

**EAST CAPE GIRARDEAU  
WETLAND COMPENSATION SITE**

**ISGS #81**

IL 146 (FAP 312)

Sequence #633

Alexander County, near East Cape Girardeau, Illinois

**Primary Project Manager: Eric T. Plankell**

**Secondary Project Manager: not assigned**

**SITE HISTORY**

- November 2008: ISGS submitted a Level I Initial Site Evaluation Report to IDOT.
- December 2008: ISGS began on-site monitoring with the installation of a monitoring network.
- July 2009: ISGS removed most of the monitoring network in anticipation of wetland construction and planting to begin in August 2009.

**WETLAND HYDROLOGY CALCULATION FOR 2009**

The estimated area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2009 growing season is 5.2 ha (12.8 ac) out of a total mitigation area of approximately 7.3 ha (18.0 ac). The estimated area that satisfied wetland hydrology criteria for greater than 12.5% of the 2009 growing season is 4.9 ha (12.0 ac). Using new guidance proposed by the U.S. Army Corps of Engineers (2008), we estimate that 5.2 ha (12.8 ac) also satisfied wetland hydrology criteria for 14 or more consecutive days during 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 Cape Girardeau, Missouri is March 26, and the season lasts 228 days; 5% of the growing season is 11 days, and 12.5% of the growing season is 29 days. According to methods outlined in the Midwest Regional Supplement (U.S. Army Corps of Engineers 2008), we estimate that March 6 was the starting date of the 2009 growing season based on soil temperature.
- Total precipitation for the monitoring period, as recorded at the weather station in Jackson, Missouri was 95% of normal. Precipitation at the Jackson, Missouri weather station was at or above normal in the months of September and December 2008, and February, April, May, and August 2009. Precipitation at the Jackson, Missouri weather station was below normal for the remaining months in the monitoring period.
- Beginning in April 2009, elevated water levels on the Mississippi River at Thebes, Illinois resulted in water backing up in the East Cape Main Ditch (ECMD), thereby resulting in flooding at the site that was sustained through June.
- In 2009, water levels measured in all soil-zone (S and VS) monitoring wells, except well 5VS, satisfied the wetland hydrology criteria for greater than 5% of the growing season, for more than 14 consecutive days of the growing season, and for more than 12.5% of the growing season.

- Surface-water levels, measured by data loggers at gauges A and B, indicated inundation at or below approximately 100.84 m (330.84 ft) and 100.73 m (330.48 ft), respectively, for greater than 5% of the growing season, inundation at or below approximately 100.78 m (330.64 ft) and 100.65 m (330.22 ft), respectively, for 14 or more consecutive days of the growing season, and inundation at or below approximately 100.63 m (330.15 ft) and 100.51 m (329.76 ft), respectively, for greater than 12.5% of the growing season.

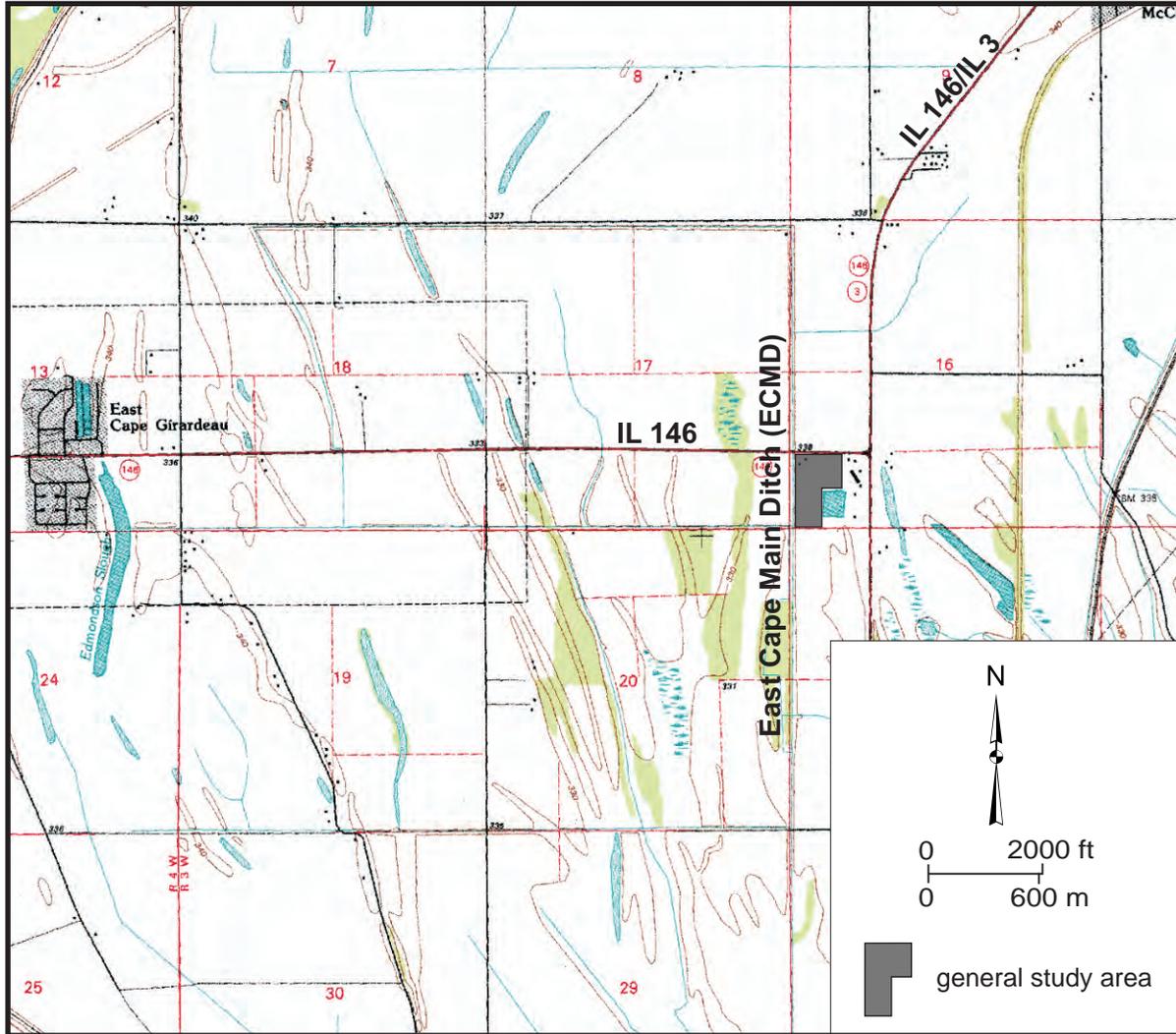
#### PLANNED FUTURE ACTIVITIES

- The ISGS will install a new monitoring network at the site following wetland construction and planting activities.
- Monitoring will continue at the site until no longer required by IDOT.

# East Cape Girardeau Wetland Compensation Site [FAP 312 (IL 146)]

## General Study Area and Vicinity

from the USGS Topographic Series, Mc Clure, IL-MO 7.5-minute Quadrangle (USGS 1993)  
contour interval is 20 feet, with supplementary contour interval of 10 feet

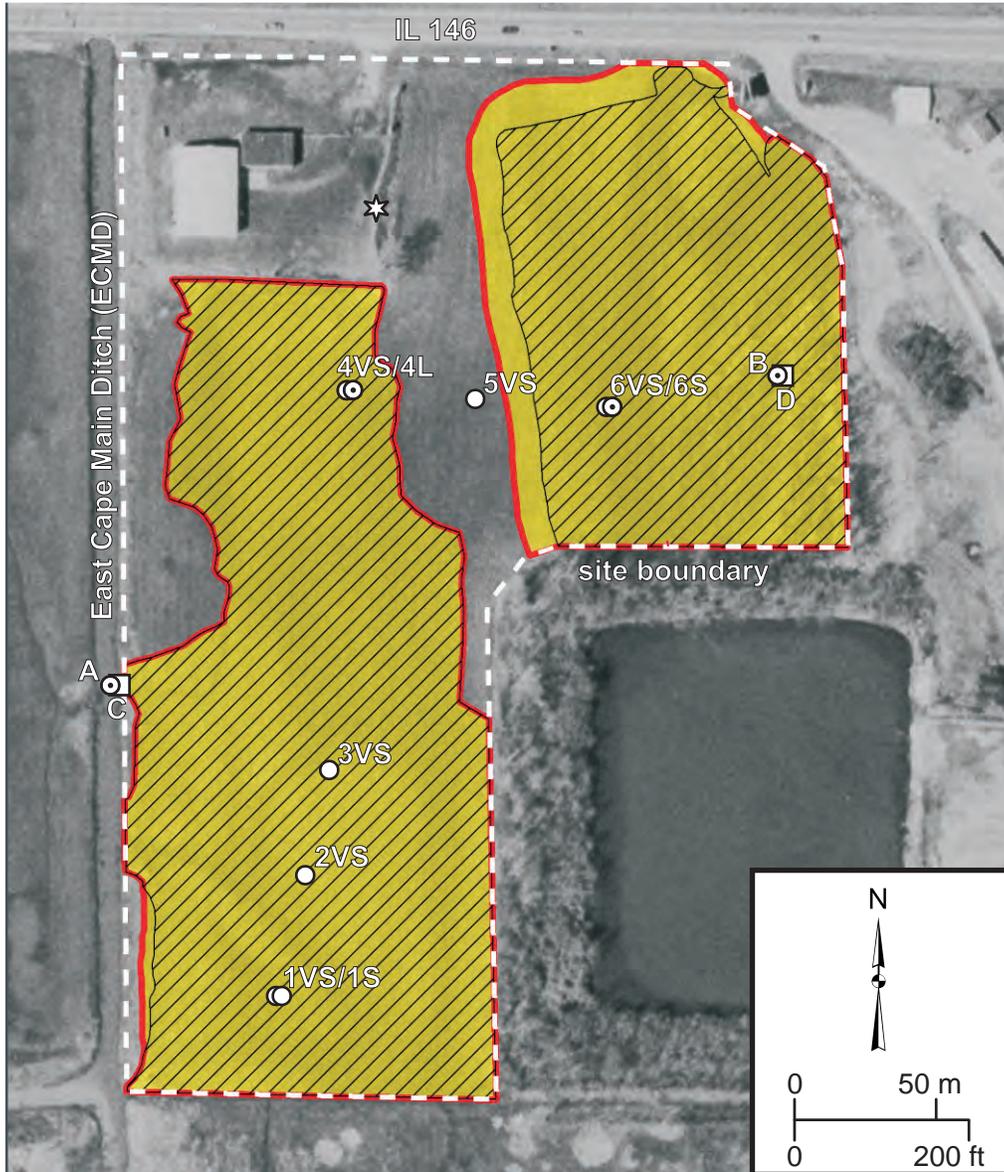


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## Estimated Areal Extent of 2009 Wetland Hydrology

September 1, 2008 through August 31, 2009

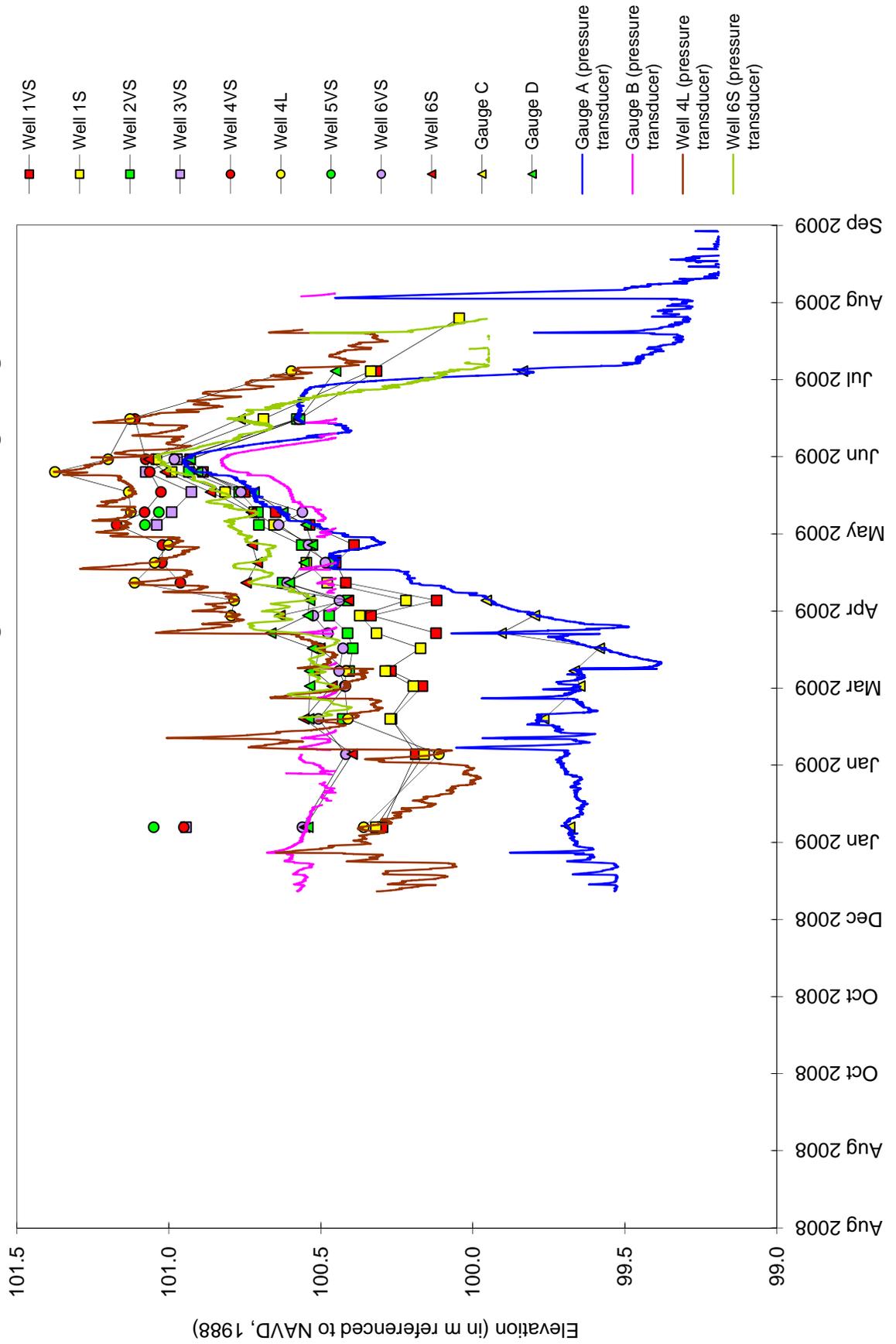
Map based on USGS digital orthophotograph, McClure, SW quarter quadrangle (ISGS 2005)



○	ISGS monitoring well		> 5% of the growing season (1987 Manual)
□	Staff gauge (4.0 ft)		> 12.5% of the growing season (1987 Manual)
⊙	Pressure transducer		> 14 days (2008 Midwest Supplement)
☆	Rain gauge		

# East Cape Girardeau Wetland Compensation Site September 1, 2008 through August 31, 2009

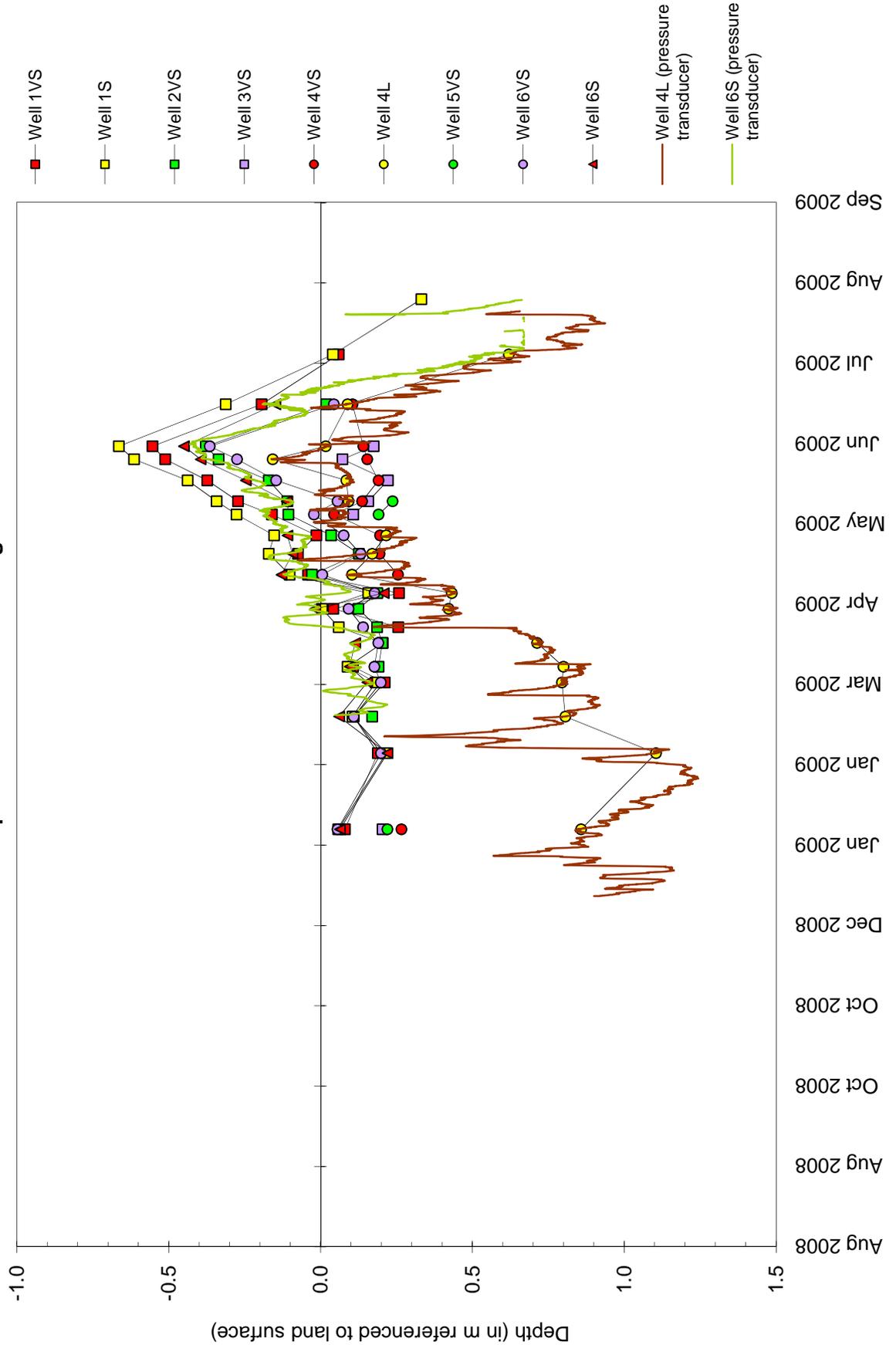
## Water-Level Elevations in Monitoring Wells and at Stage Gauges



# East Cape Girardeau Wetland Compensation Site

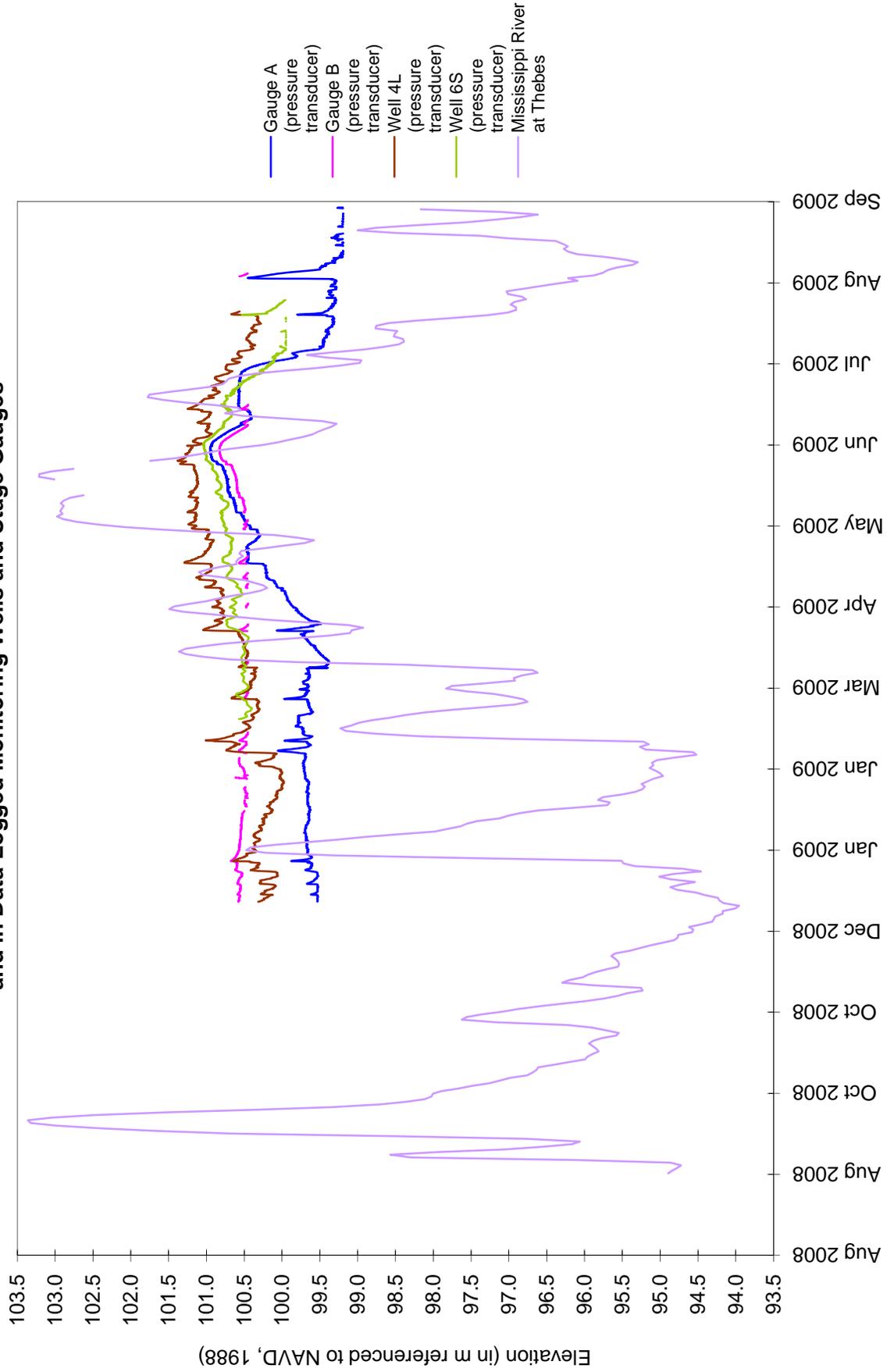
## September 1, 2008 through August 31, 2009

Depth to Water in Monitoring Wells



# East Cape Girardeau Wetland Compensation Site September 1, 2008 through August 31, 2009

## Water-Level Elevations on Mississippi River and in Data-Logged Monitoring Wells and Stage Gauges



# East Cape Girardeau Wetland Compensation Site September 2008 through August 2009

## Total Monthly Precipitation Recorded On Site and at the Jackson, MO and Cape Girardeau, MO Weather Stations

