FAIRMONT CITY, NEW RIVER CROSSING **ISGS #53**
POTENTIAL WETLAND MITIGATION SITE
FAP 999
Sequence #33
Saint Clair County, near Fairmont City, Illinois
Primary Project Manager: Steven E. Benton
Secondary Project Manager: Adrianne K. M. Knight

SITE HISTORY

- August 1999: The ISGS conducted an initial site evaluation. The results were reported to IDOT by letter in November.

- September 2000: ISGS began monitoring groundwater and surface-water levels.

- March 2003: A Level II hydrogeologic characterization report was submitted to IDOT (ISGS Open-File Series 2003–04).

WETLAND HYDROLOGY CALCULATION FOR 2010

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in 2010 for more than 5% of the growing season was estimated to be 14.1 ha (34.8 ac) out of a total area of 32.4 ha (80.0 ac). The area that satisfied wetland hydrology criteria for more than 12.5% of the 2010 growing season was estimated to be 14.1 ha (34.8 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 14.1 ha (34.8 ac) 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 Belleville, Illinois, is April 6 and the season lasts 199 days; 5% of the growing season is 10 days and 12.5% of the growing season is 25 days. According to methods outlined in the 2010 Midwest Region supplement, we estimate that March 11 was the starting date of the 2010 growing season based on both vegetation growth and development and soil temperatures measured at the wetland mitigation site.

- Total precipitation recorded at the Belleville, Illinois weather station during the monitoring period was 130% of normal and total precipitation in Spring 2010 (March through May) was 93% of normal.

- In 2010, water levels measured in all of the soil-zone monitoring wells except 6S satisfied wetland hydrology criteria for more than 5% of the growing season and for more than 12.5% of the growing season. Water levels measured in all of the soil-zone monitoring wells except 6S satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement.

- Surface-water elevations measured in the pond (SW Pond, gauge AR2) and the drainage ditch along the base of the terrace (gauge BR) reveal that surface water was at or above 122.22 m (401.00 ft) for more than 5% of the growing season, and at or above 122.21 m (400.97 ft) for more than 12.5% of the growing season. At gauges D and F, on the east side of the site, surface water was above 122.35 m (401.43 ft) for more than 5% of the growing season and for more than 12.5% of the growing season. Surface-

water elevations measured in the pond (SW Pond, gauge AR2) and the drainage ditch along the base of the terrace (gauge BR) reveal that surface water was at or above 122.22 m (401.00 ft) for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement. At gauges D and F, on the east side of the site, surface water was above 122.35 m (401.43 ft) for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement.

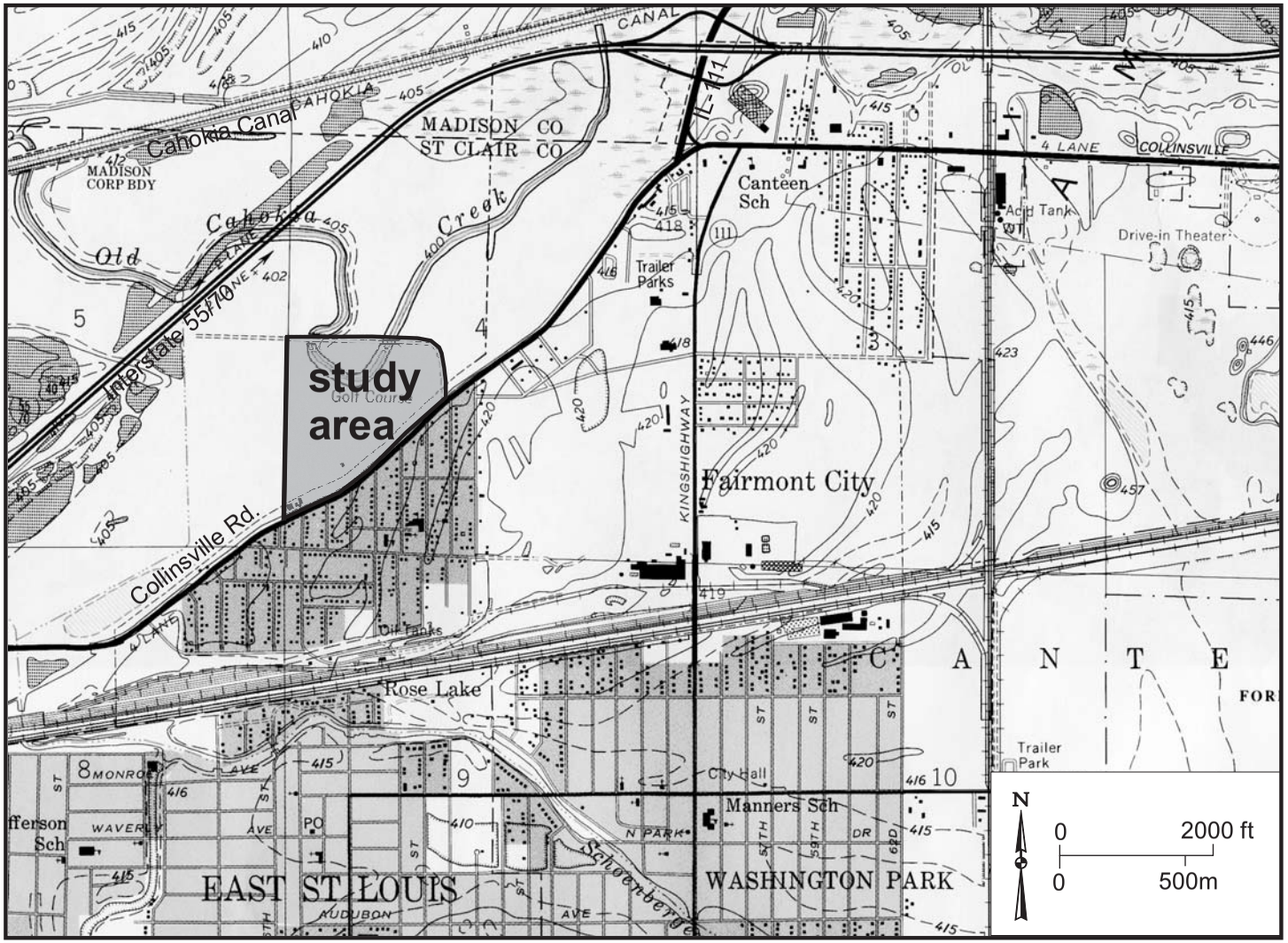
PLANNED FUTURE ACTIVITIES

- Monitoring will continue at this site until notified otherwise by IDOT.

Fairmont City, New River Crossing Potential Wetland Mitigation Site (FAP 999)

General Study Area and Vicinity

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

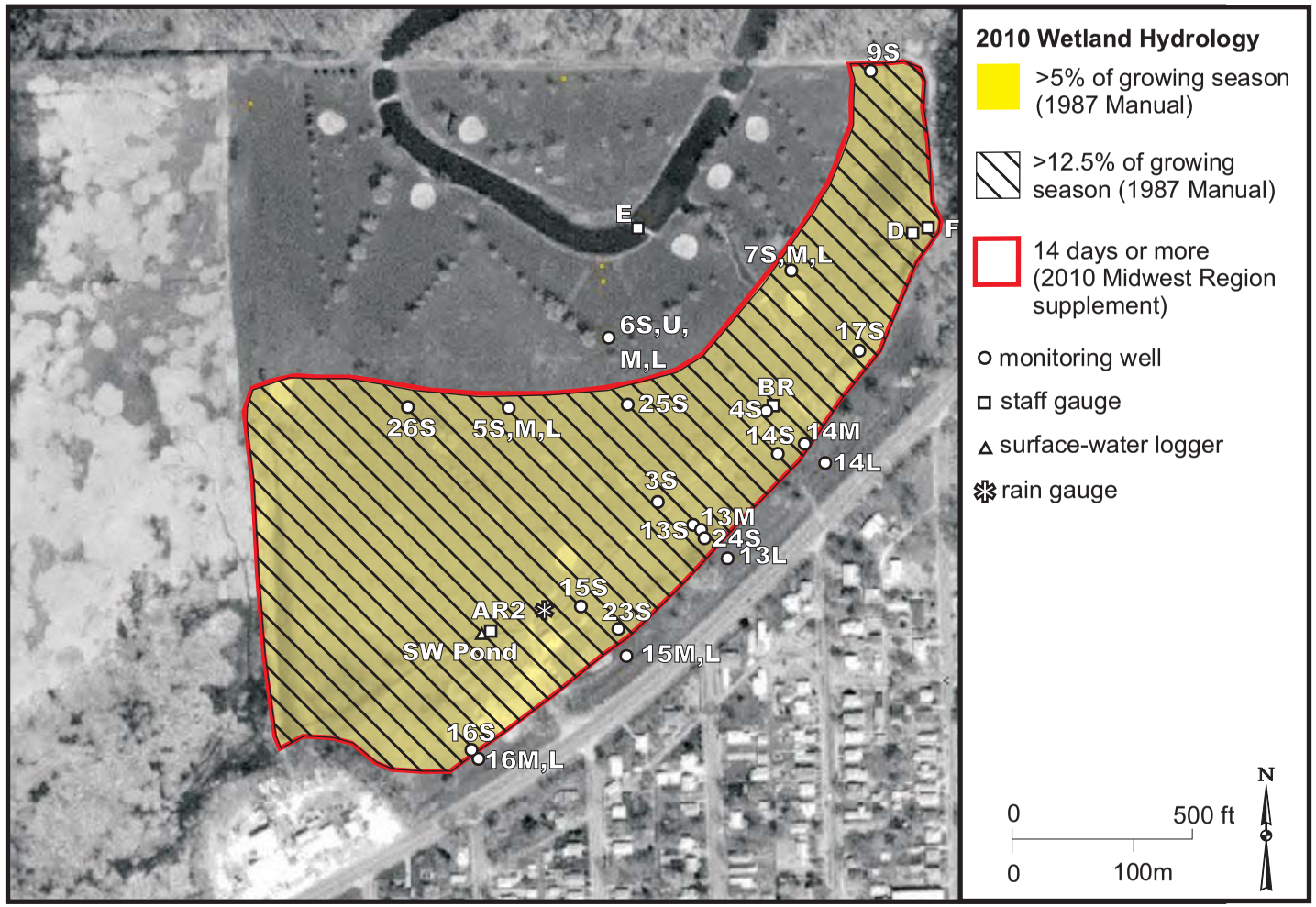


Fairmont City, New River Crossing Potential Wetland Mitigation Site
(FAP 999)

Estimated Areal Extent of 2010 Wetland Hydrology

September 1, 2009 through August 31, 2010

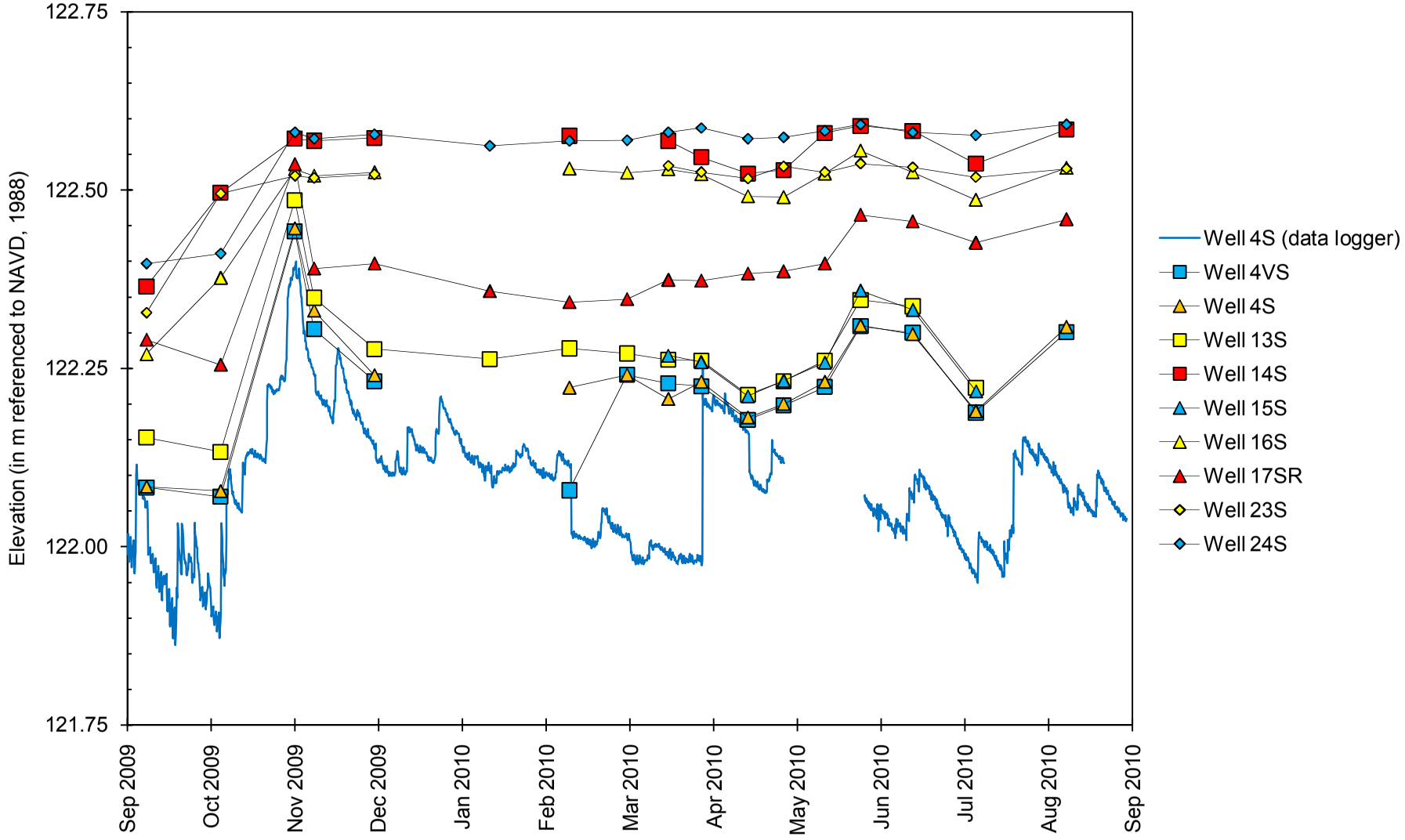
Map based on USGS digital orthophotograph, Monks Mound SW quarter quadrangle
produced from 04/08/1999 aerial photography (ISGS 2001)
monitoring well, staff gauge and data logger locations from GPS survey



Fairmont City, New River Crossing Potential Wetland Mitigation Site

September 1, 2009 through August 31, 2010

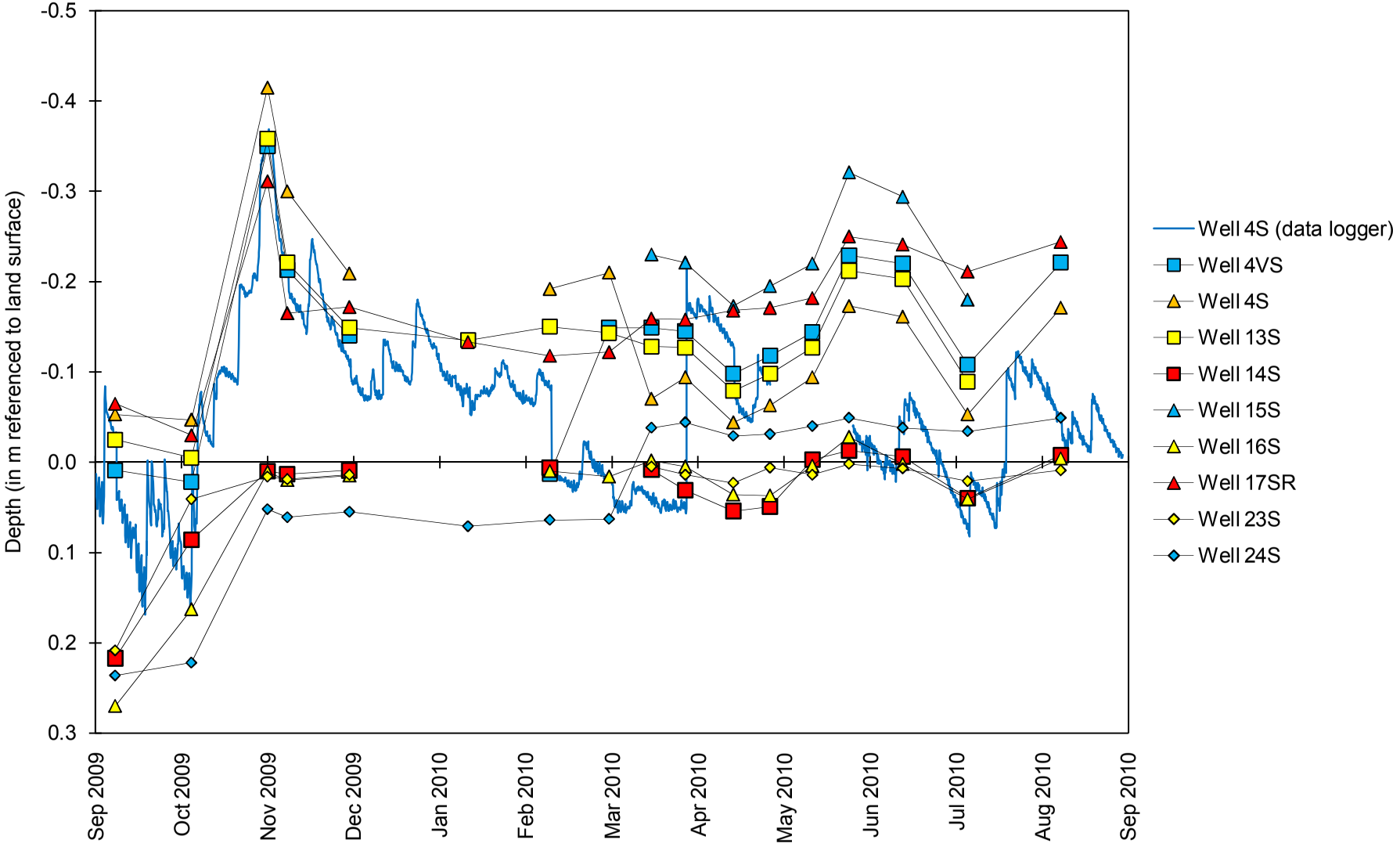
Water-Level Elevations in Soil-Zone and Upper Wells Adjacent to the Ditch along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

September 1, 2009 through August 31, 2010

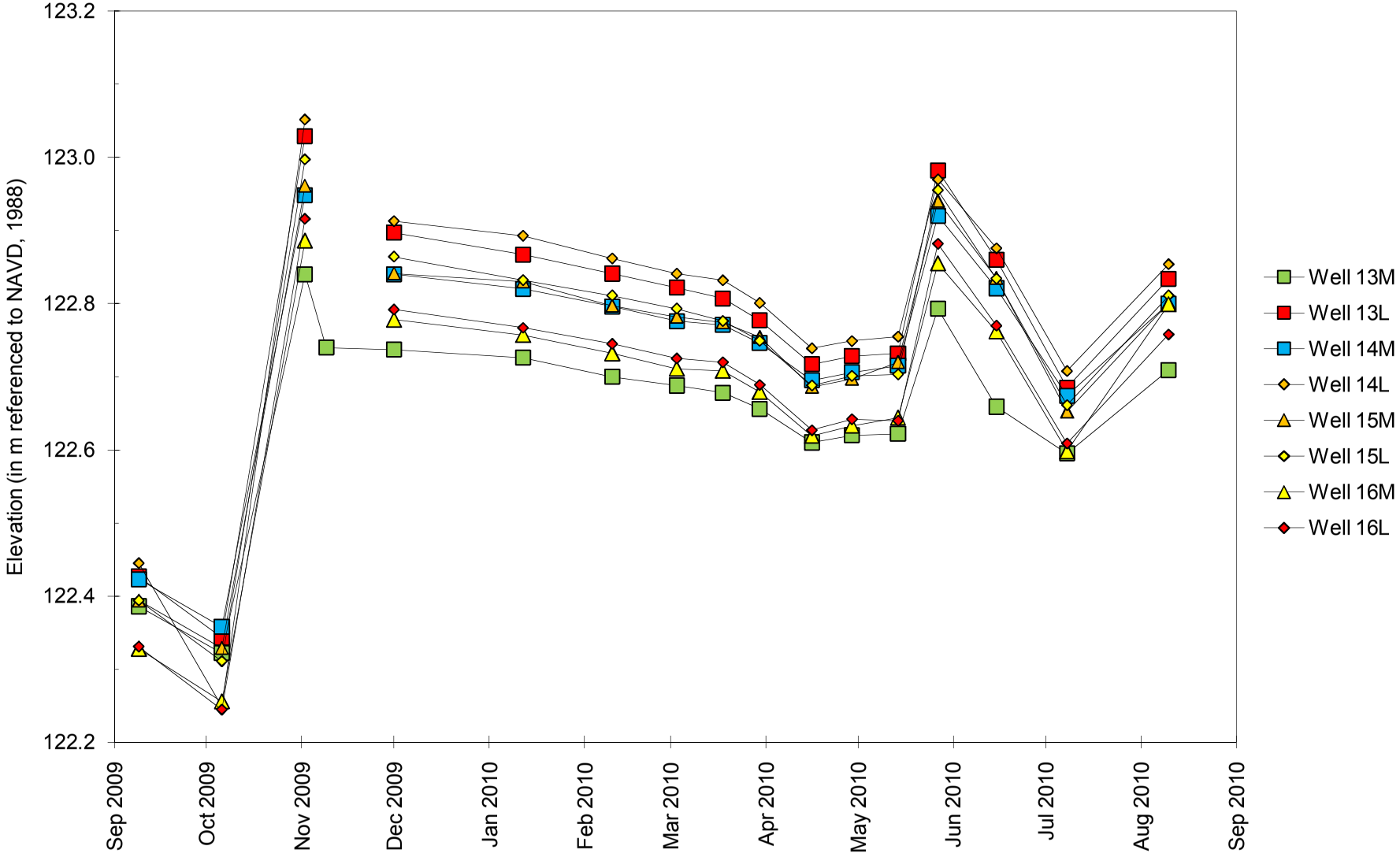
Depth to Water in Soil-Zone and Upper Wells Adjacent to the Ditch along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

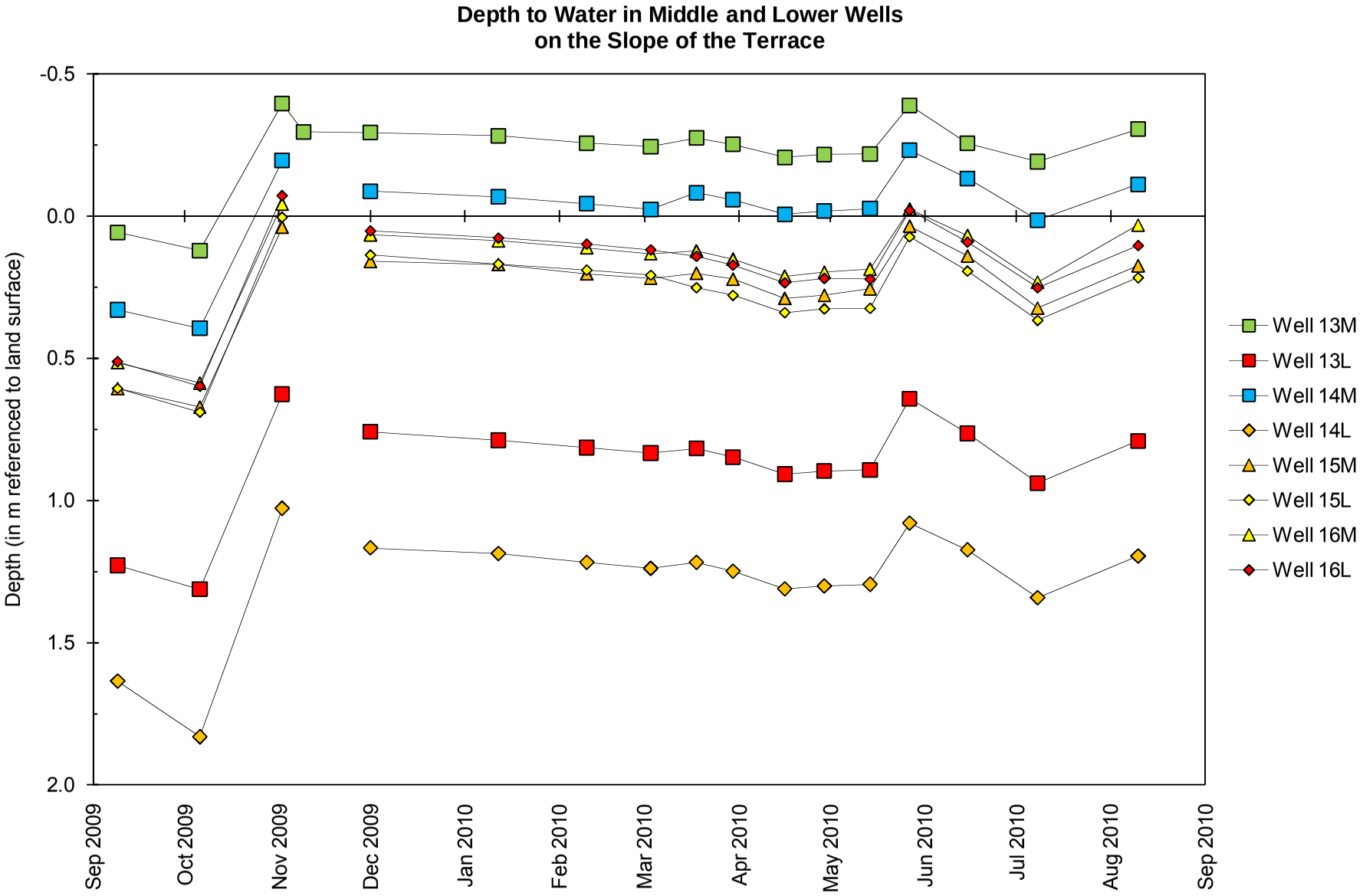
September 1, 2009 through August 31, 2010

Water-Level Elevations in Middle and Lower Wells on the Slope of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

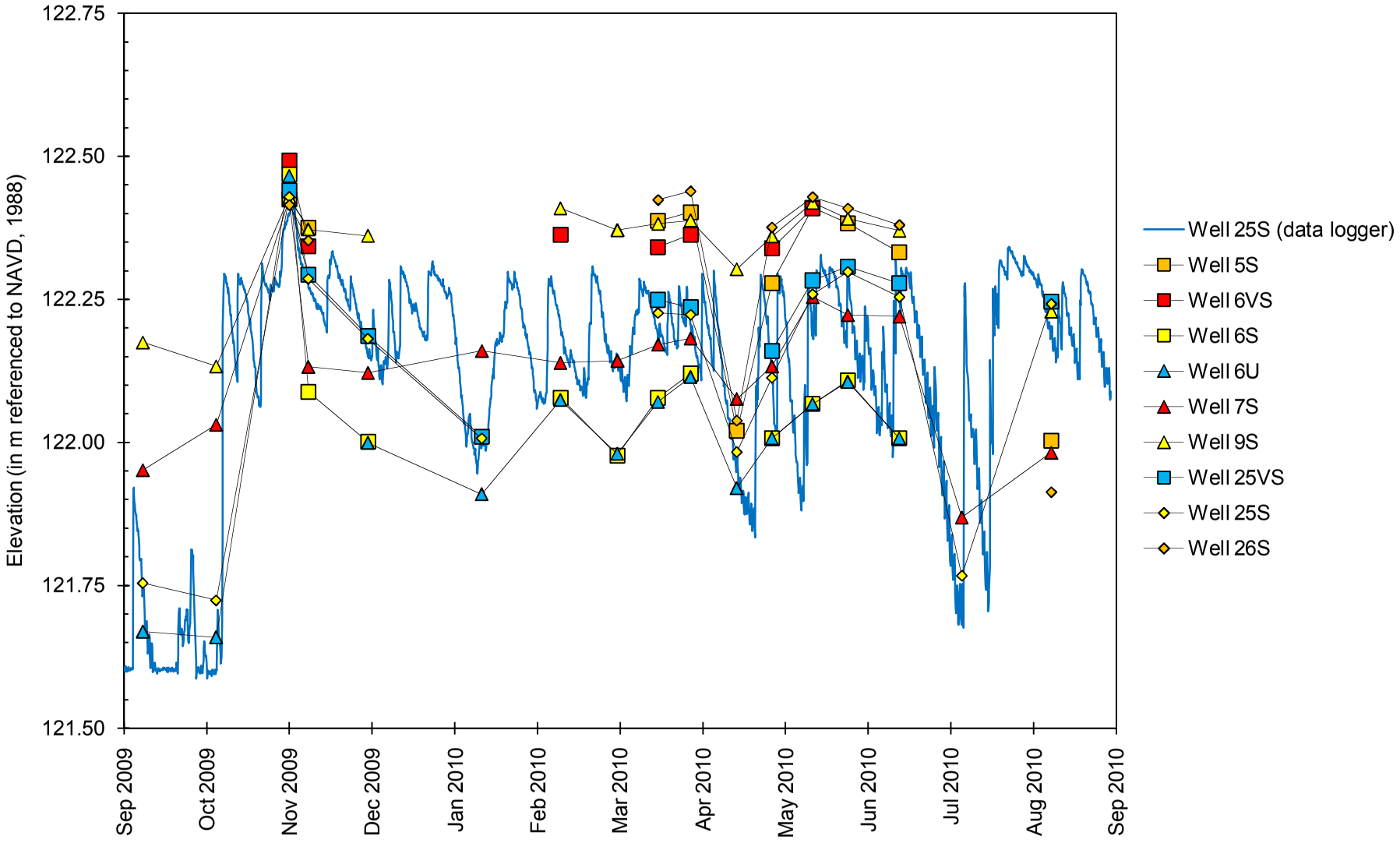
September 1, 2009 through August 31, 2010



Fairmont City, New River Crossing Potential Wetland Mitigation Site

September 1, 2009 through August 31, 2010

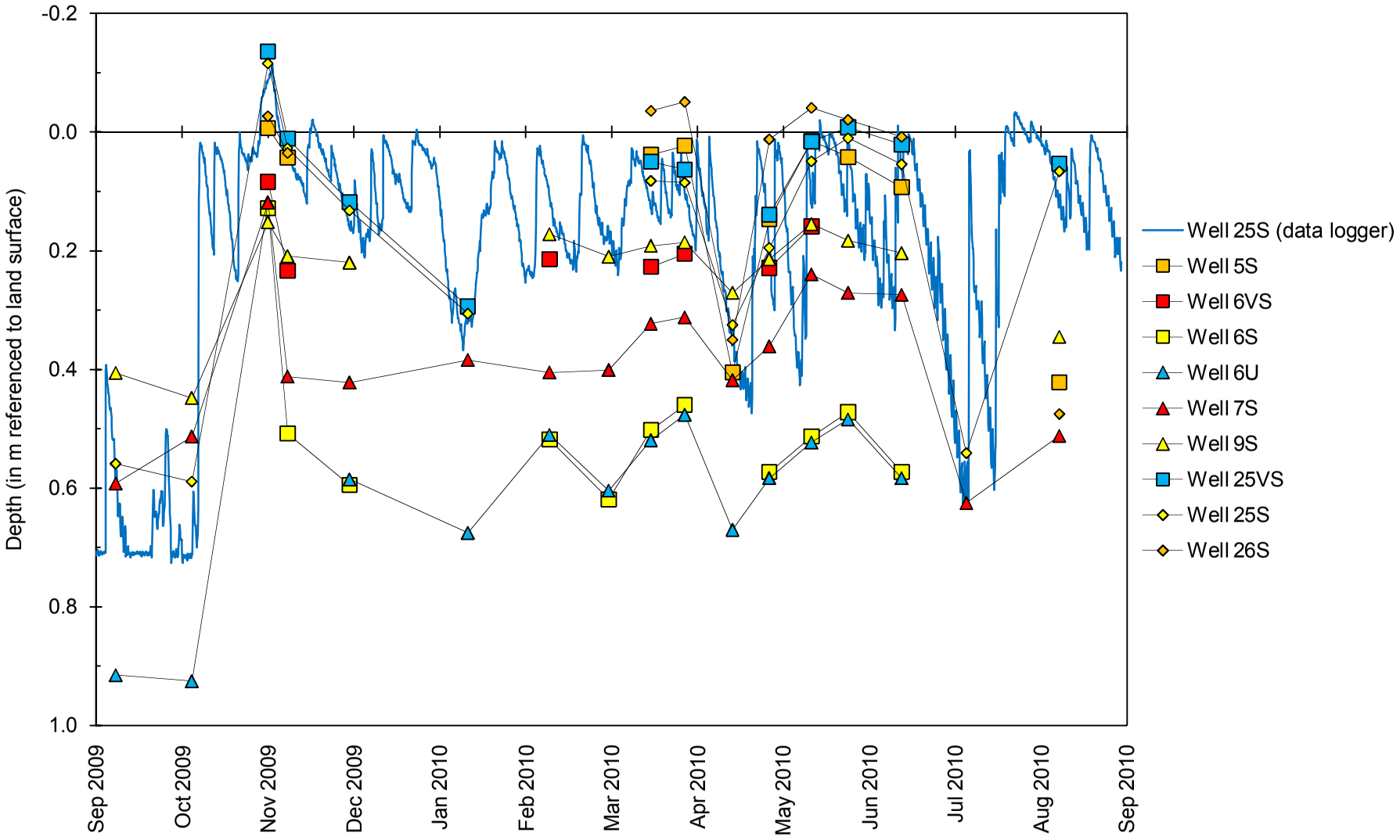
Water-Level Elevations in Soil-Zone and Upper Wells Furthest from the Ditch Along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

September 1, 2009 through August 31, 2010

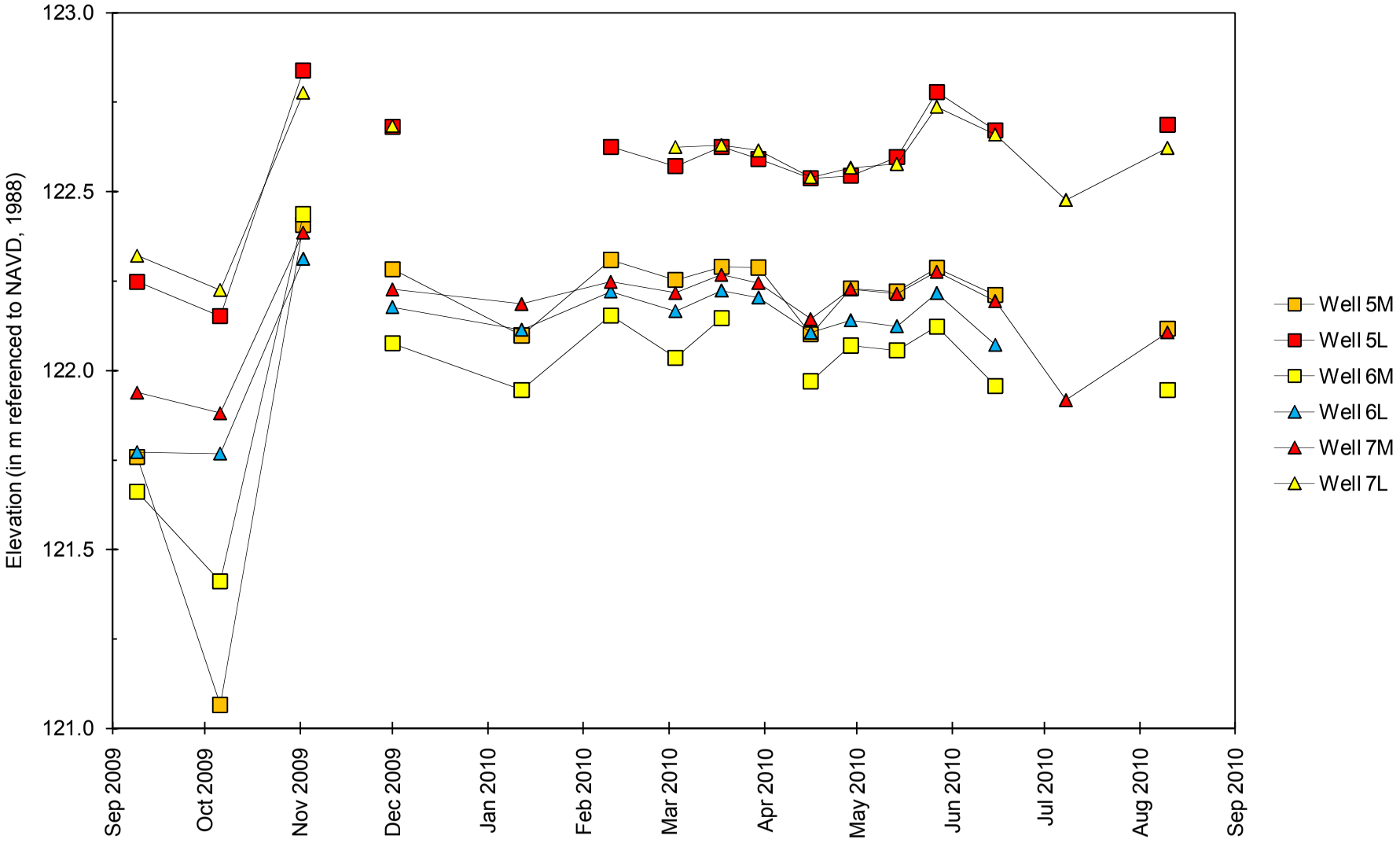
Depth to Water in Soil-Zone and Upper Wells Furthest from the Ditch Along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

September 1, 2009 through August 31, 2010

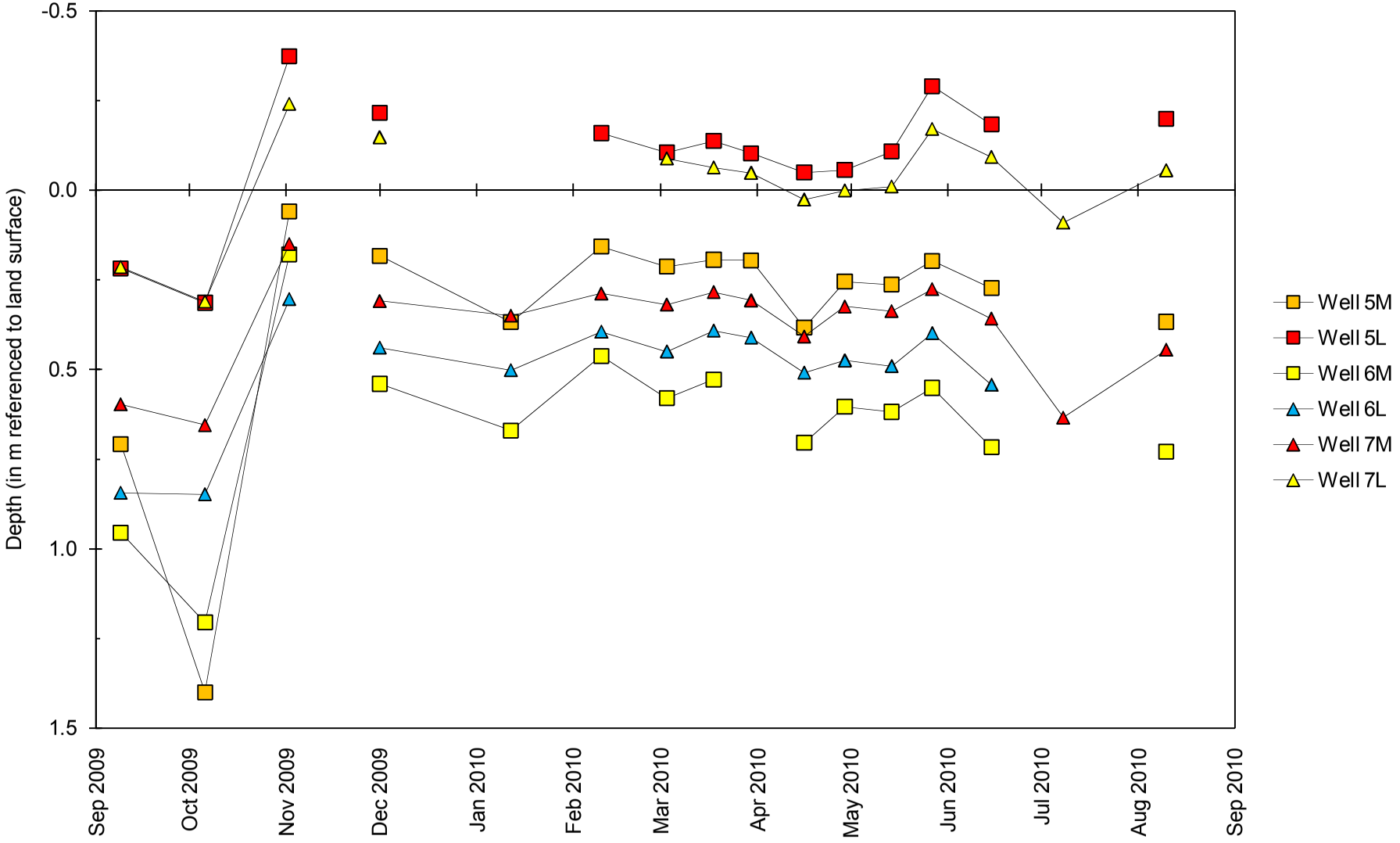
Water-Level Elevations in Middle and Lower Wells Furthest from the Ditch Along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Compensation Site

September 1, 2009 through August 31, 2010

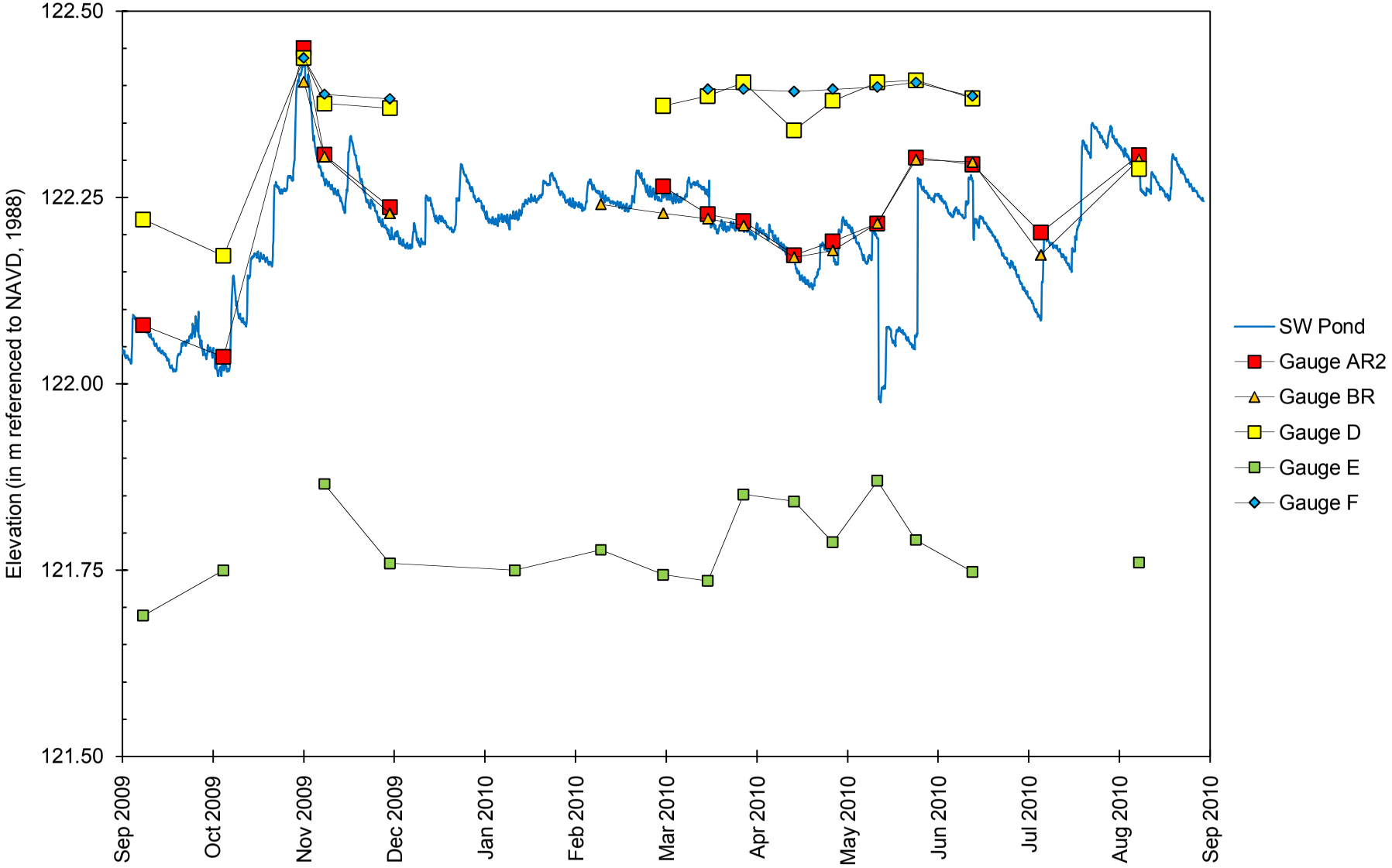
Depth to Water in Middle and Lower Wells
Furthest from the Ditch Along the Base of the Terrace



Fairmont City, New River Crossing Potential Wetland Mitigation Site

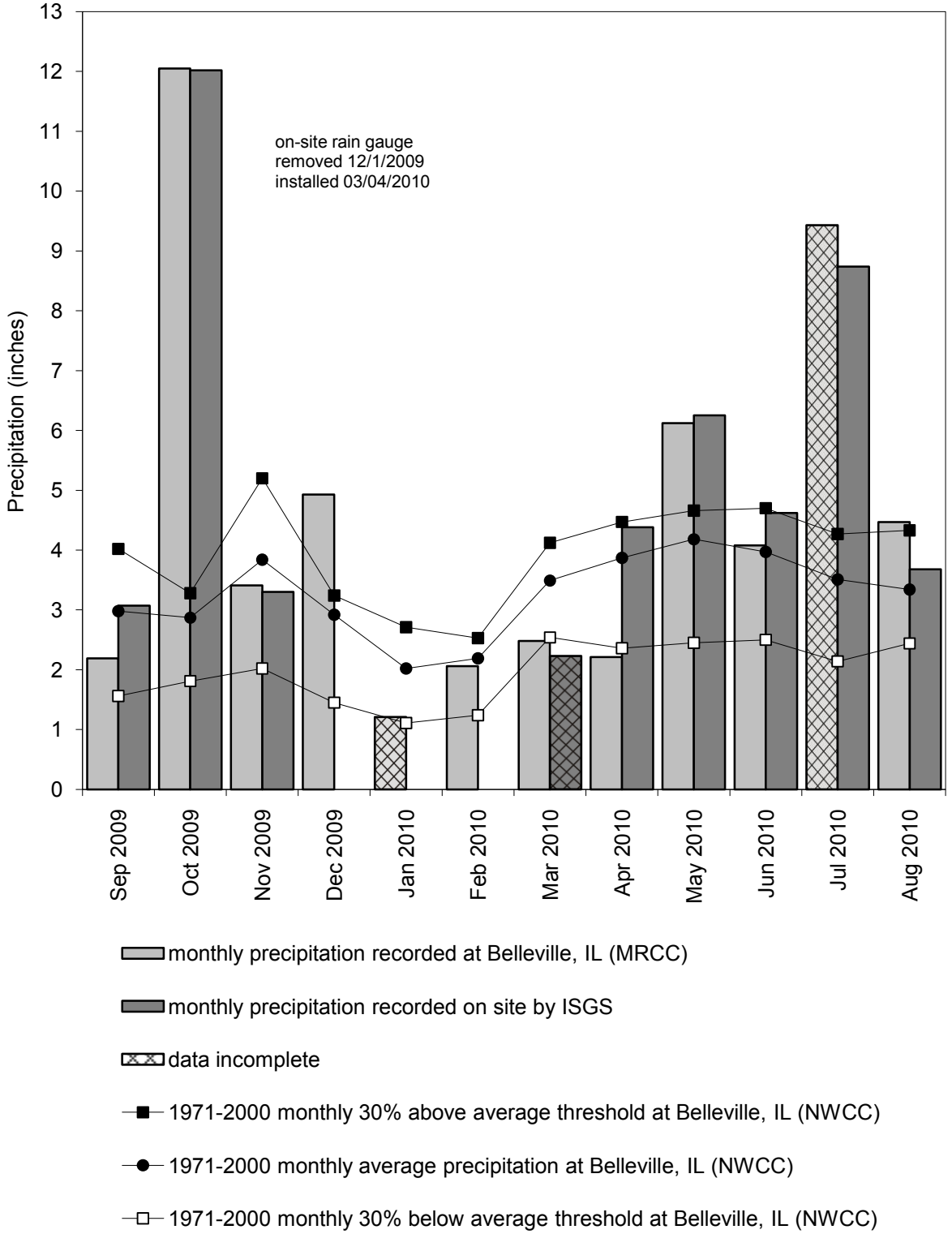
September 1, 2009 through August 31, 2010

Water-Level Elevations on Stage Gauges and Data Loggers



Fairmont City, New River Crossing
Potential Wetland Mitigation Site
September 2009 through August 2010

Total Monthly Precipitation Recorded on Site and at the Southern Illinois University Research Center, Belleville, IL



Graph last updated September 29, 2010