HARRISBURG, SITE 2 **ISGS #78**
WETLAND MITIGATION SITE
IL 14
FAP 857
Sequence #547
Saline County, near Harrisburg, Illinois
Primary Project Manager: Geoffrey E. Pociask
Secondary Project Manager: Melinda C. Campbell

SITE HISTORY

- October 2007: Construction at the wetland mitigation site began.
- March 2008: ISGS was tasked by IDOT to monitor the site for performance standards as outlined in the wetland mitigation plan, and post-construction water-level monitoring was initiated.
- May 2008: Construction at the wetland mitigation site was completed.
- March through August 2010: Bridge construction on Illinois Route 13 impounded water on the east portion of the site during the growing season and may have temporarily increased water levels and duration of flooding.

WETLAND HYDROLOGY CALCULATION FOR 2010

We estimate that 8.0 ha (19.7 ac) out of a total site area of approximately 14.2 ha (35.0 ac) satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2010, whereas 2.7 ha (6.7 ac) satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 10.1 ha (25.0 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 Harrisburg, Illinois, is April 1 and the season lasts 211 days; 5% of the growing season is 11 days and 12.5% of the growing season is 26 days. According to the 2010 Midwest Region supplement, we estimate that March 7 was the starting date of the 2010 growing season based on soil temperatures and vegetation growth and development observed at the wetland mitigation site.
- Total precipitation at the Du Quoin, Illinois weather station for the period from September 2009 through August 2010 was 118% of normal, and Spring 2010 (March through May) precipitation was 101% of normal.
- In 2010, wells 1S, 1VS, 2S, 2VS, 3S, 3VS, 4S, 5VS, 6S, 6VS, 7S, 8S, 9S, 10S, 11S, 12S, 13S, 14S, 15S, 16S, 22VS, 23VS, and 26VS satisfied wetland hydrology criteria for greater than 5% of the growing season and wells 2S, 3S, 4S, 6VS, 9S, 10S, 12S, 15S, 22VS and 26VS satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Furthermore, all wells satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement.

- Data from the Gauge A data logger showed that water-level elevation was at or above 113.87 m (373.58 ft) for greater than 5% and greater than 12.5% of the growing season according to the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement. Gauge B showed water levels at or above 112.53 m (369.19 ft) for greater than 5% and greater than 12.5% of the growing season according the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement. Gauge E showed water levels at or above 114.75 m (376.47 ft) for greater than 5% and greater than 12.5% of the growing season according to the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement. Gauge G showed water levels at or above 111.83 m (366.90 ft) for greater than 5% and greater than 12.5% of the growing season according to the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement. Gauge H showed water levels at or above 113.07 m (370.96 ft) for greater than 5% and greater than 12.5% of the growing season according to the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region supplement.

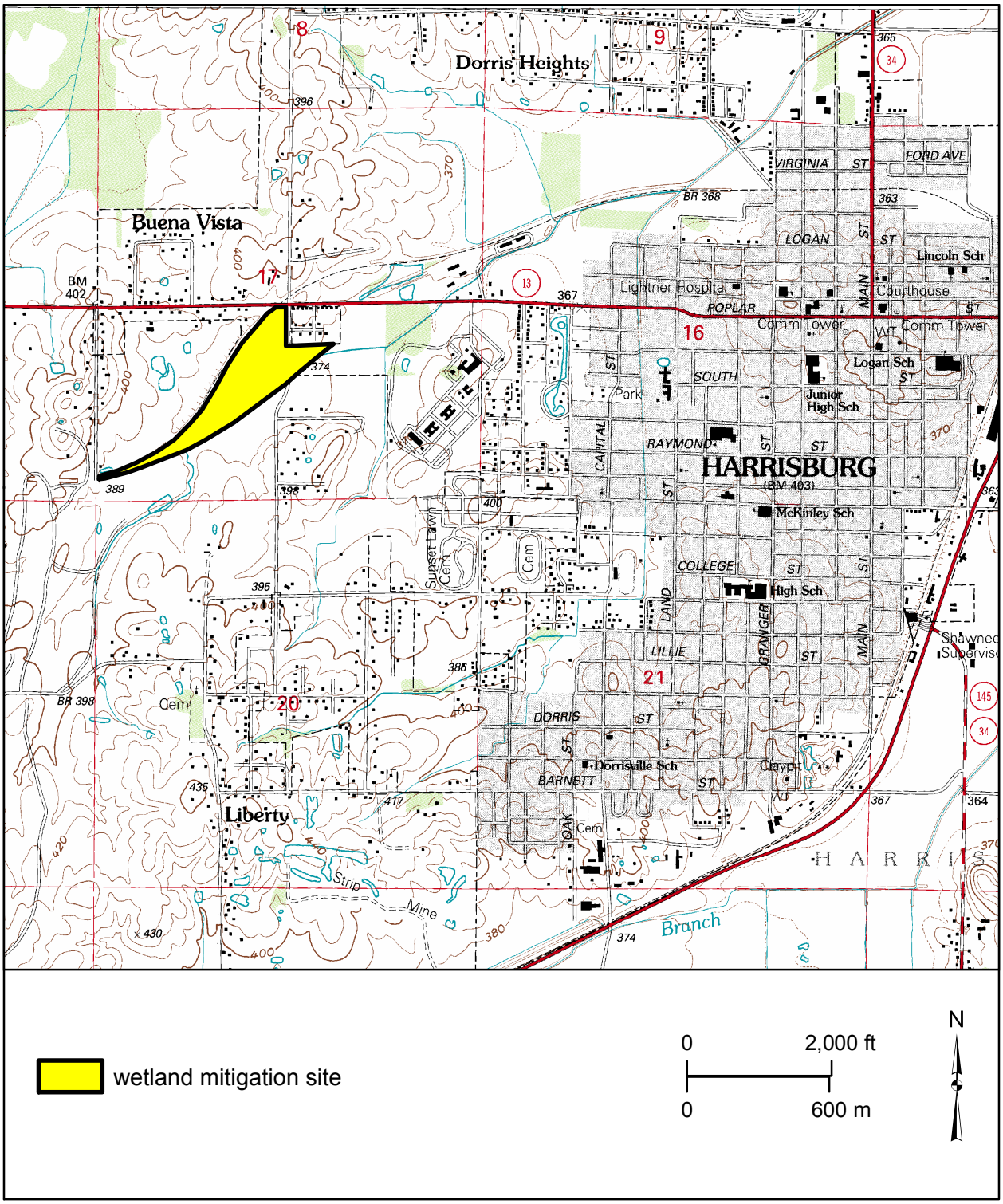
PLANNED FUTURE ACTIVITIES

- Water-level monitoring is expected to continue through 2013 or until no longer required by IDOT.

Harrisburg, Site 2 Wetland Mitigation Site
(FAP 857)

General Study Area and Vicinity

from the USGS Topographic Series, Harrisburg, IL, 7.5-minute Quadrangle (USGS 1996)
contour interval is 5 feet



Harrisburg, Site 2 Wetland Mitigation Site
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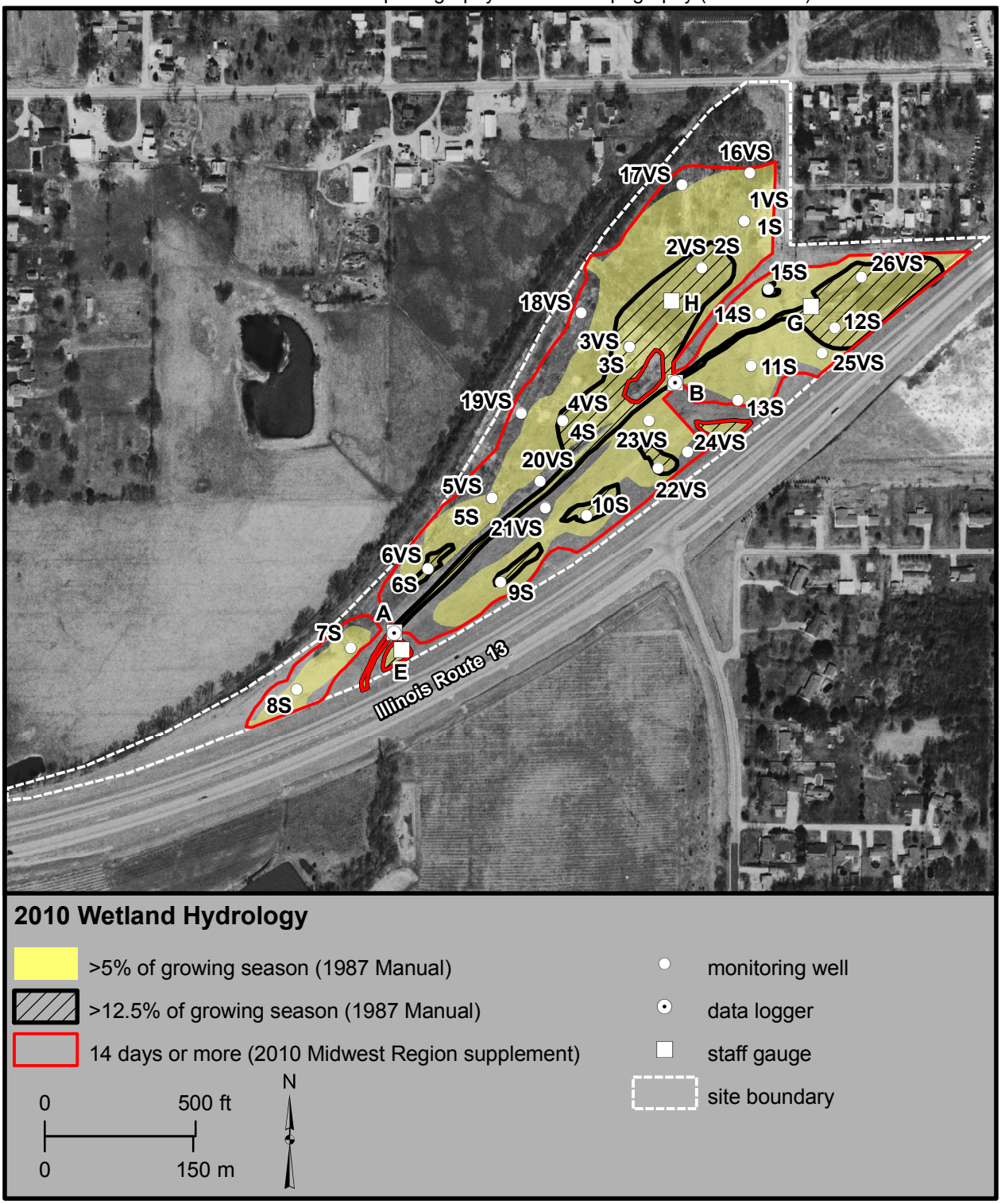
Estimated Areal Extent of 2010 Wetland Hydrology

September 1, 2009 though August 31, 2010

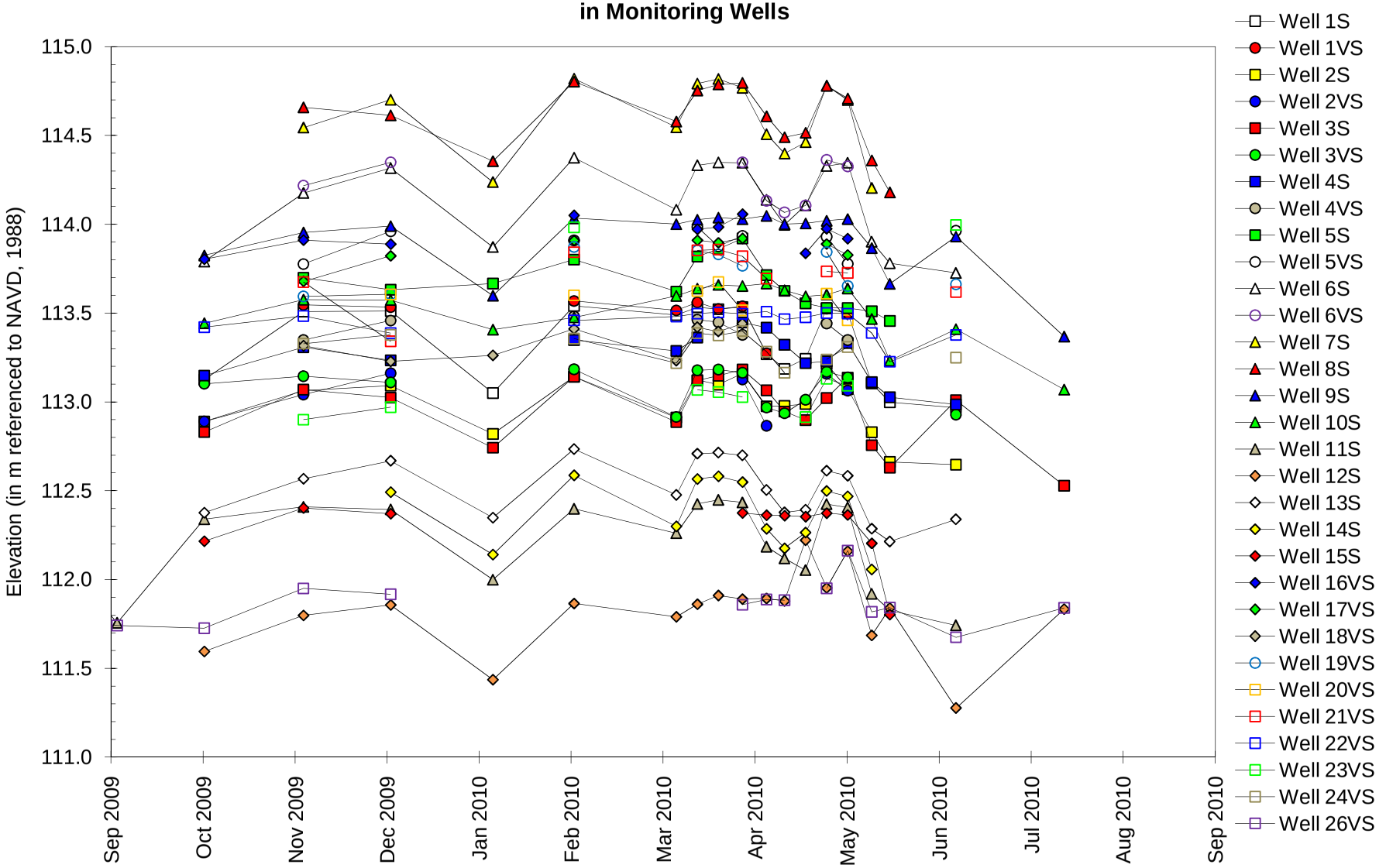
map based on USGS digital orthophotograph Harrisburg NW quarter quadrangle
from 3/17/2005 aerial photography and ISGS topography (ISGS 2006)



Harrisburg, Site 2 Wetland Mitigation Site

September 1, 2009 through August 31, 2010

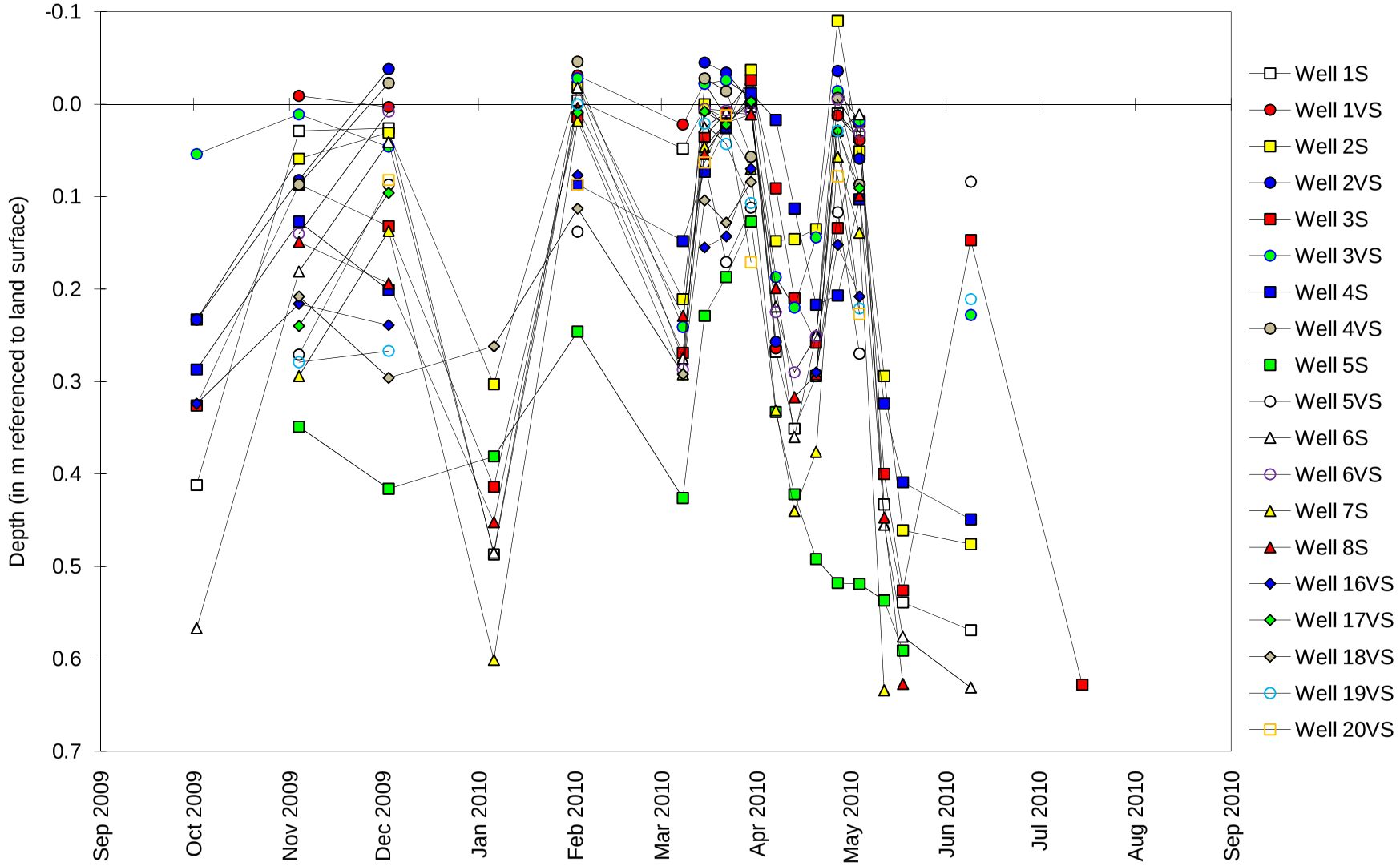
Water-Level Elevations in Monitoring Wells



Harrisburg, Site 2 Wetland Mitigation Site

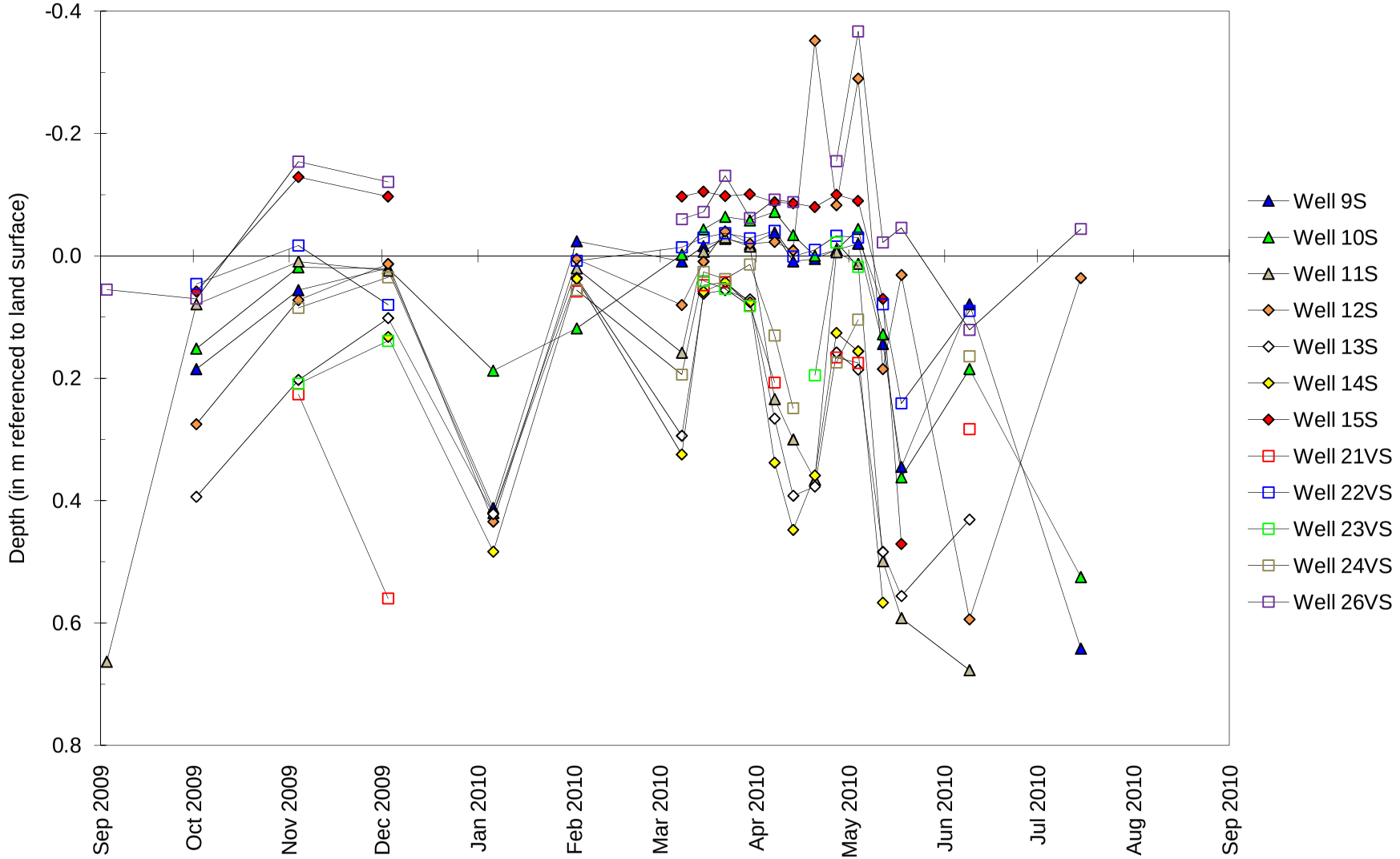
September 1, 2009 through August 31, 2010

Depth to Water in Monitoring Wells (North)



Harrisburg, Site 2 Wetland Mitigation Site
September 1, 2009 through August 31, 2010

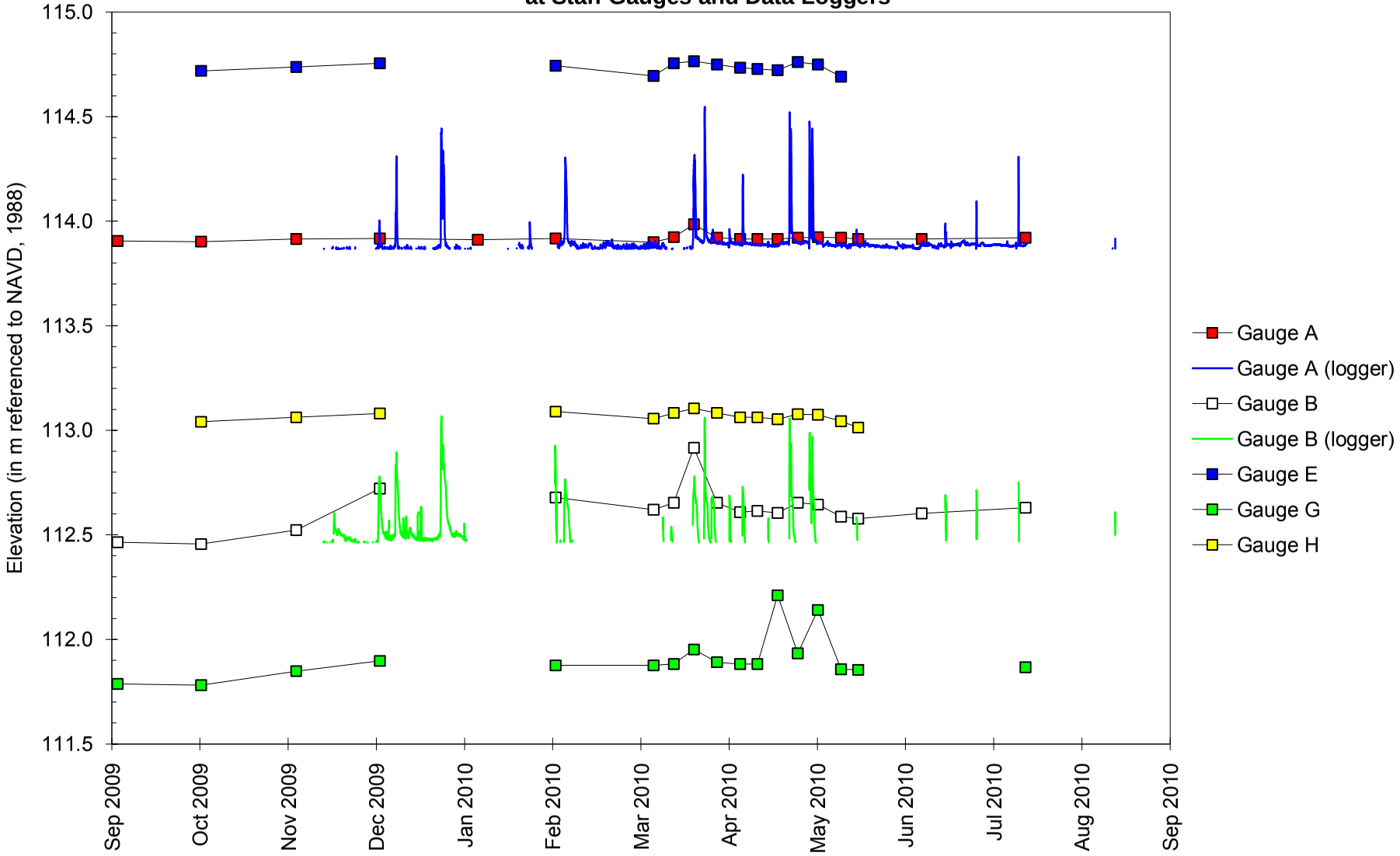
Depth to Water in Monitoring Wells (South)



Harrisburg, Site 2 Wetland Mitigation Site

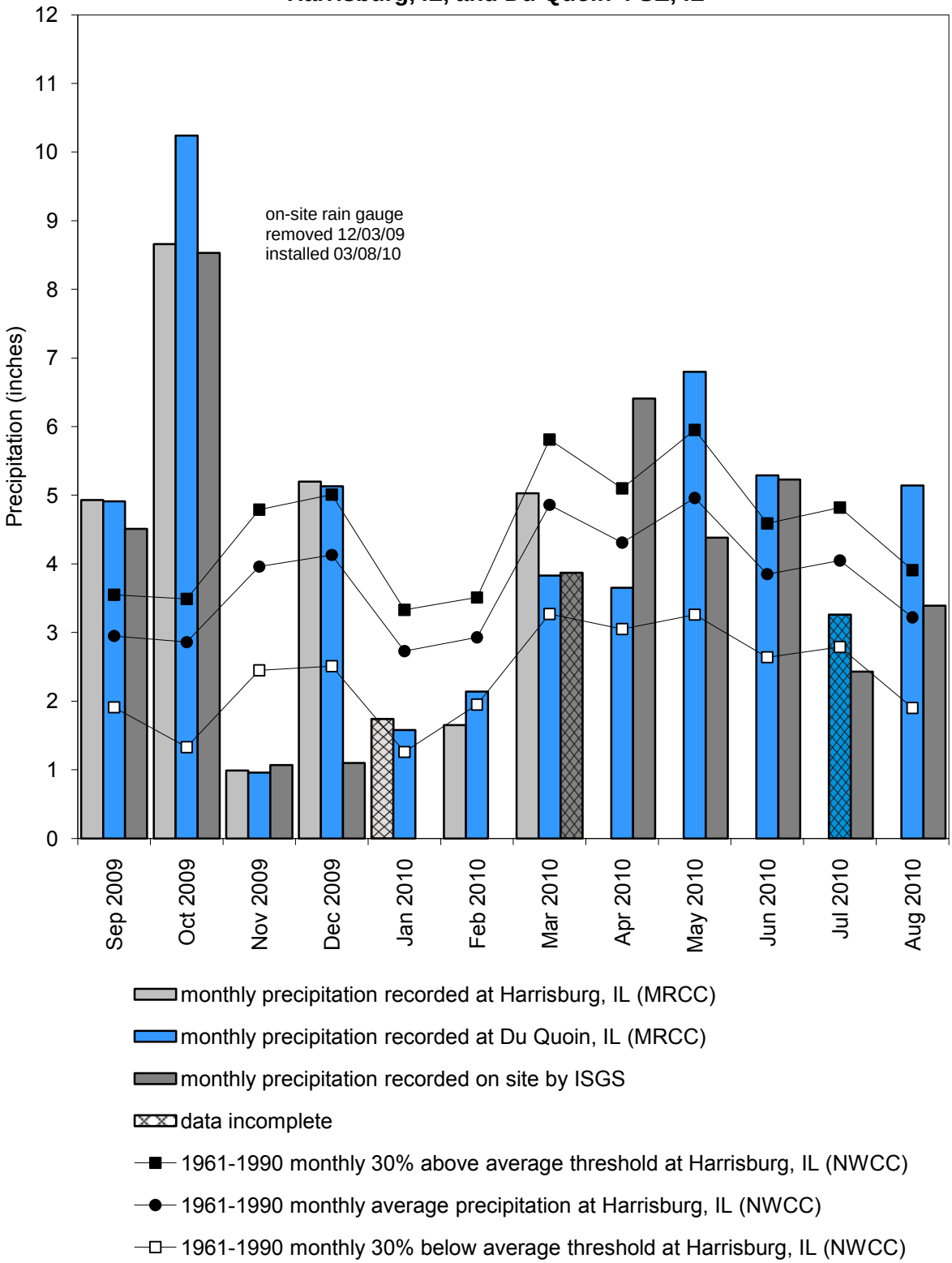
September 1, 2009 through August 31, 2010

Water-Level Elevations at Staff Gauges and Data Loggers



Harrisburg Site 2 Wetland Mitigation Site
September 2009 through August 2010

Total Precipitation Recorded on Site and at Harrisburg, IL, and Du Quoin 4 SE, IL



Graph last updated September 27, 2010