



**FAIRMONT CITY, NEW RIVER CROSSING
POTENTIAL WETLAND COMPENSATION SITE**

ISGS #53

FAP 999

St. Clair County, near Fairmont City, Illinois

Primary Project Manager: Steven E. Benton

Secondary Project Manager: not assigned

SITE HISTORY

- August 1999: The ISGS conducted an initial site evaluation of the proposed compensation site. The results were reported to IDOT by letter in November.
- June 2000: IDOT requested that the ISGS perform a Level II investigation of the proposed compensation site.
- September 2000: Field work commenced at the site with the installation of a ground-water and surface-water monitoring network.
- March 2003: A Level II hydrogeologic characterization report was submitted to IDOT.

WETLAND HYDROLOGY CALCULATION FOR 2004

The area of the site that satisfied wetland hydrology criteria (U.S. Army Corps of Engineers 1987) for more than 5% of the 2004 growing season was estimated to be 30.6 ac (12.4 ha). The area that satisfied wetland hydrology criteria for more than 12.5% of the 2004 growing season was also estimated to be 30.6 ac (12.4 ha). These estimates are based on the following factors:

- According to the Midwestern Climate Center, the median length of the growing season at Belleville, Illinois is 203 days, starting April 5 and ending October 24. Therefore, 12.5% of the growing season is 25 days.
- Total precipitation recorded at the Belleville, Illinois weather station during the 2004 monitoring period was 49.07 inches, which was 125% of normal. The wettest month during the period was May 2004 (209% of normal), and the driest month was April 2004 (34% of normal). The longest period of below normal precipitation was from February 2004 to April 2004. There were no extended periods greater than 2 months of above normal precipitation.
- In 2004, water levels in monitoring wells 1S, 2S, 3S, 4S, 5S, 8S, 12S, 13S, 14S, 15S, and 17S satisfied the wetland hydrology criteria for more than 5% of the growing season. These wells also satisfied the wetland hydrology criteria for more than 12.5% of the growing season.
- Water levels in the three monitoring wells (20S, 21S, and 22S) on the Fairmont City 2 site also satisfied the wetland hydrology criteria for more than 5% of the growing season. These wells also satisfied the wetland hydrology criteria for more than 12.5% of the growing season. Due to the limited areal coverage of these wells, no wetland hydrology polygon was drawn.
- Surface-water data recorded by RDS1 reveal that the portions of the Fairmont City 1 site

below an elevation of 122.3 m were inundated for more than 5% of the growing season, and the portions below an elevation of 122.2 m were inundated for more than 12.5% of the growing season. No other areas were inundated for more than 5% of the growing season.

- Surface-water data recorded by RDS3/Global2 on the Fairmont City 2 site reveal that the portions of the site below an elevation of 122.2 m were inundated for more than 12.5% of the growing season. Due to the limited areal coverage of the data logger, no wetland hydrology polygon was drawn.

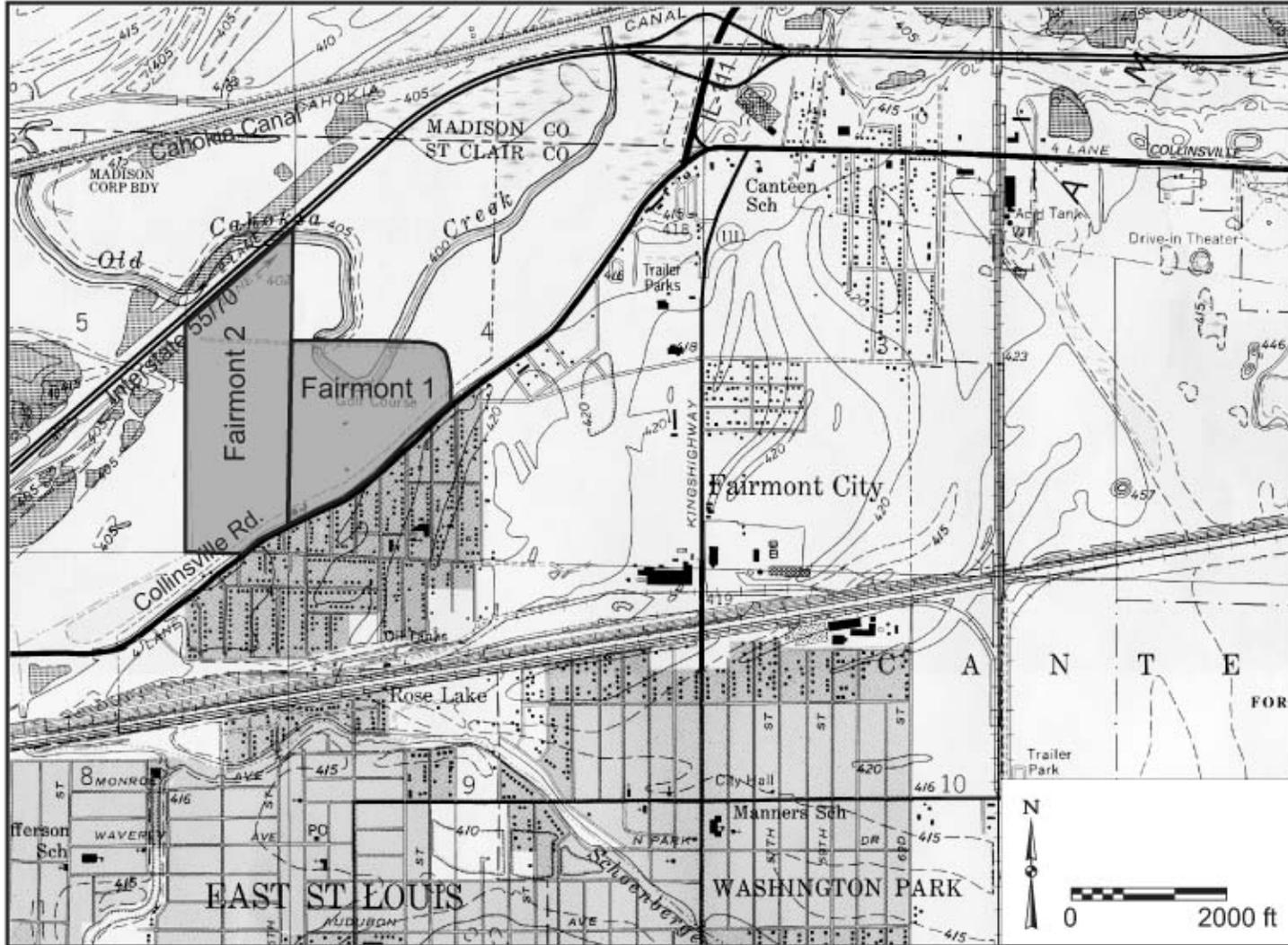
PLANNED FUTURE ACTIVITIES

- Surface- and ground-water monitoring will continue at this site until notified otherwise by IDOT.

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General Study Area and Vicinity

from the USGS Topographic Series, Monks Mound, IL 7.5-minute Quadrangle (USGS 1993)



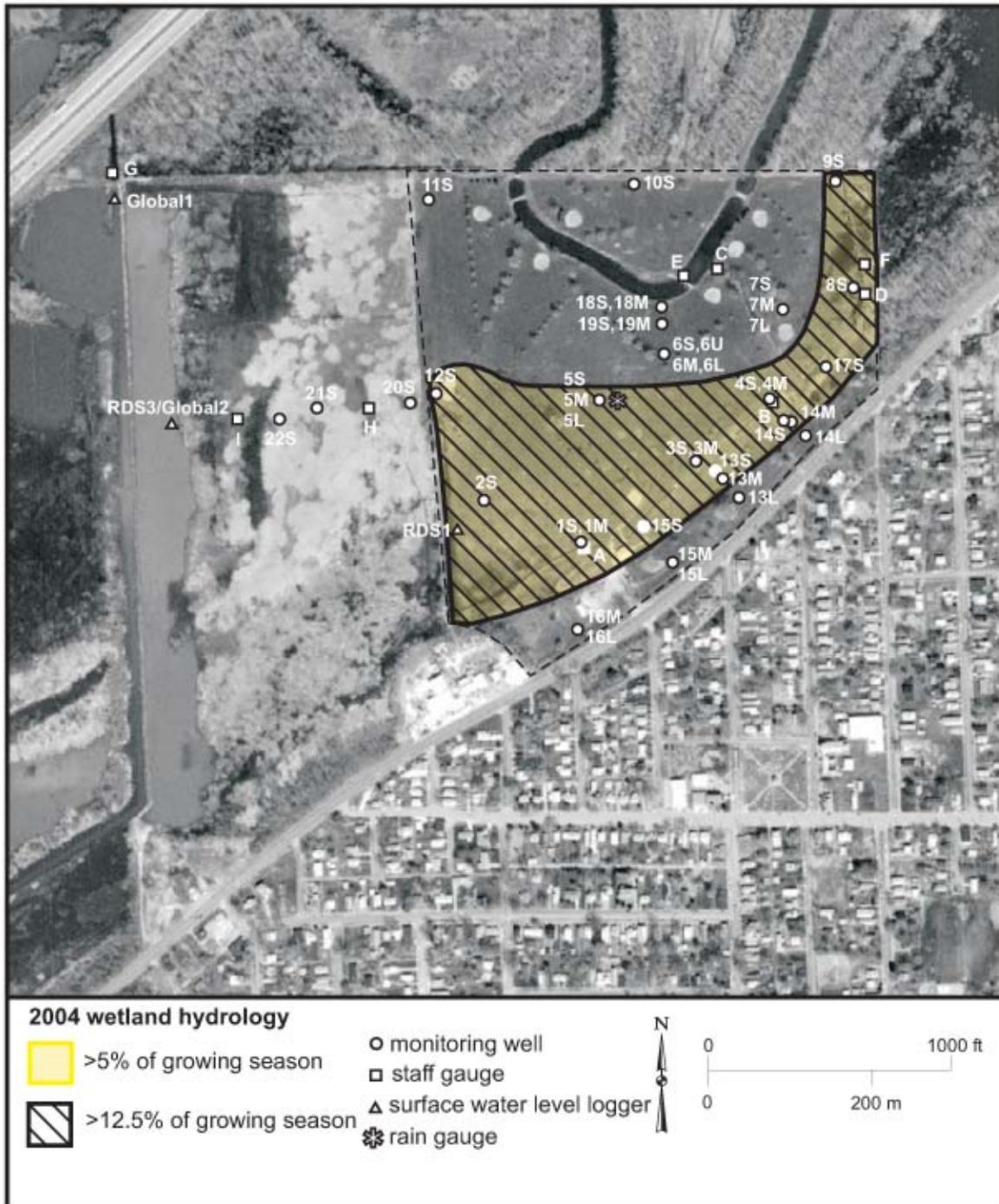
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Extent of 2004 Wetland Hydrology

based on data collected between September 1, 2003 and September 1, 2004

map based on the USGS, Monks Mound SW, Digital Orthophoto Quadrangle (NAPP 1998/99)

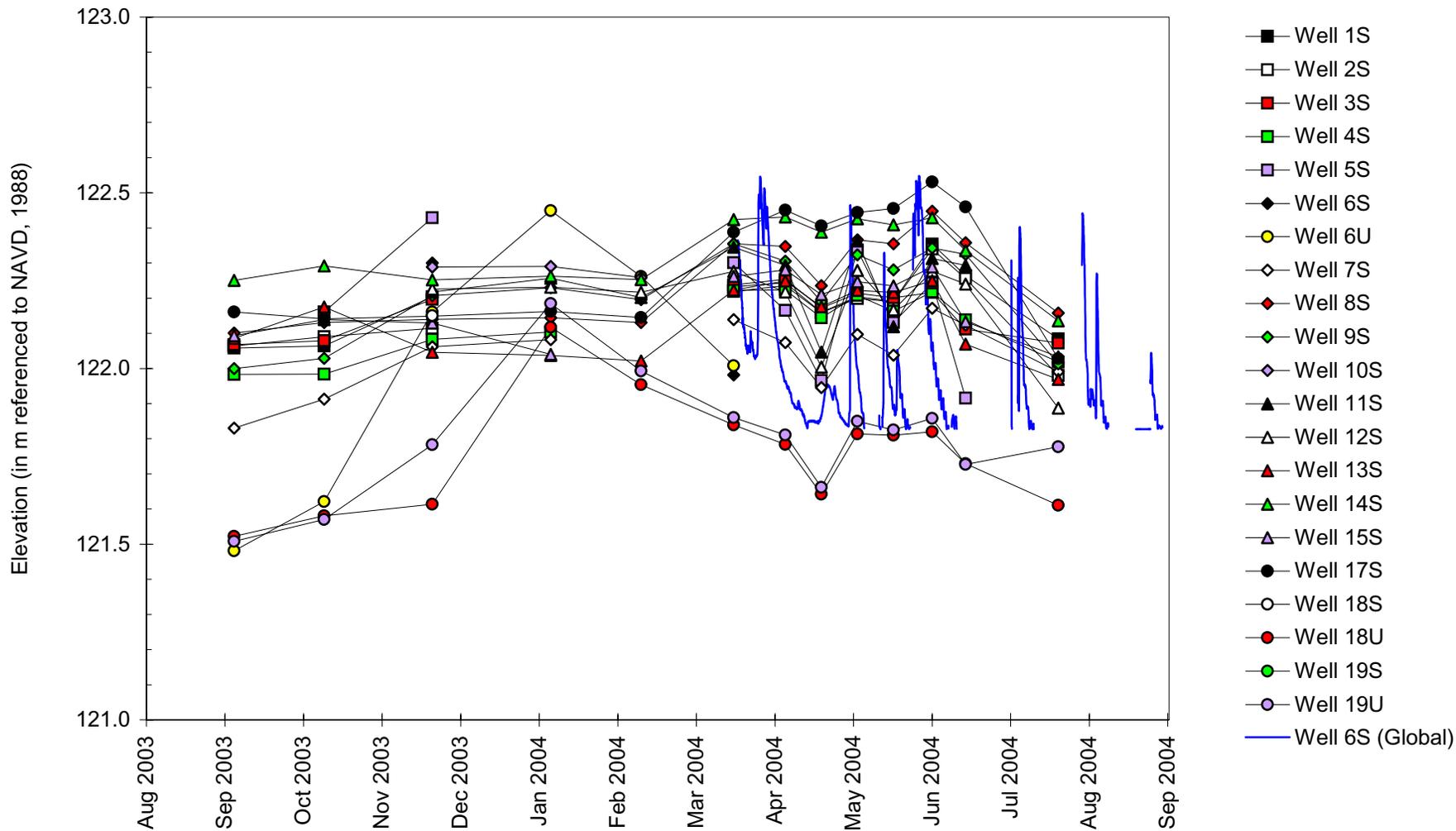
Monitoring well, staff gauge and data logger locations from GPS survey



Fairmont City, New River Crossing Potential Wetland Compensation Site

September 1, 2003 to September 1, 2004

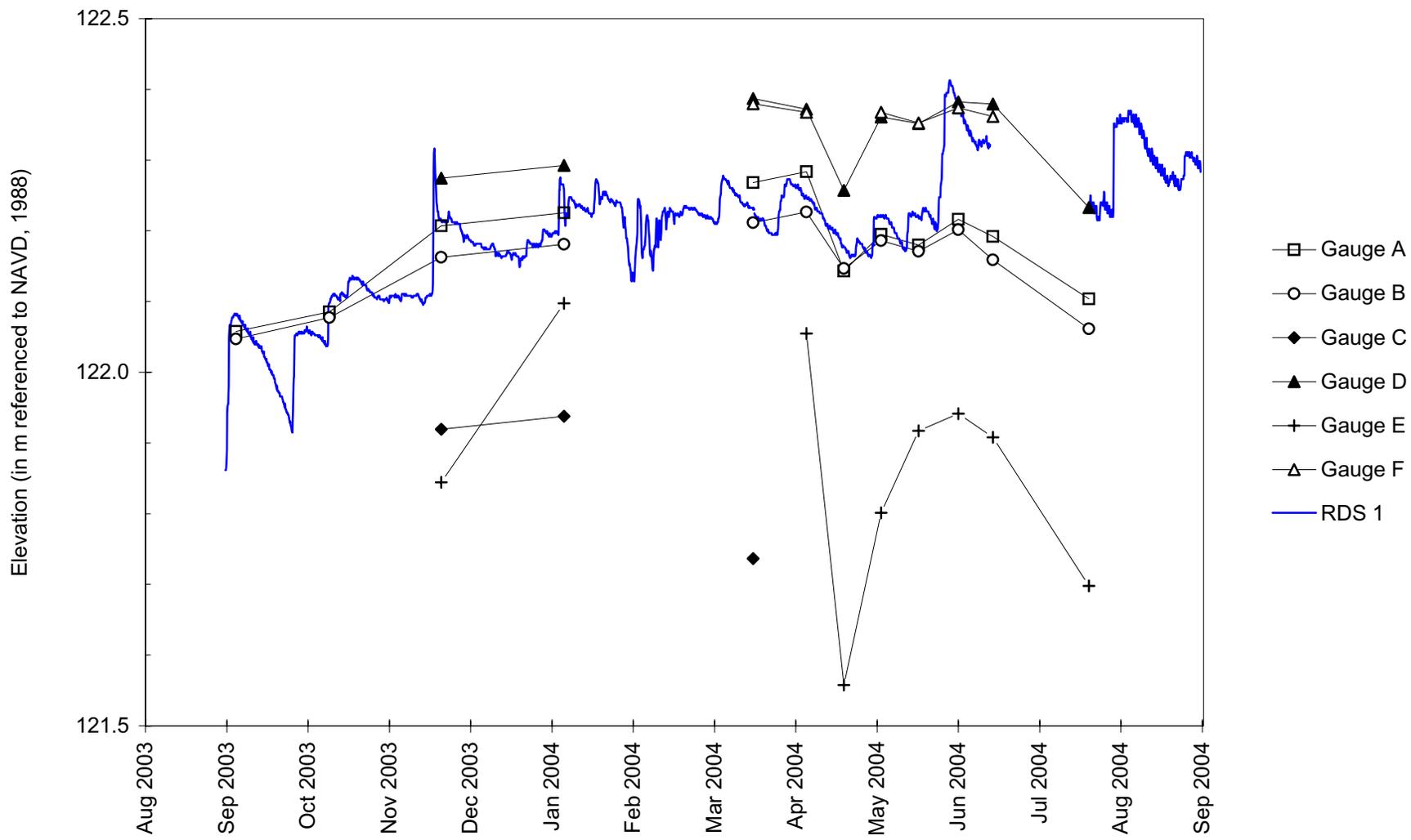
Water-Level Elevations in Soil-Zone and Upper Wells



Fairmont City, New River Crossing Potential Wetland Compensation Site

September 1, 2003 to September 1, 2004

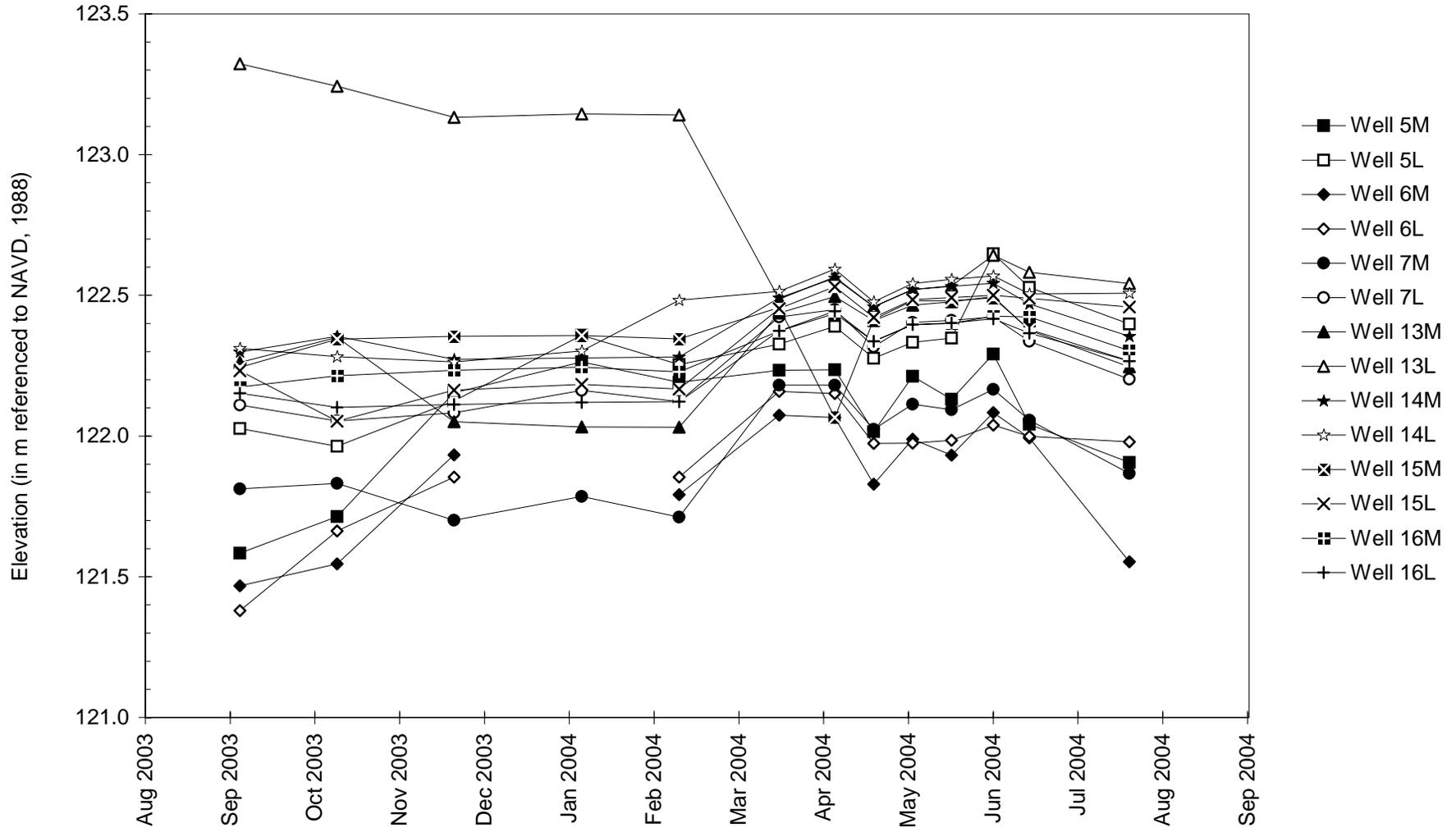
Water-Level Elevations on Stage Gauges and Data Loggers in the Fairmont City 1 Site



Fairmont City, New River Crossing Potential Wetland Compensation Site

September 1, 2003 to September 1, 2004

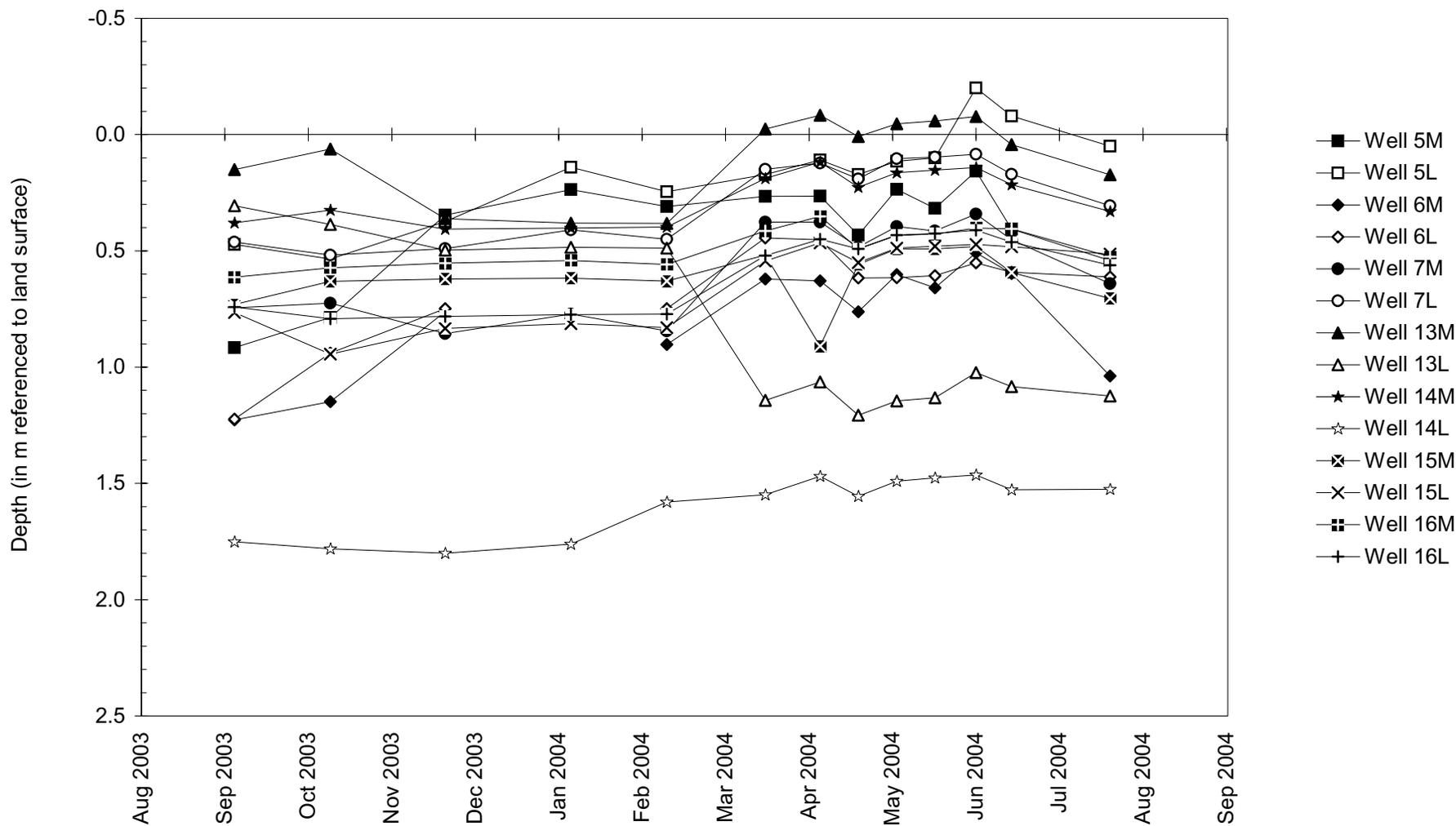
Water-Level Elevations in Middle and Lower Wells



Fairmont City, New River Crossing Potential Wetland Compensation Site

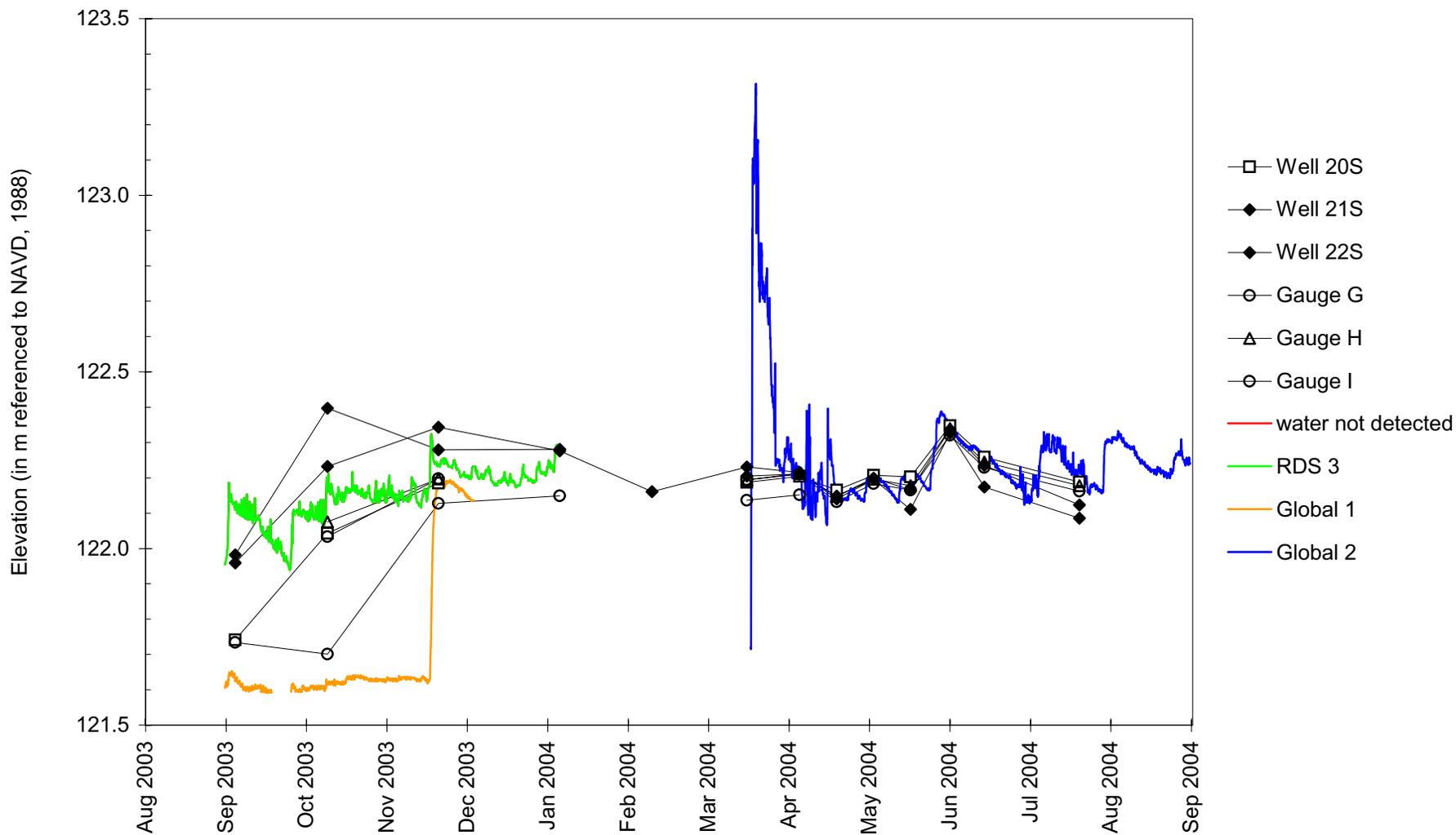
September 1, 2003 to September 1, 2004

Depth to Water in Middle and Lower Wells



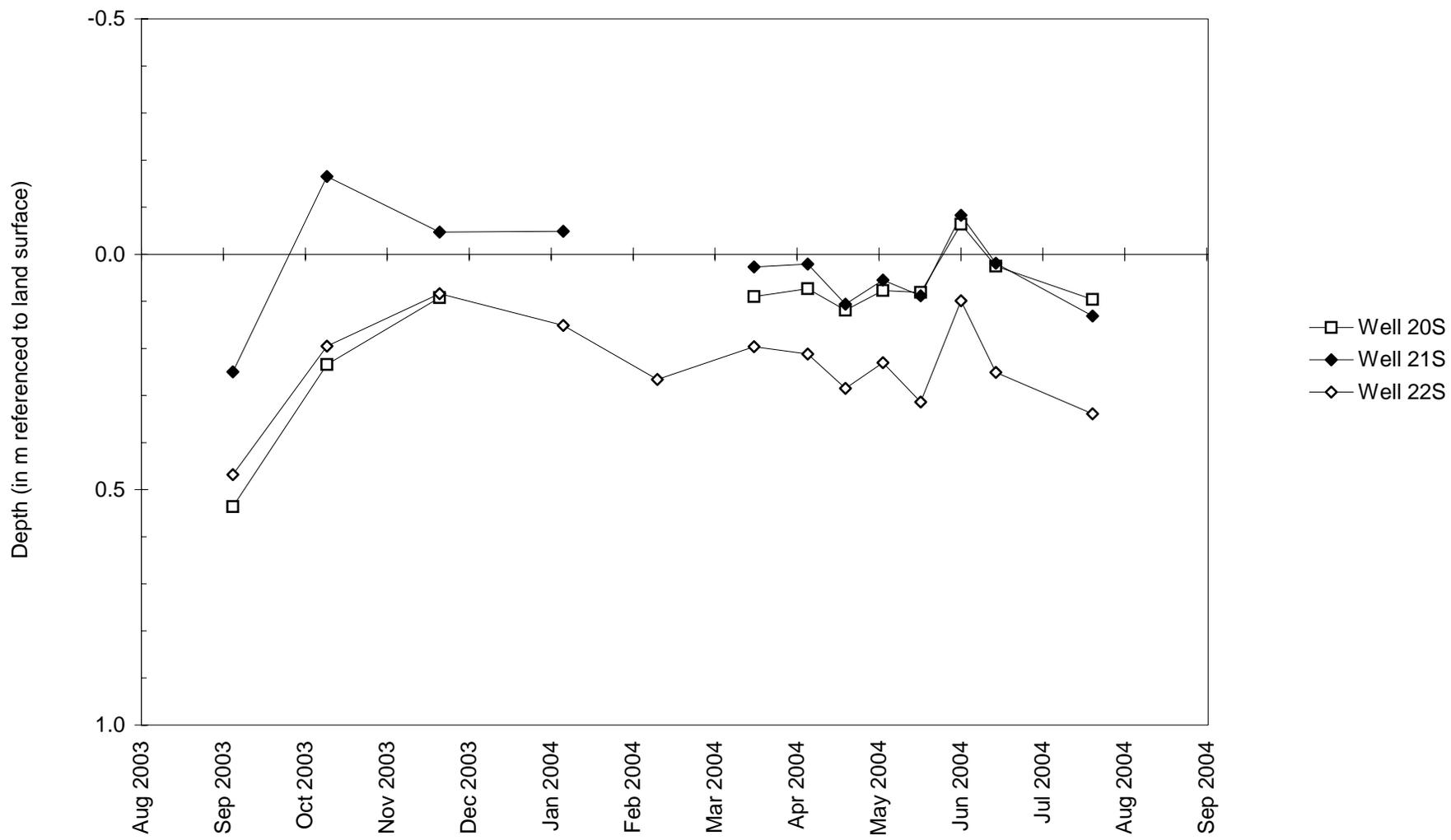
Fairmont City, New River Crossing Potential Wetland Compensation Site September 1, 2003 to September 1, 2004

Water-Level Elevations in Soil-Zone Wells, Stage Gauges and Data Loggers in Fairmont City 2 Site



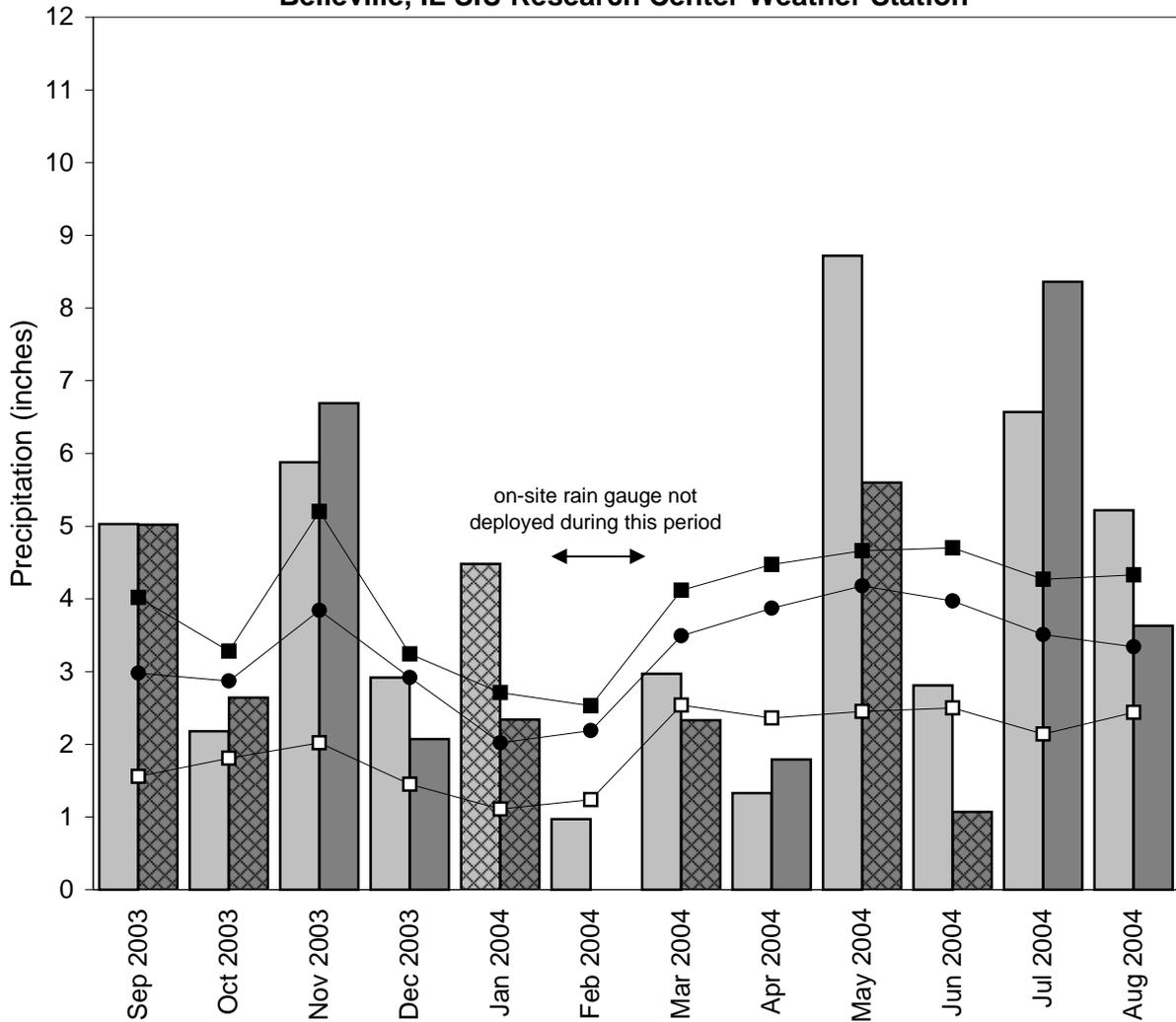
Fairmont City, New River Crossing Potential Wetland Compensation Site
September 1, 2003 to September 1, 2004

Depth to Water
in Soil-Zone Wells in the Fairmont City 2 Site



Fairmont City, New River Crossing Potential Wetland Compensation Site September 2003 through August 2004

**Total Monthly Precipitation Recorded On Site and at the
Belleville, IL SIU Research Center 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