FAIRMONT CITY **ISGS #53**
POTENTIAL WETLAND MITIGATION SITE
FAP 14
Sequence #27
Saint Clair County, near Fairmont City, Illinois
Primary Project Manager: Steven E. Benton
Secondary Project Manager: Jessica Monson

SITE HISTORY

- August 1999: The ISGS conducted an initial site evaluation.
- 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 2011

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in 2011 for greater than 5% of the growing season was estimated to be 14.5 ha (35.9 ac) out of a total area of 32.4 ha (80.0 ac), and the area that satisfied wetland hydrology criteria for greater than 12.5% of the 2011 growing season was estimated to be 13.9 ha (34.3 ac). Using the 2010 Midwest Region Supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 14.5 ha (35.9 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 Belleville, Illinois, is April 6 and the season lasts 199 days (MRCC 2011); 5% of the growing season is 10 days and 12.5% of the growing season is 25 days, according to the 1987 Manual. According to methods outlined in the 2010 Midwest Region Supplement, we estimate that March 4 was the starting date of the 2011 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 114% of normal, and total precipitation in Spring 2011 (March through May) was 144% of normal.
- In 2011, water levels measured in all of the soil-zone monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season, and all of the soil-zone monitoring wells, except 6S, satisfied wetland hydrology criteria for greater than 12.5% of the growing season, according to the 1987 Manual. Water levels measured in all of the soil-zone monitoring wells 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 [data logger], Gauge AR2) and the drainage ditch along the base of the terrace (Gauge BR) reveal that surface water was at or above 122.30 m (401.27 ft) for greater than 5% of the growing season, and at or above 122.29 m (401.23 ft) for greater than 12.5% of the growing season, according to the 1987 Manual. In addition, these gauges reveal that surface-water was

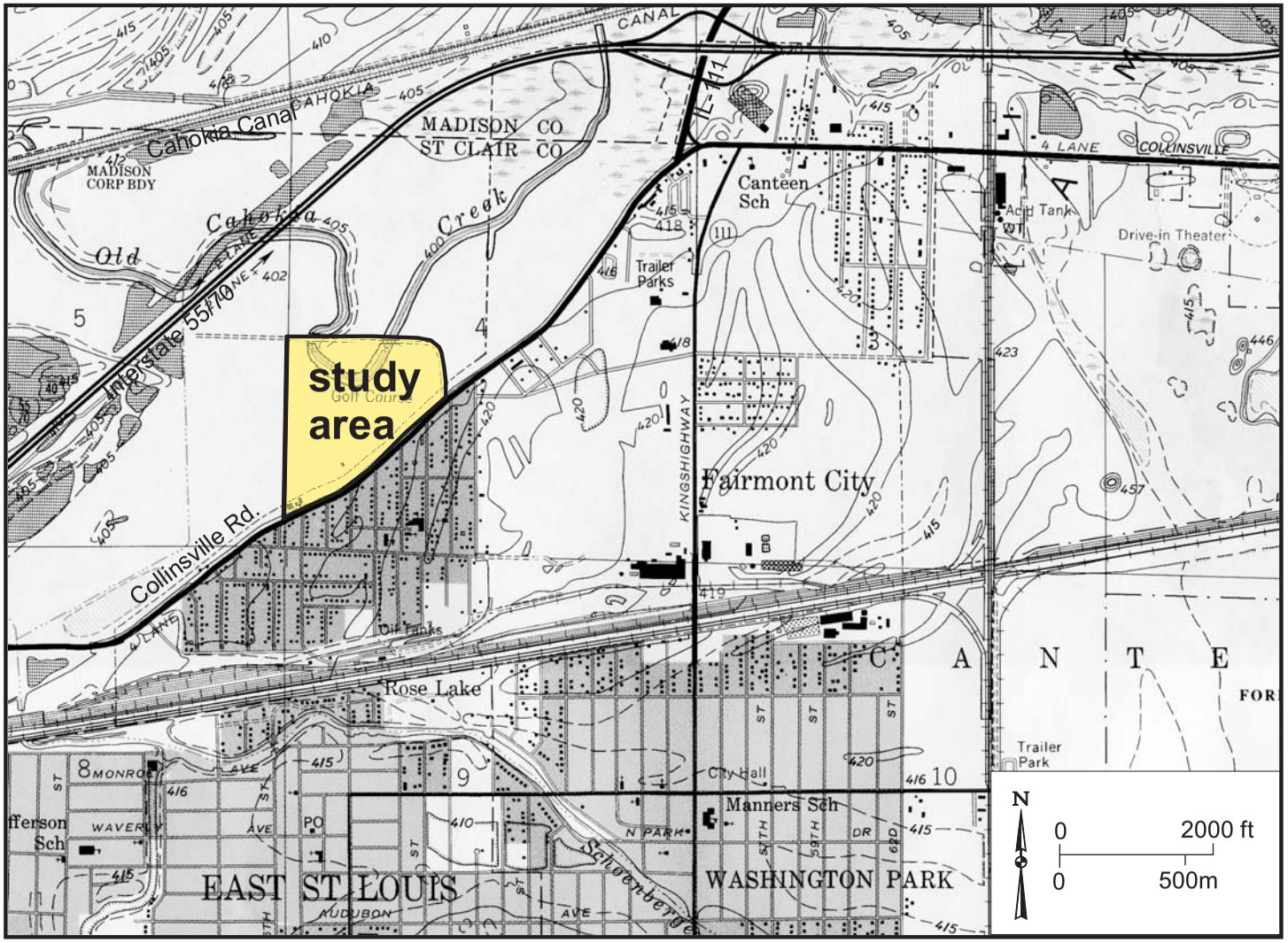
at or above 122.29 m (401.23 ft) for 14 or more consecutive days during the growing season per the 2010 Midwest Region Supplement.

PLANNED FUTURE ACTIVITIES

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

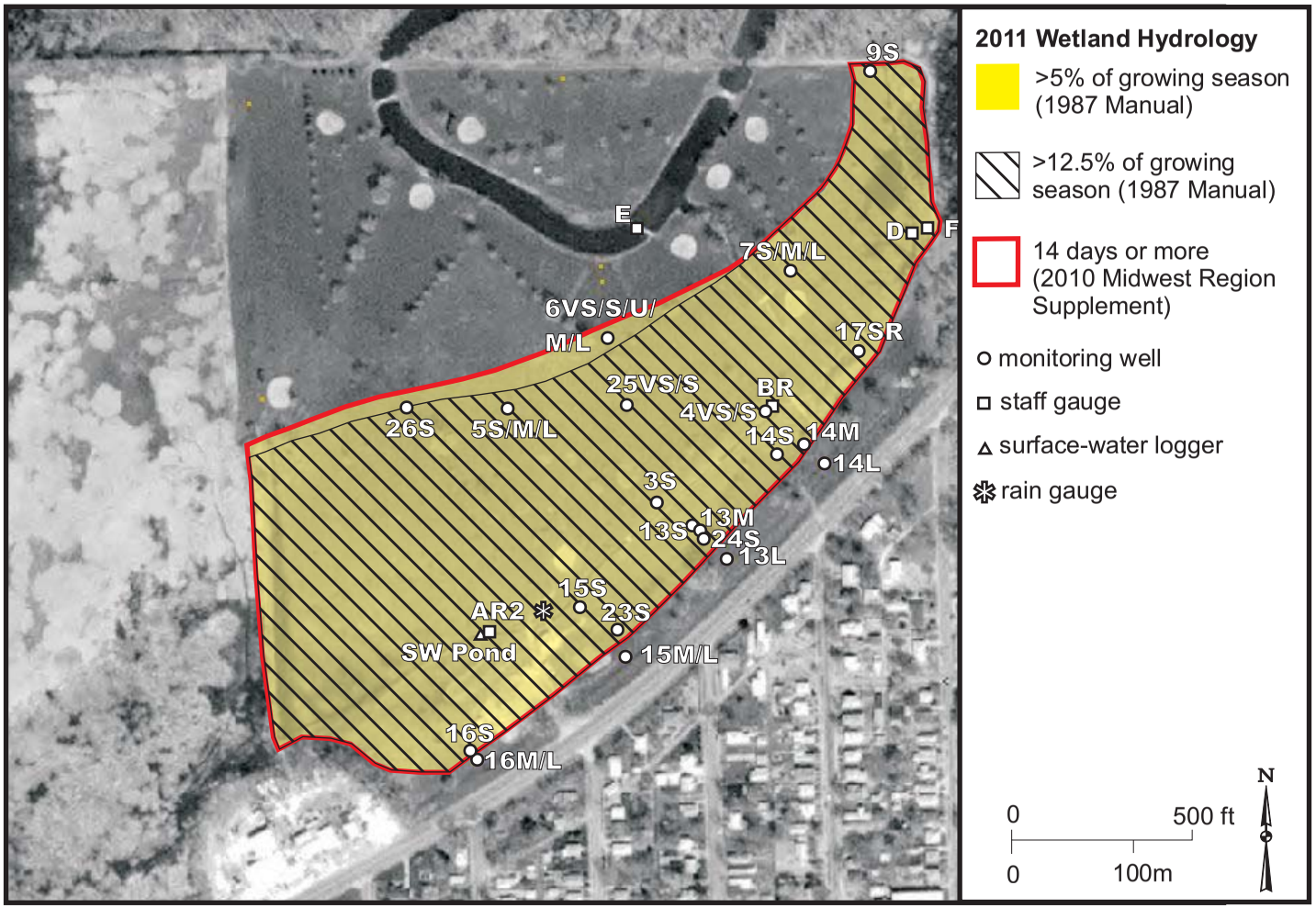
Fairmont City Potential Wetland Mitigation Site
(FAP 14)
General Study Area and Vicinity

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



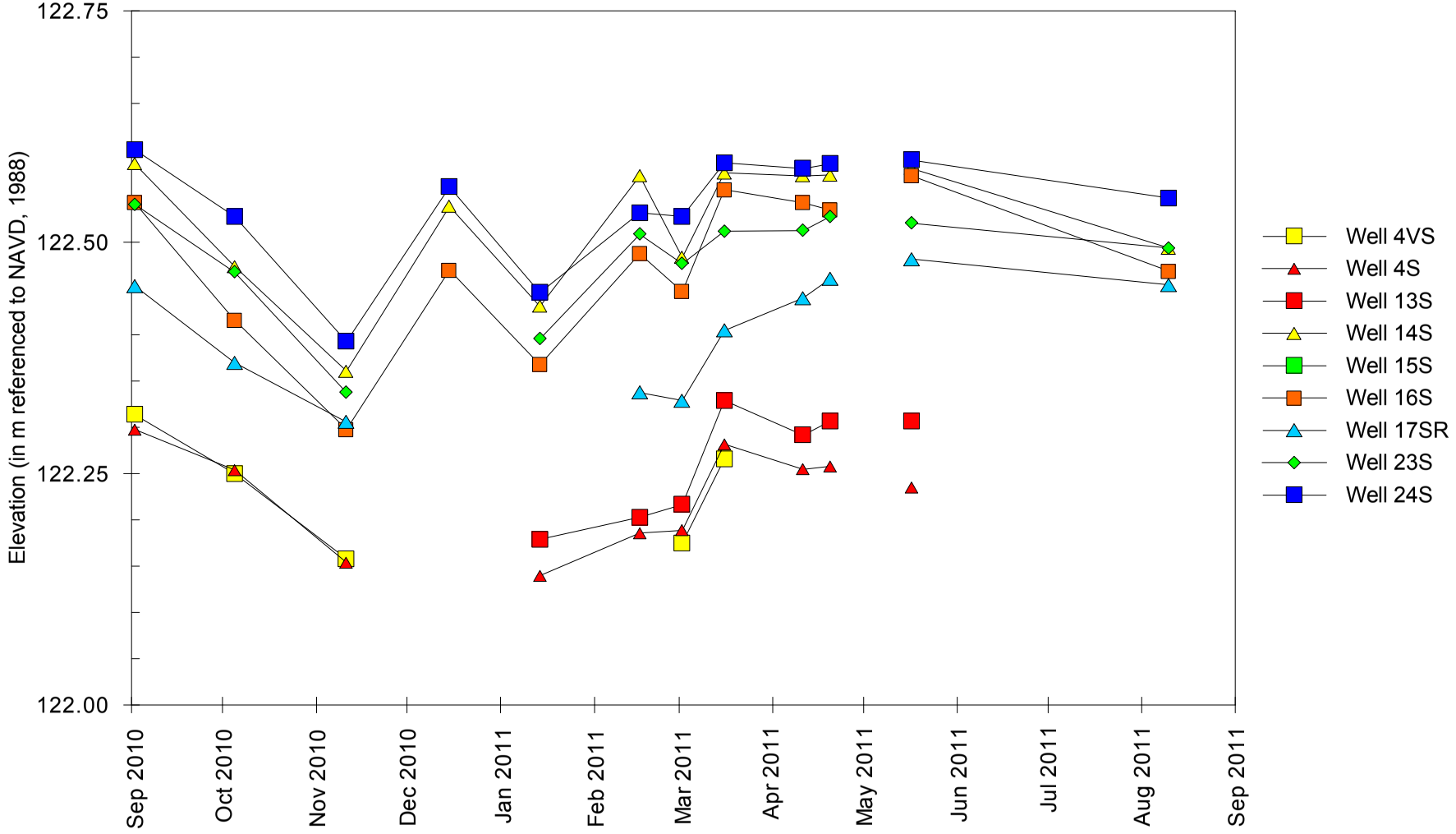
Fairmont City Potential Wetland Mitigation Site
(FAP 14)
Estimated Areal Extent of 2011 Wetland Hydrology
September 1, 2010 through August 31, 2011

Map based on USGS digital orthophotograph, Monks Mound SW quarter quadrangle
produced from 04/08/1999 aerial photography (ISGS 2001)



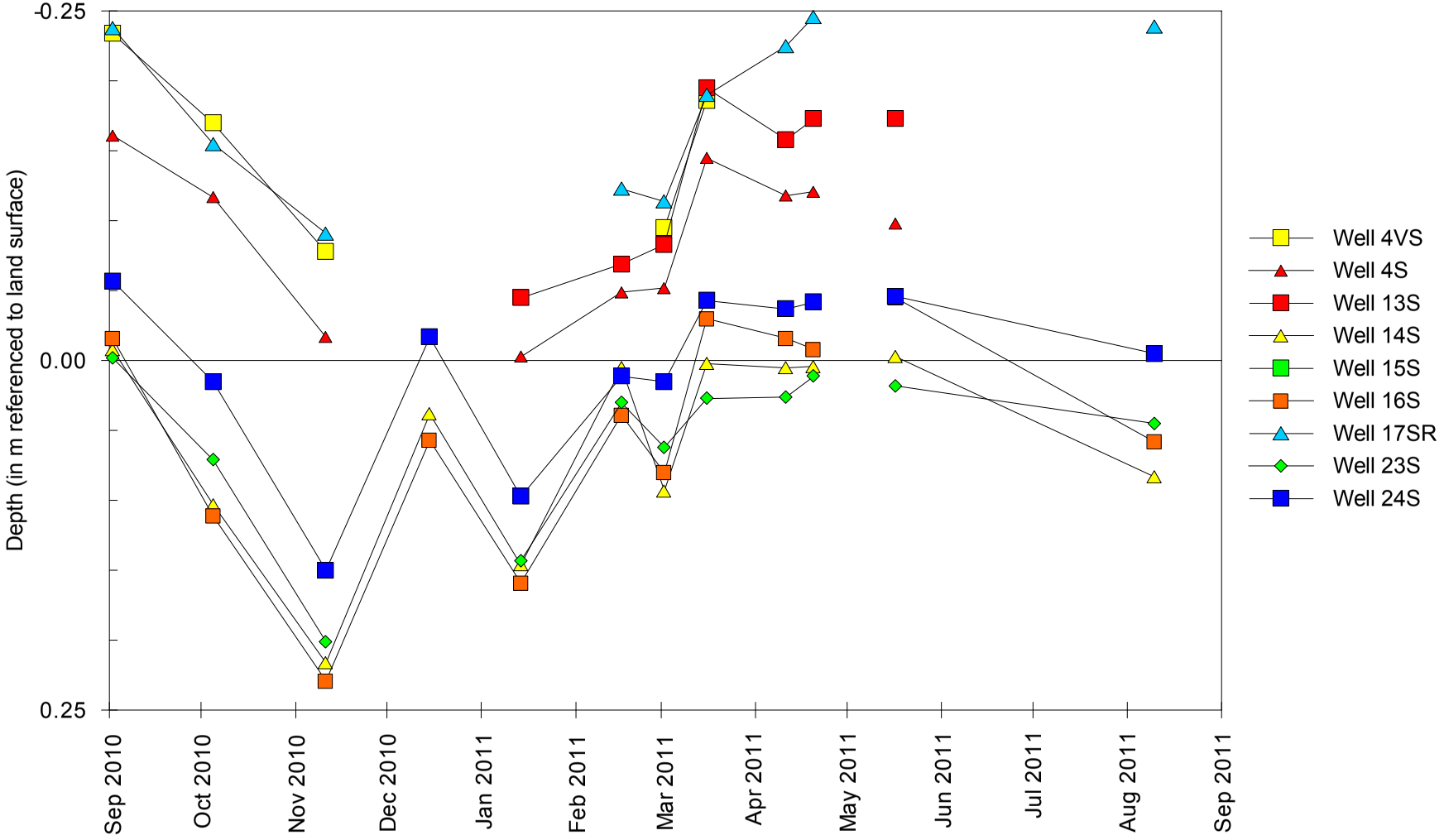
Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in S and VS Monitoring Wells
South of the Drainage Ditch



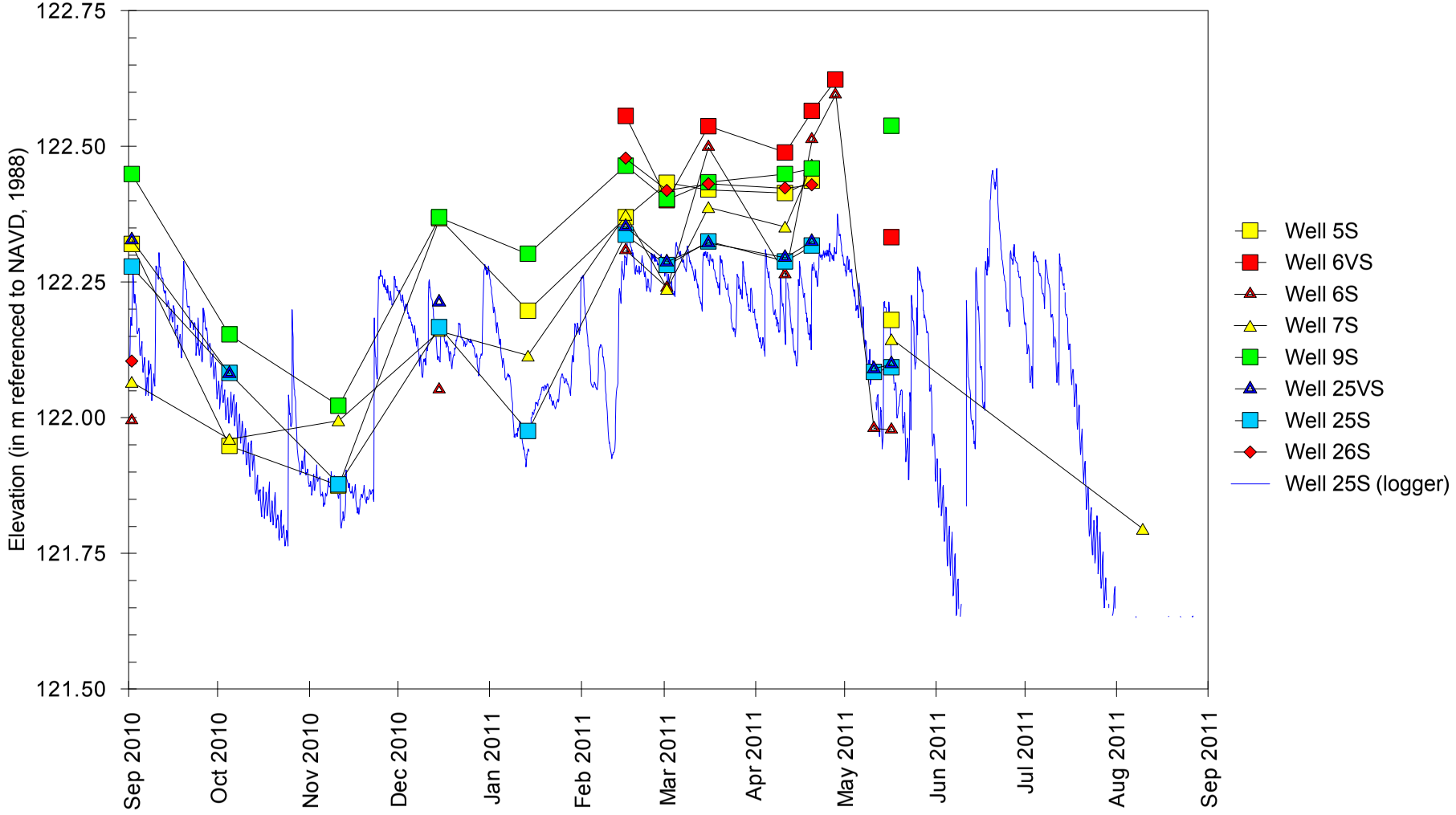
Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Depth to Groundwater in S and VS Monitoring Wells
South of the Drainage Ditch



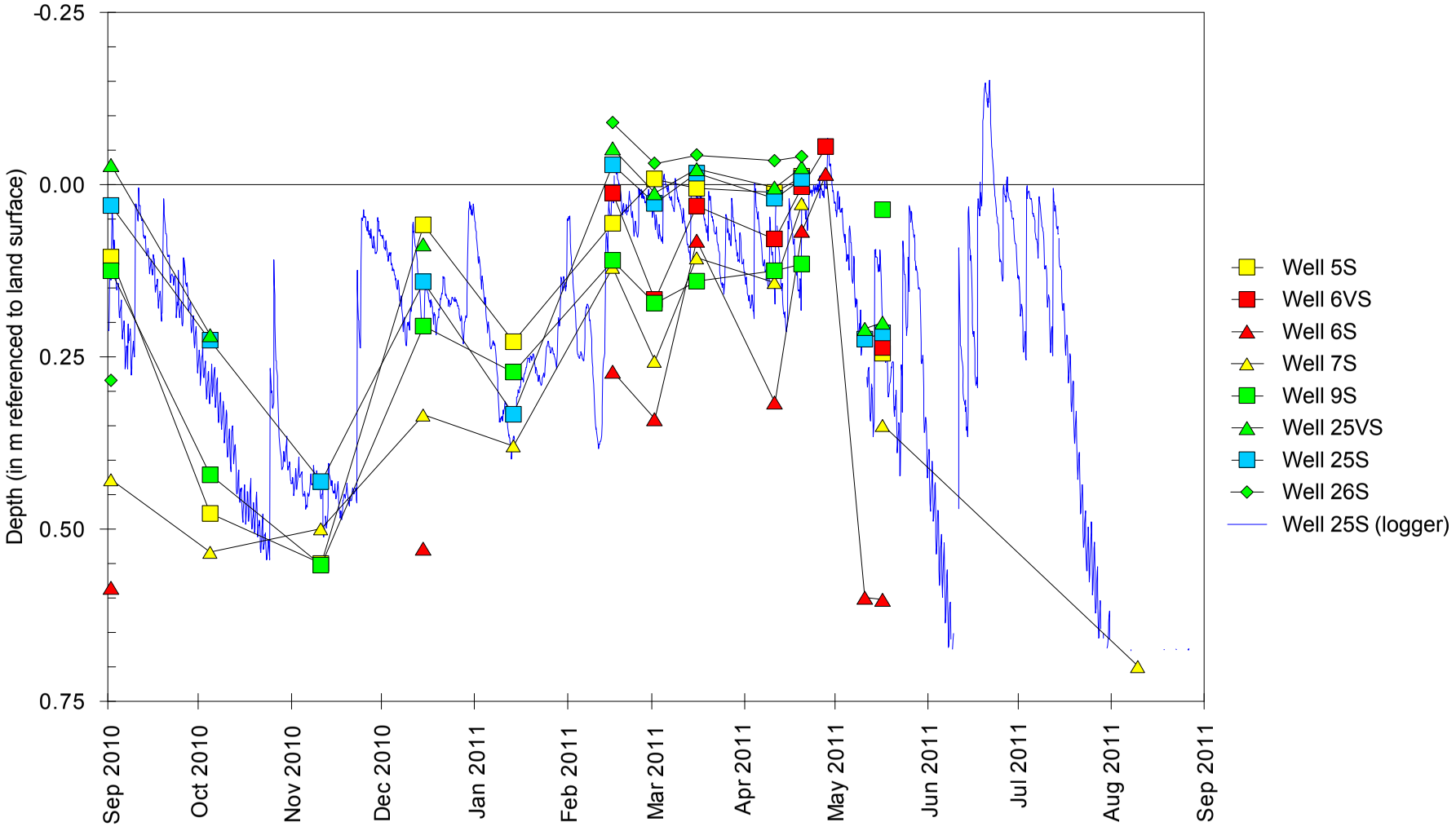
Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in S and VS Monitoring Wells
North of the Drainage Ditch



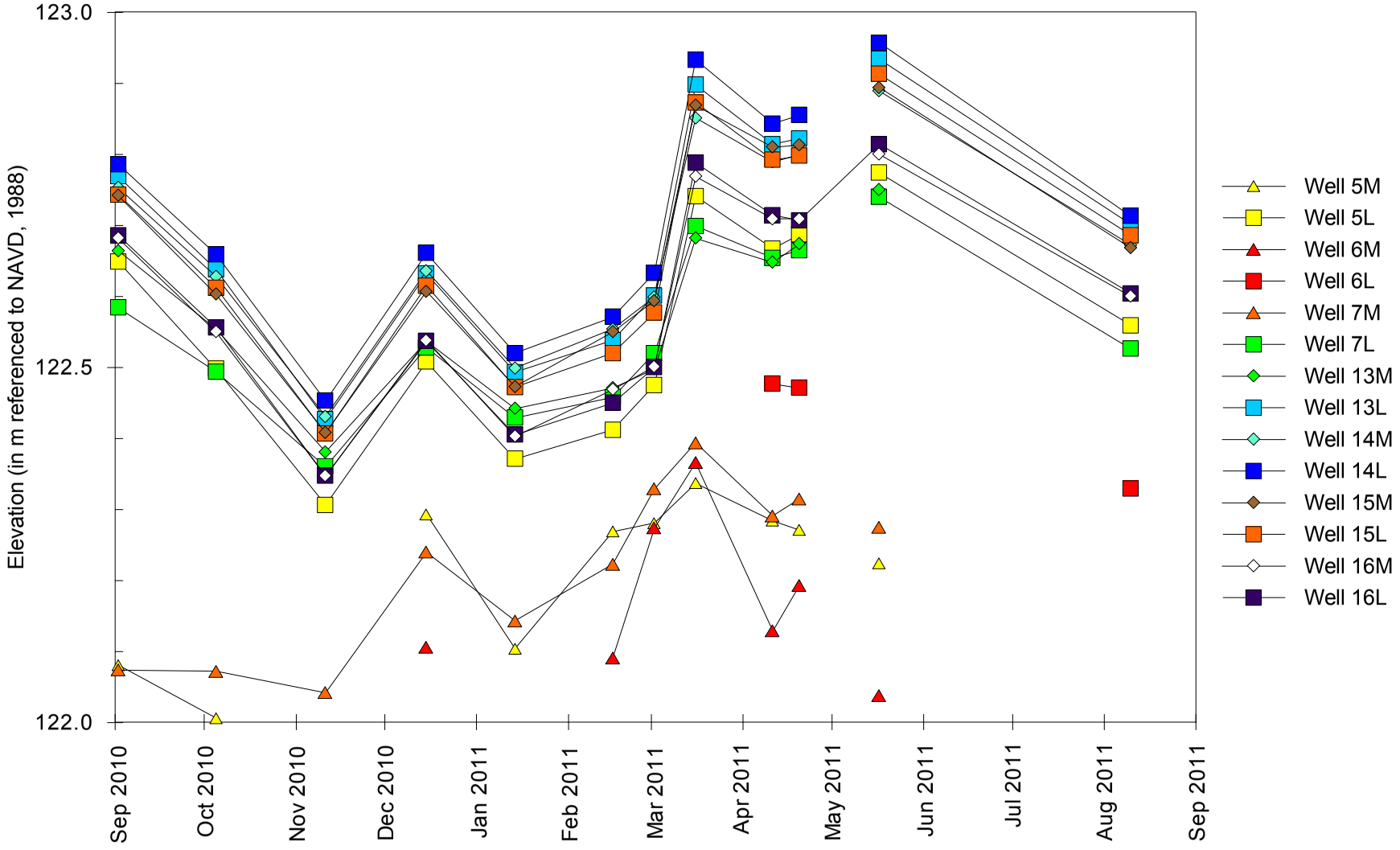
Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Depth to Groundwater in S and VS Monitoring Wells
North of the Drainage Ditch

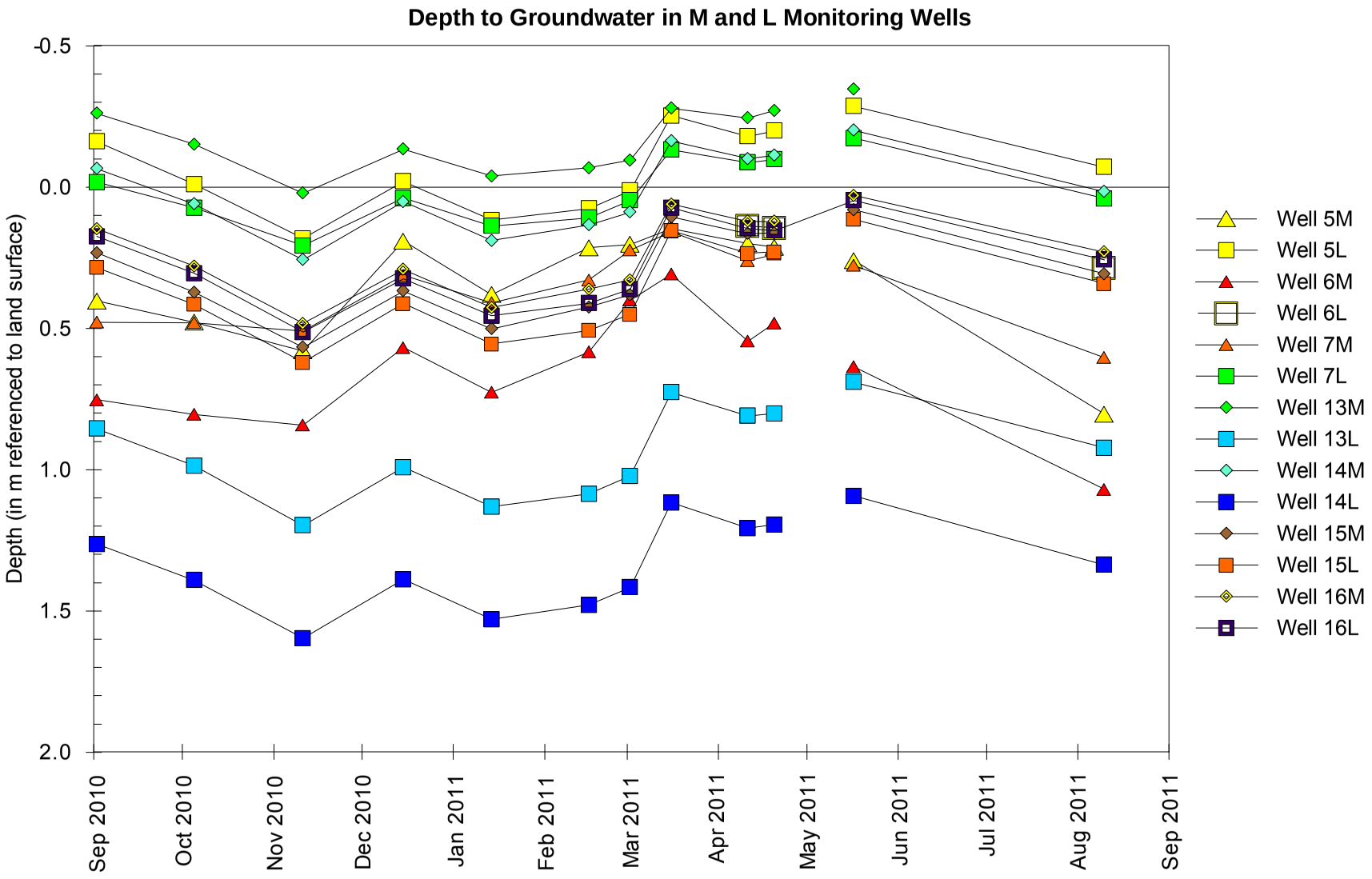


Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Water-Level Elevations in M and L Monitoring Wells

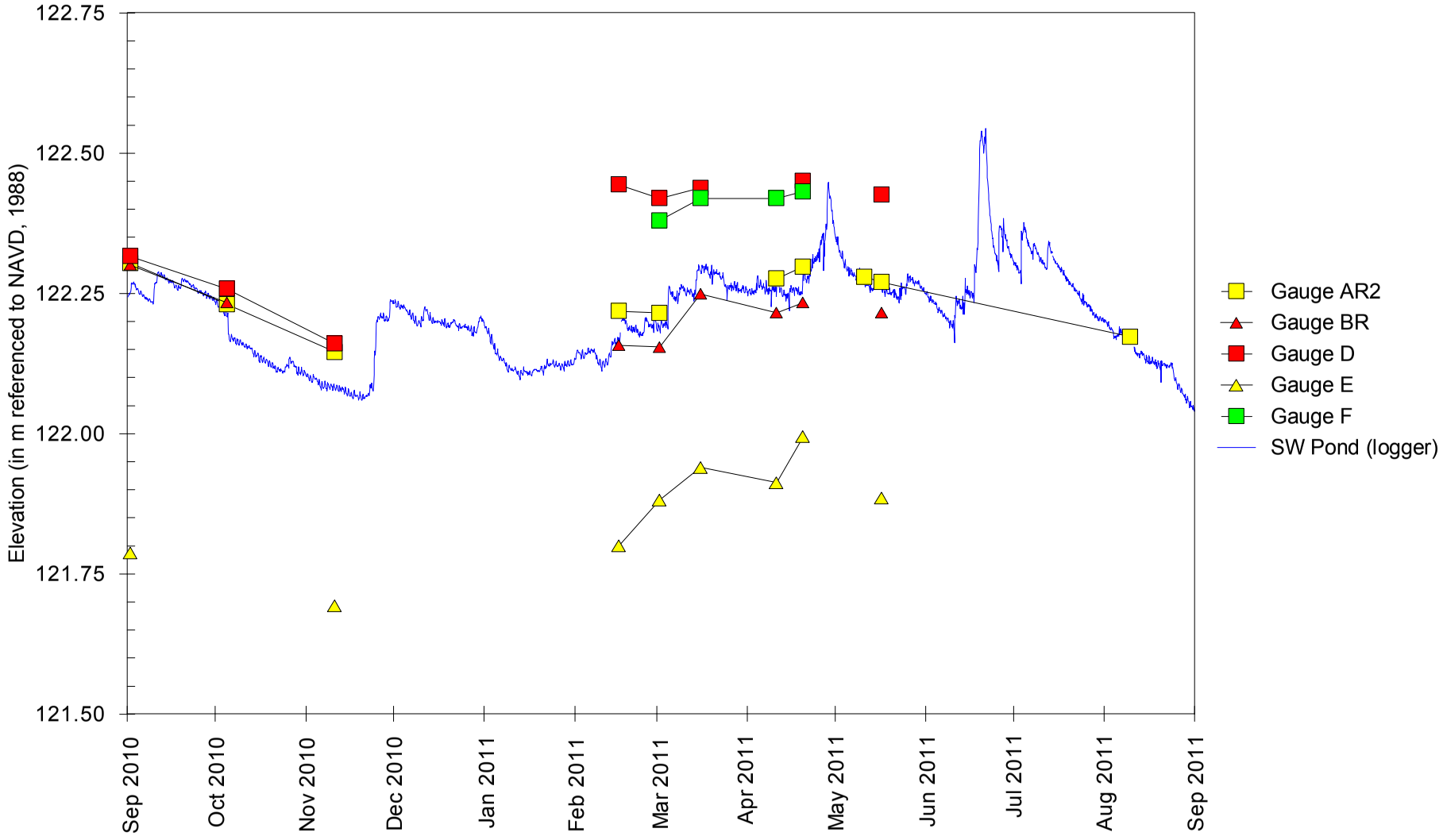


Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011



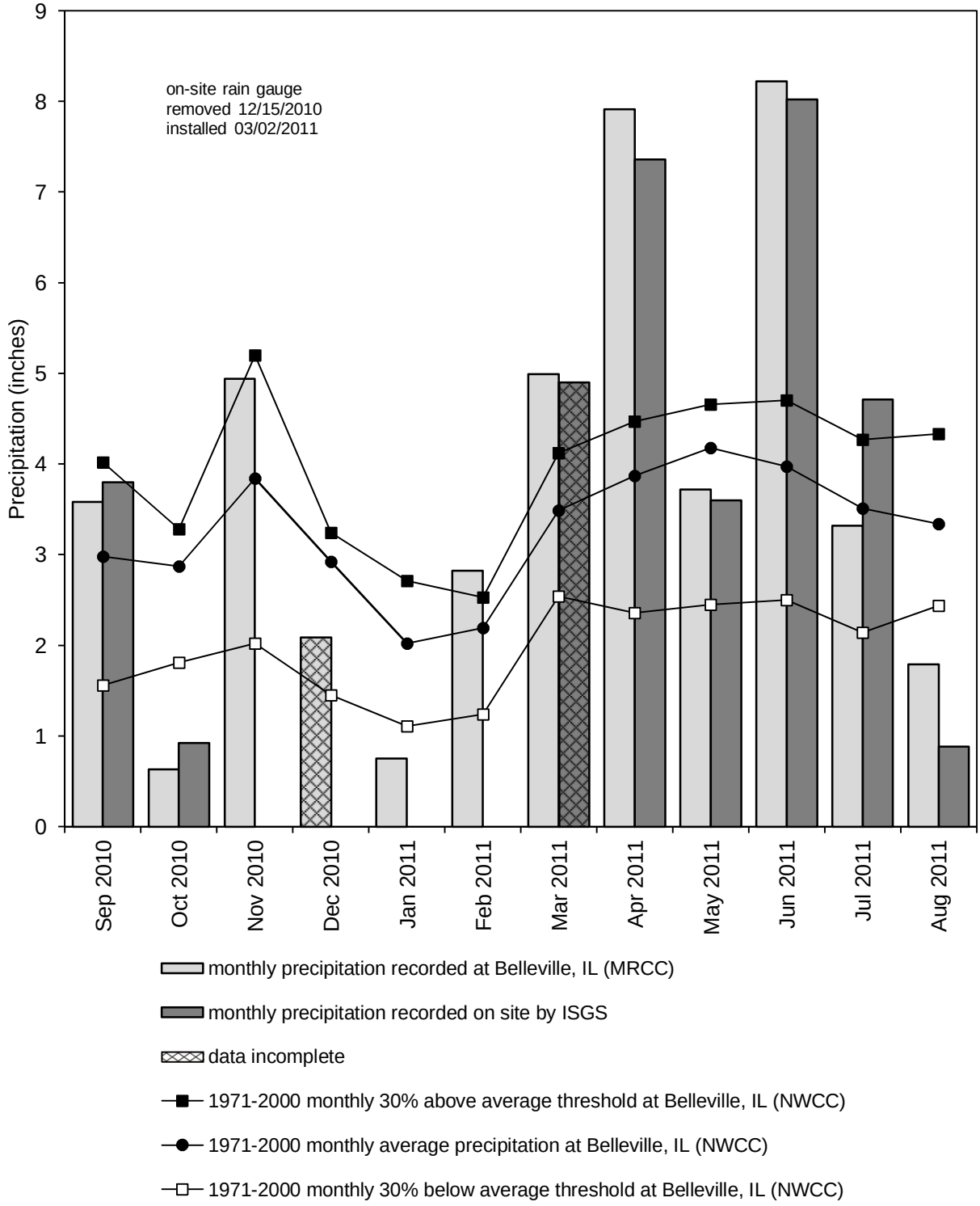
Fairmont City Potential Wetland Mitigation Site
September 1, 2010 through August 31, 2011

Surface-Water Elevations at Staff Gauges and Data Loggers



Fairmont City
Potential Wetland Mitigation Site
September 2010 through August 2011

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



Graph last updated 10/31/2011