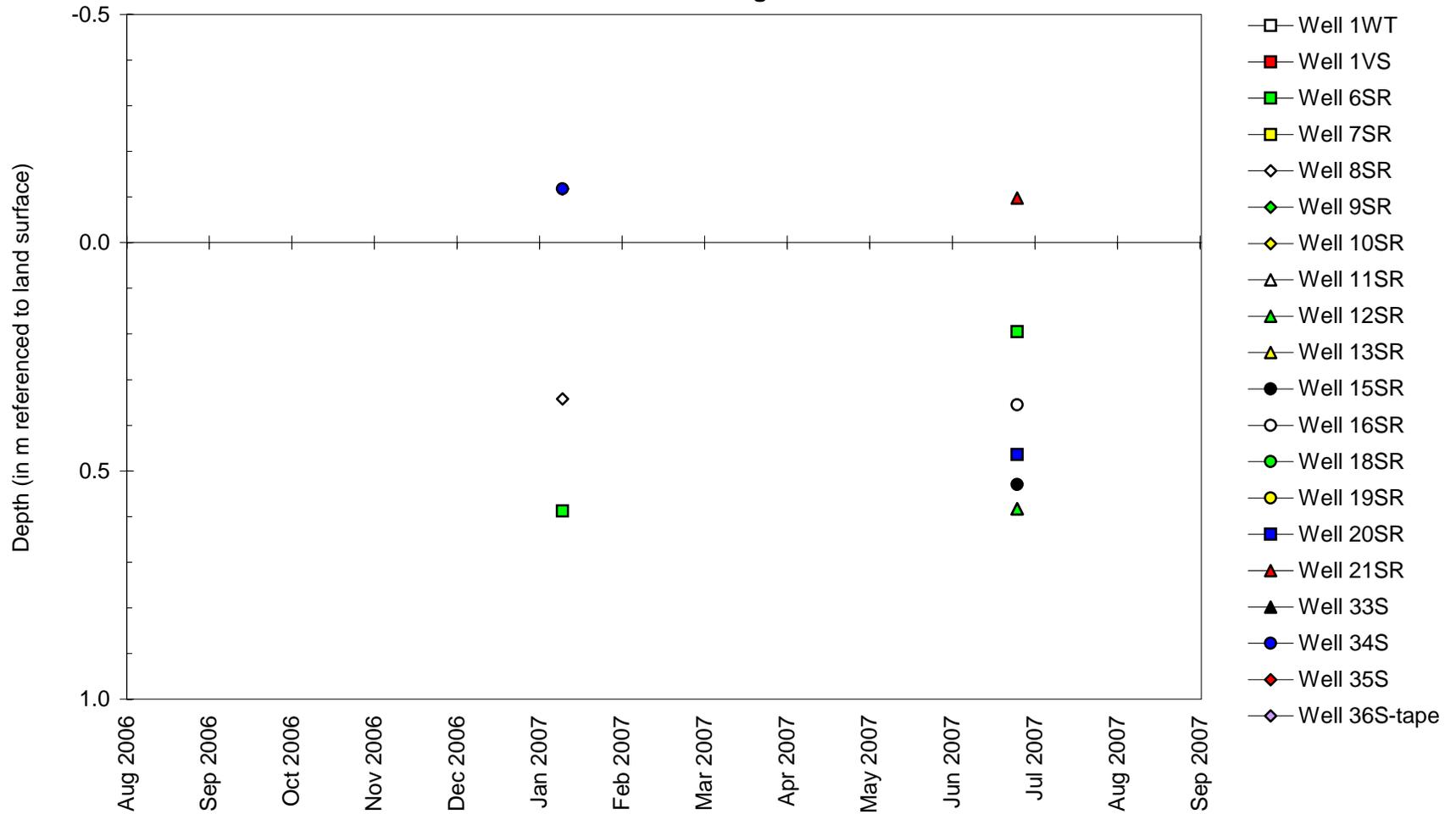
September 1, 2006 to September 1, 2007

Water-Level Elevations in Shallow Monitoring Wells in the Basin of Big Lake



Former Wessel Property, La Grange Wetland Bank Site
September 1, 2006 to September 1, 2007

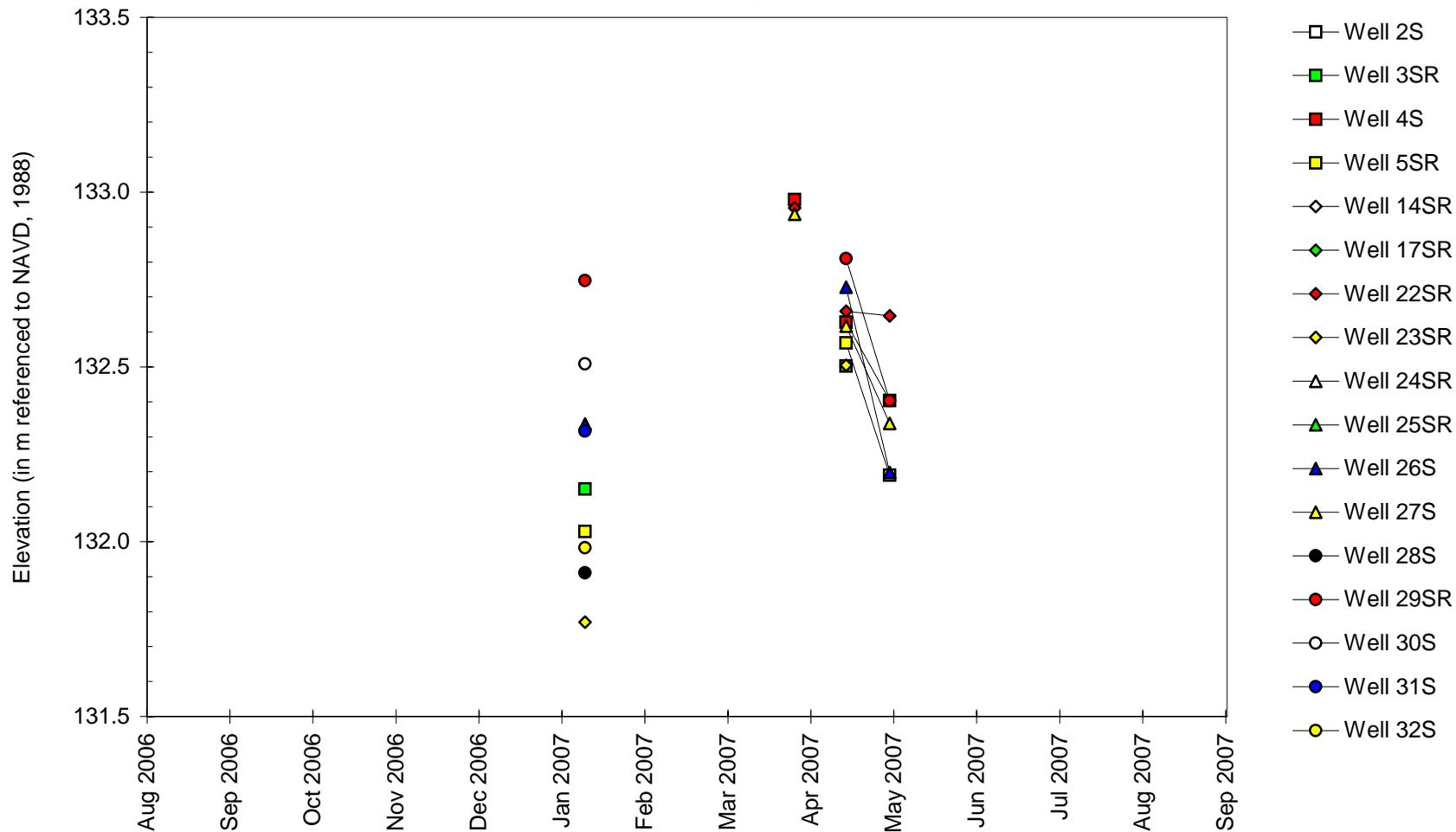
Depth to Water
in Shallow Monitoring Wells
in the Basin of Big Lake



Former Wessel Property, La Grange Wetland Bank Site

September 1, 2006 to September 1, 2007

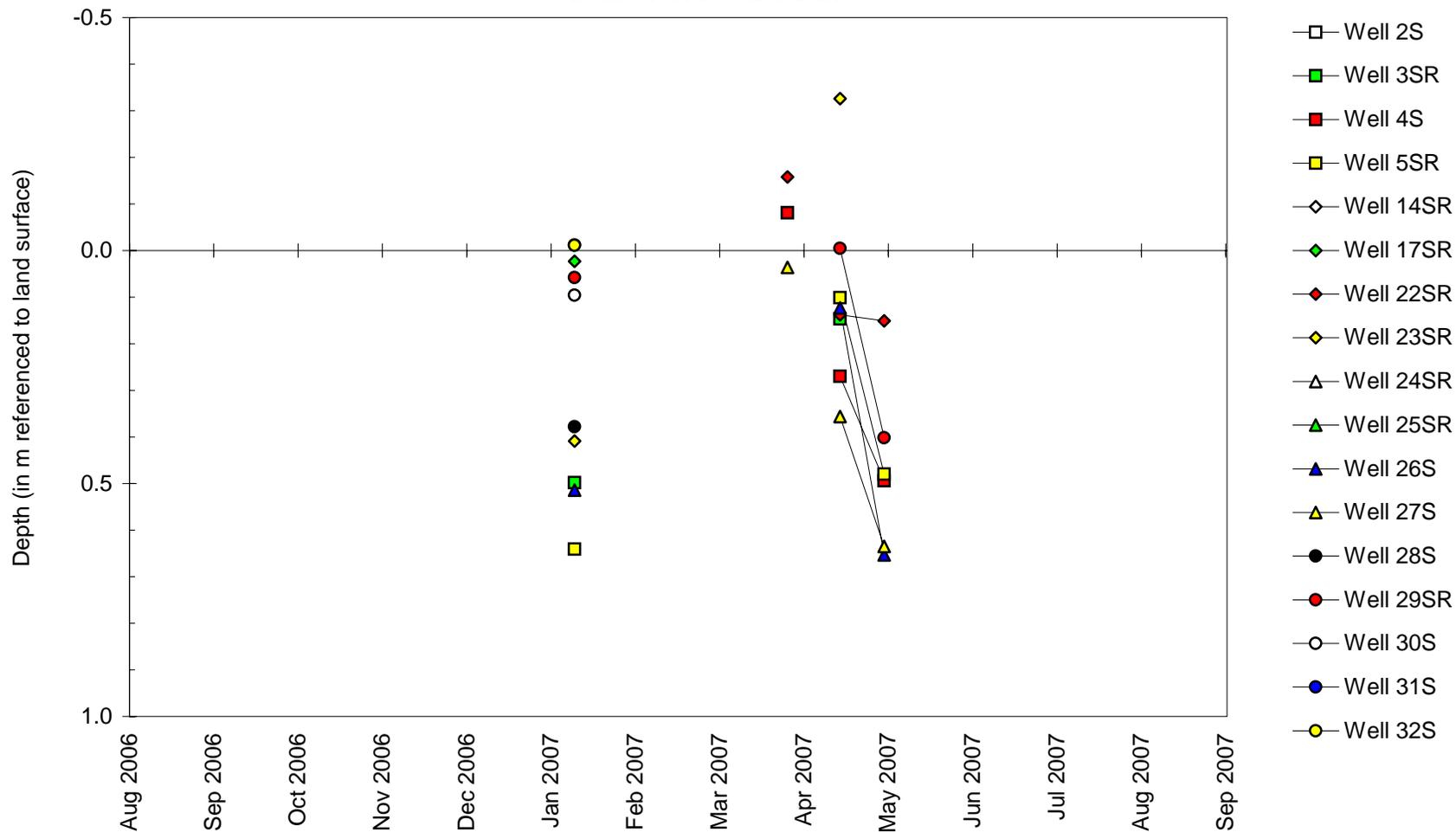
Water-Level Elevations in Shallow Monitoring Wells in the Terrace and Fan



Former Wessel Property, La Grange Wetland Bank Site

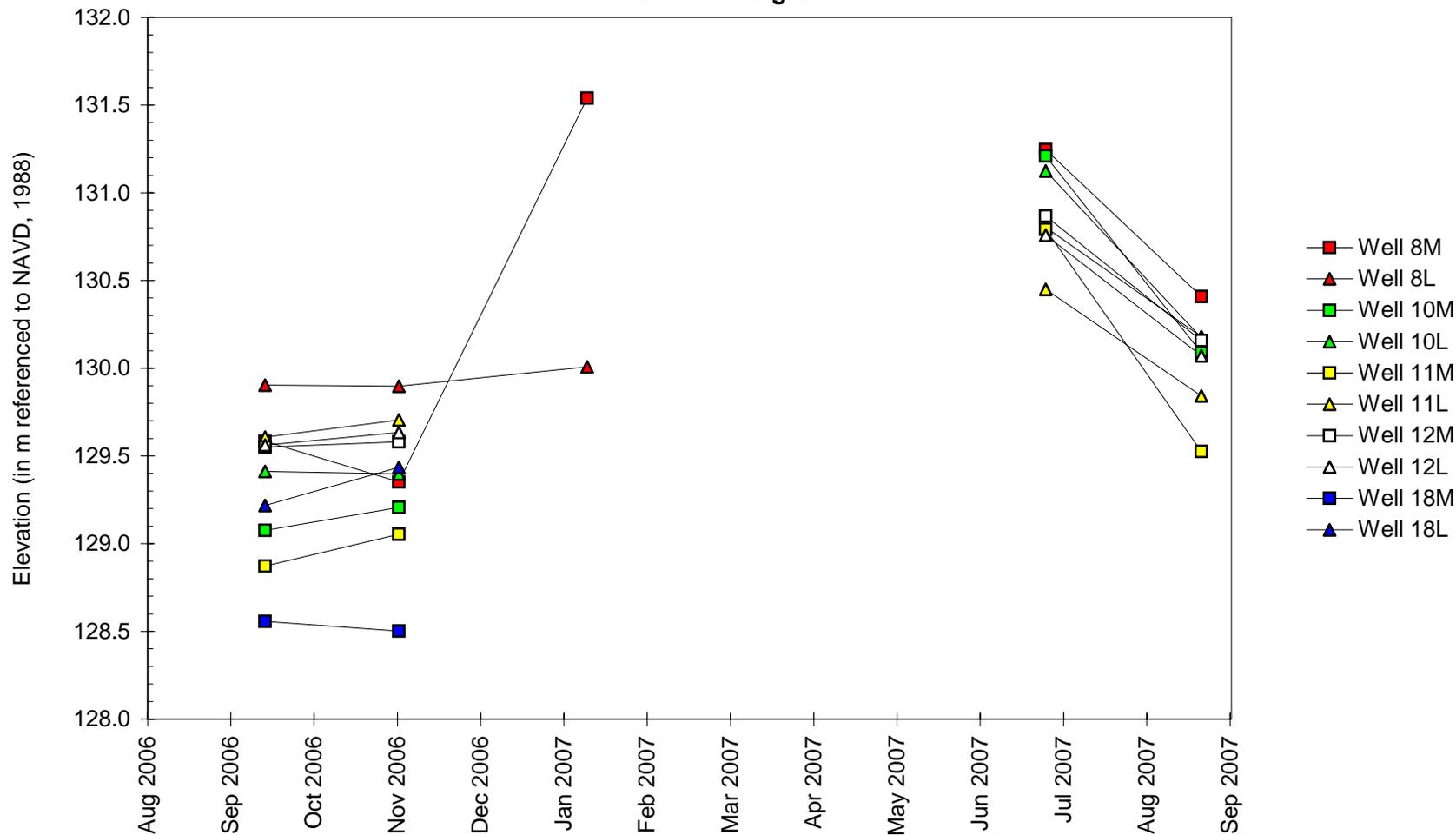
September 1, 2006 to September 1, 2007

Depth to Water in Shallow Monitoring Wells in the Terrace and Fan



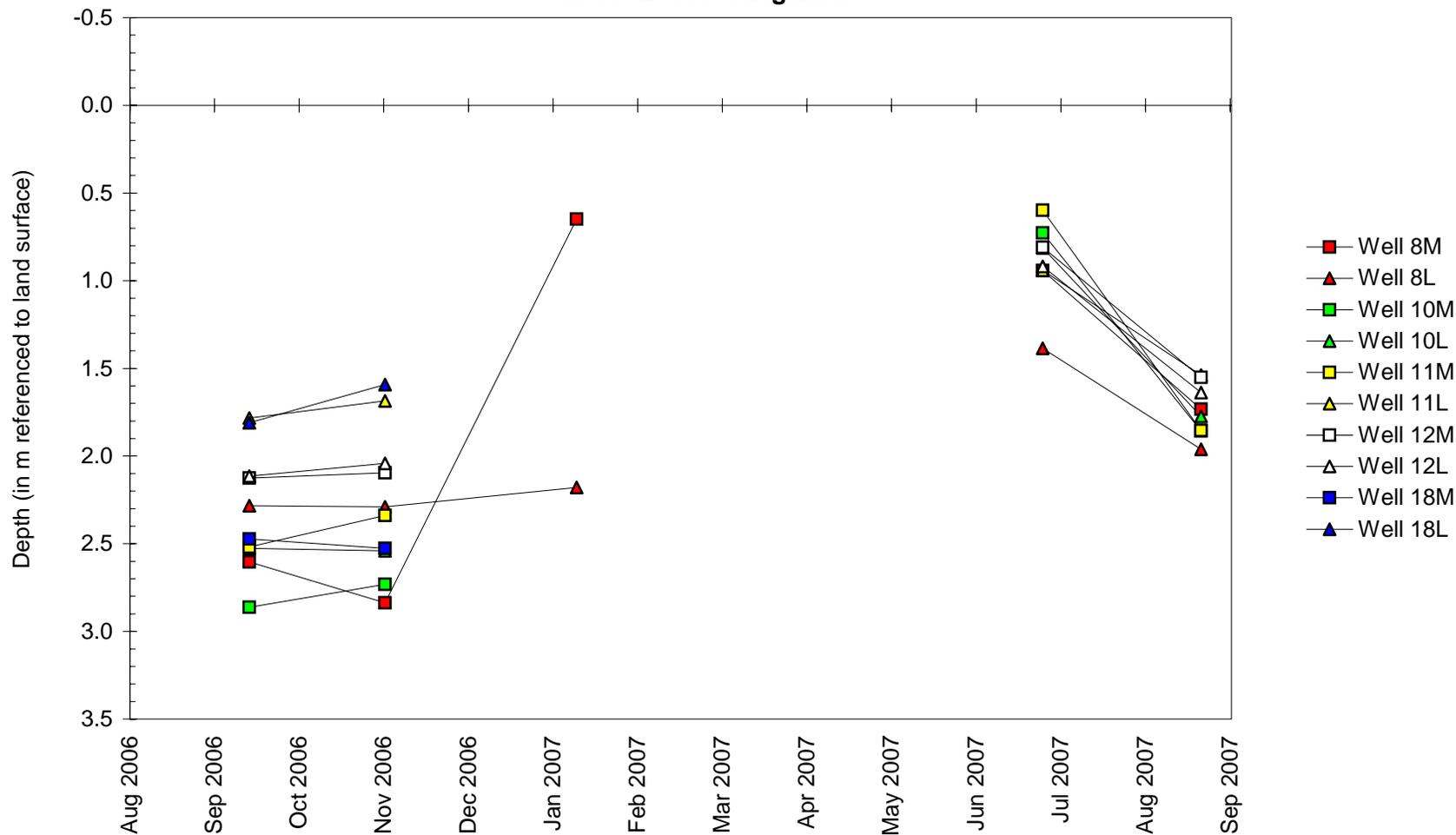
Former Wessel Property, La Grange Wetland Bank Site September 1, 2006 to September 1, 2007

Water-Level Elevations in Deeper Monitoring Wells in the Basin of Big Lake



Former Wessel Property, La Grange Wetland Bank Site
September 1, 2006 to September 1, 2007

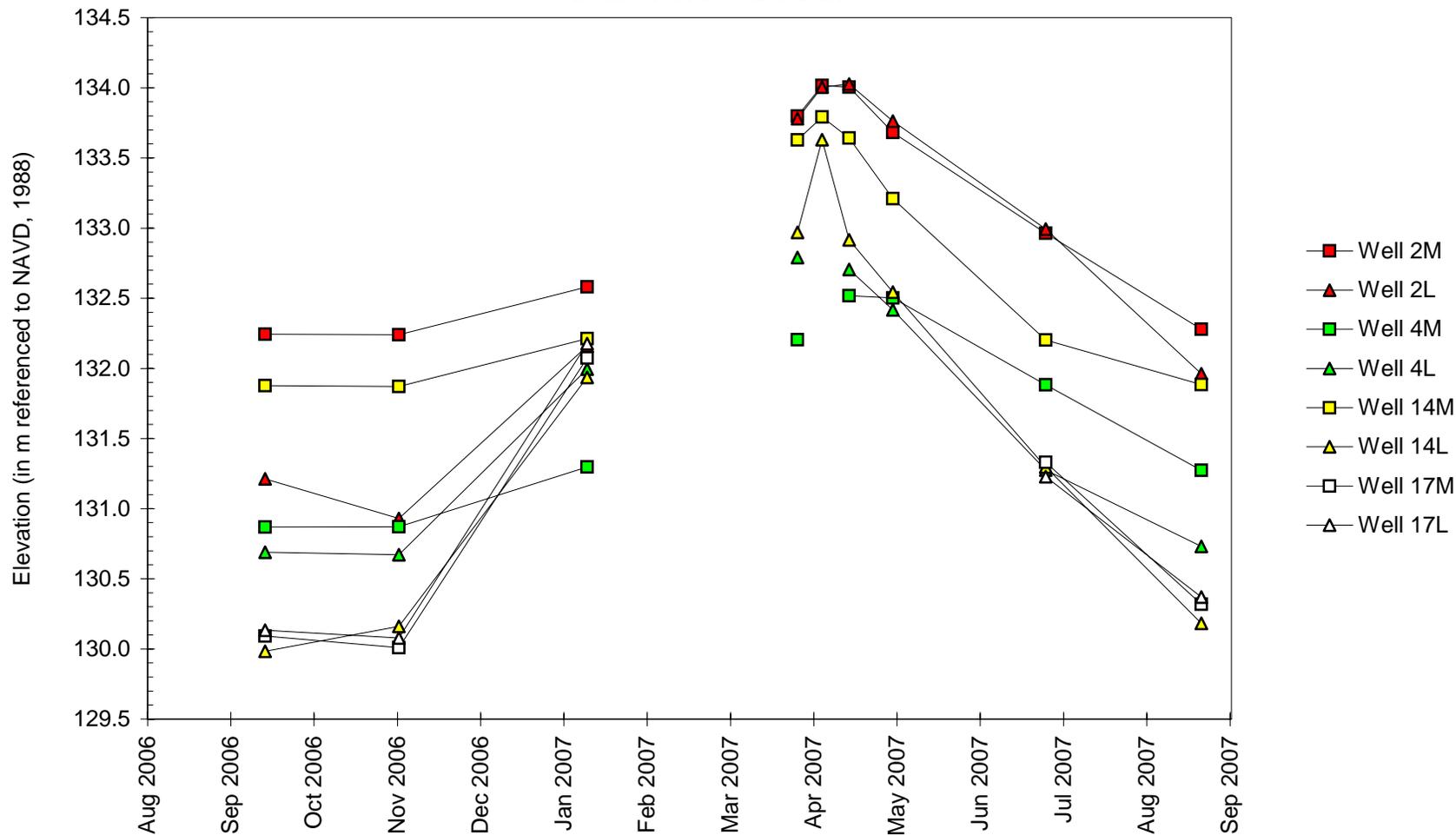
Depth to Water
in Deeper Monitoring Wells
in the Basin of Big Lake



Former Wessel Property, La Grange Wetland Bank Site

September 1, 2006 to September 1, 2007

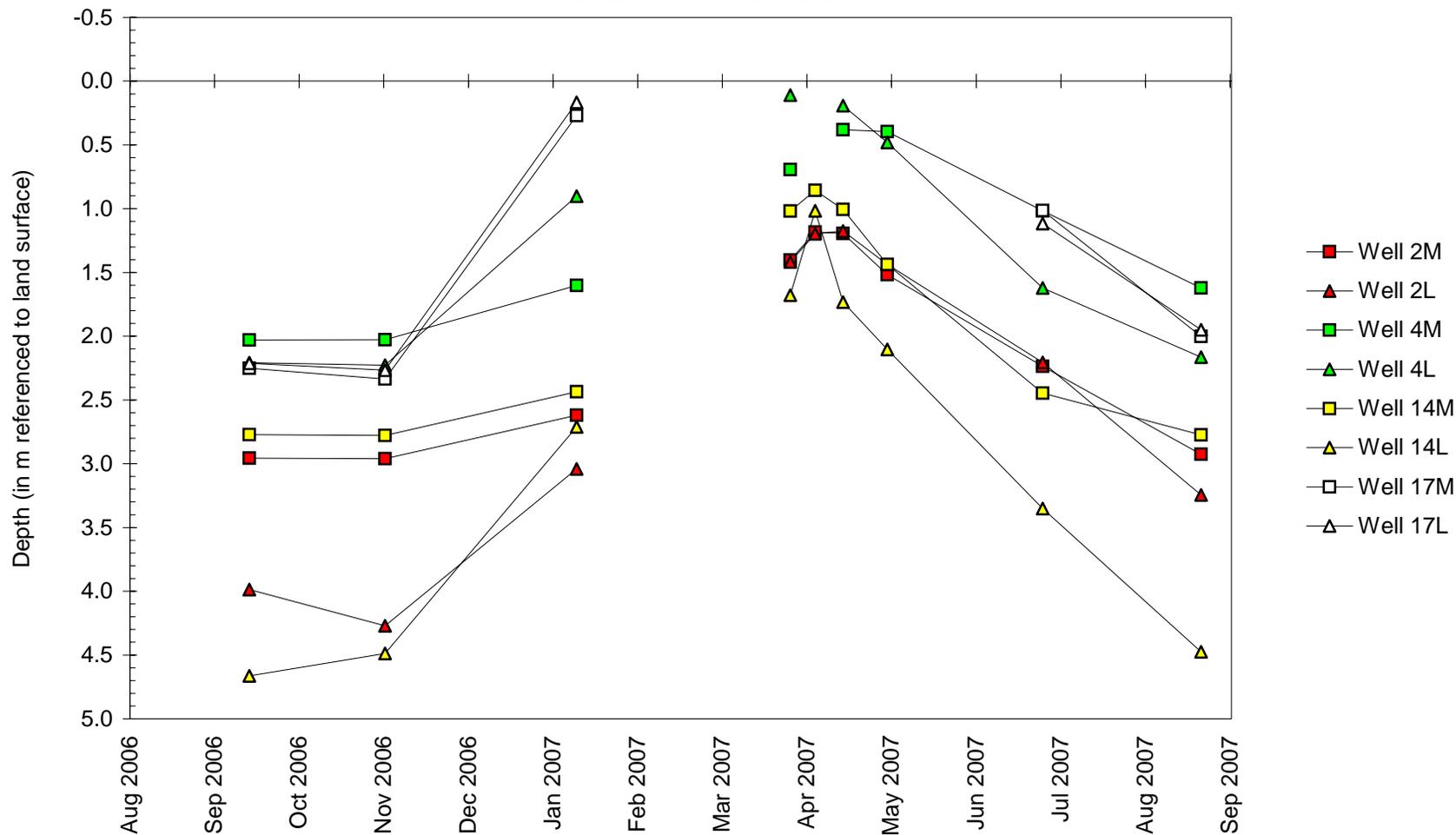
Water-Level Elevations in Deeper Monitoring Wells in the Terrace and Fan



Former Wessel Property, La Grange Wetland Bank Site

September 1, 2006 to September 1, 2007

Depth to Water in Deeper Monitoring Wells in the Terrace and Fan

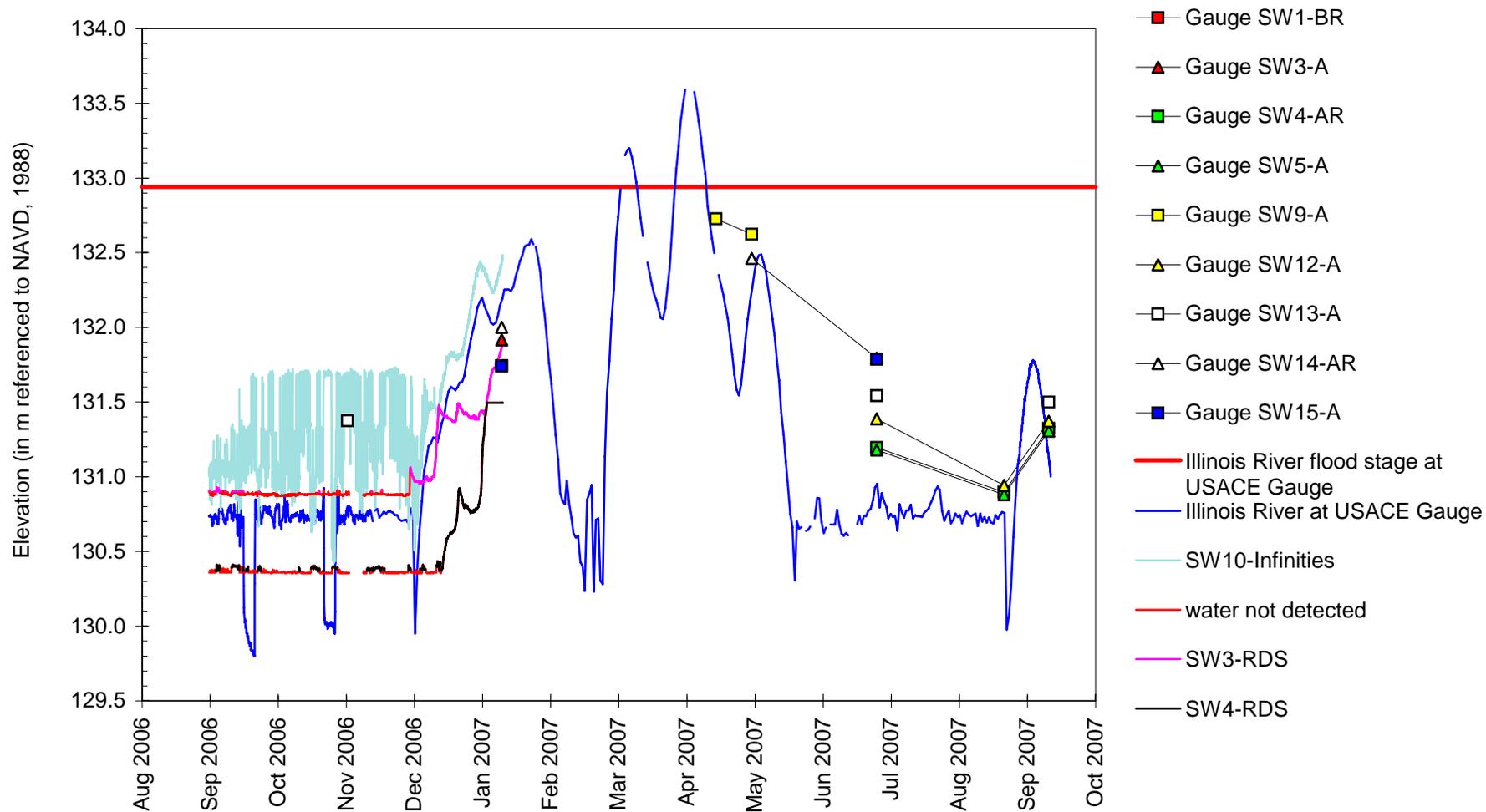


Former Wessel Property, La Grange Wetland Bank Site

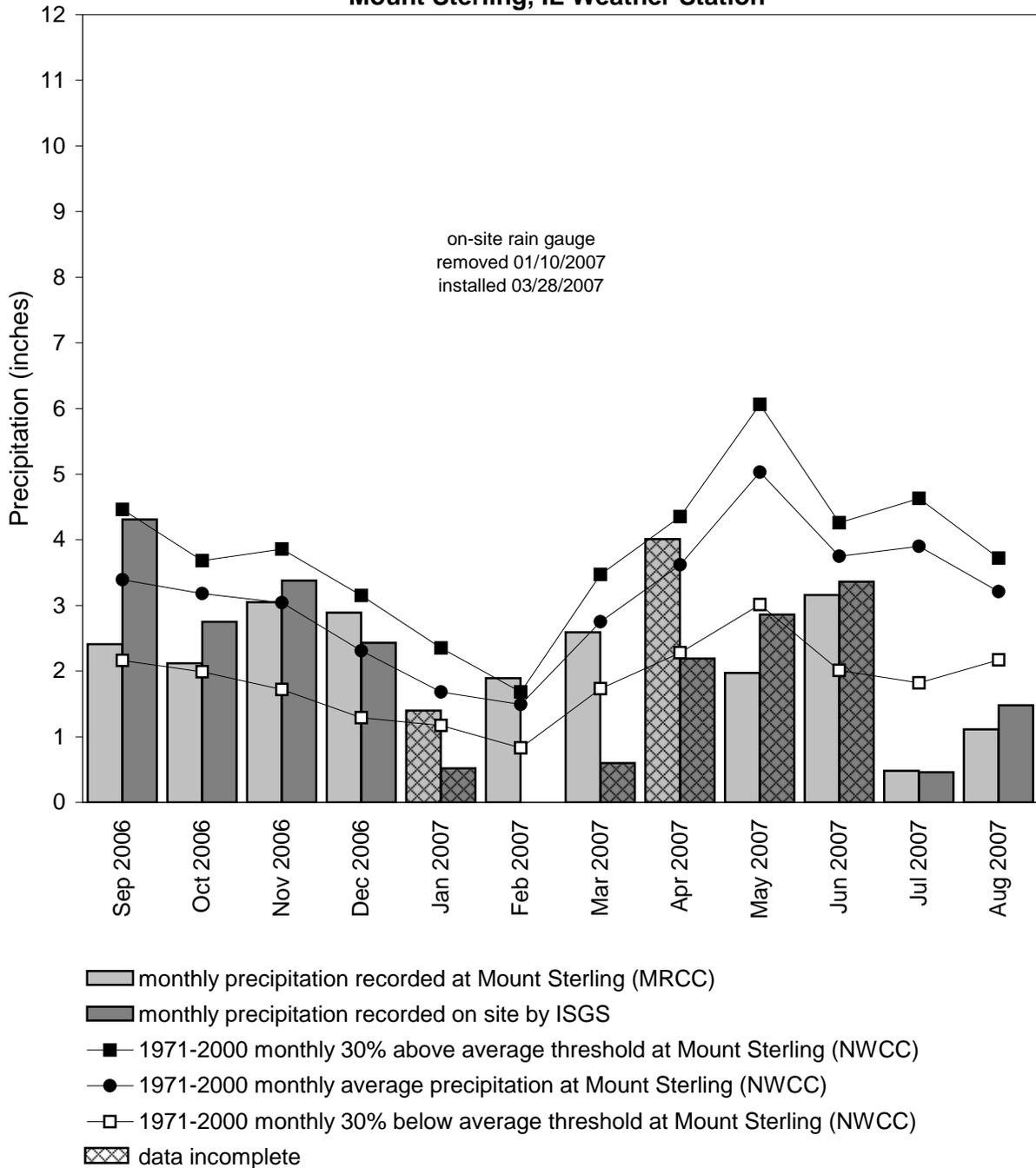
September 1, 2006 to September 12, 2007

Water-Level Elevations on Surface Water Gauges

82



**Former Wessel Property,
La Grange Wetland Bank Site
September 2006 through August 2007
Total Monthly Precipitation Recorded On Site and at the
Mount Sterling, IL Weather Station**



Graph last updated October 11, 2007