

**ECKMANN/BISCHOFF, NEW RIVER CROSSING
WETLAND MITIGATION SITE**

ISGS #43

FAP 14

Sequence #27

Madison County, near Collinsville, Illinois

Primary Project Manager: Steven E. Benton

Secondary Project Manager: none

SITE HISTORY

- March 2009: IDOT tasked the ISGS to resume monitoring of the site.
- April 2009: ISGS installed a monitoring network at the site and resumed data collection.

WETLAND HYDROLOGY CALCULATION FOR 2010

We estimate that the area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in 2010 for greater than 5% of the growing season was 22.6 ha (55.9 ac) out of a total area of 23.1 ha (57.0 ac). The area of the site that satisfied wetland hydrology criteria for greater than 12.5% of the growing season was estimated to be 20.9 ha (51.6 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 21.8 ha (53.9 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 at this site based on soil temperatures measured at the nearby Fairmont City site.
- Total precipitation recorded at Belleville, Illinois weather station during the monitoring period was 130% of normal and precipitation in Spring 2010 (March through May) was 93% of normal. The largest areas of jurisdictional wetland hydrology for all three criteria occurred in April and May when on-site precipitation was 92% of normal.
- In 2010, water levels measured in soil-zone monitoring wells 2S, 3S, 4S, 5S, 6S, 7S, 8S, and 9S satisfied wetland hydrology criteria for more than 5% of the growing season. Water levels measured in soil-zone monitoring wells 3S, 4S, 5S, 7S, and 9S satisfied wetland hydrology criteria for more than 12.5% of the growing season. Water levels measured in soil-zone monitoring wells 2S, 3S, 4S, 5S, 6S, 7S, and 9S satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season as per the 2010 Midwest Region supplement.
- Surface-water elevations measured at EBSW1 reveal that areas of the site at and below an elevation of 124.10 m (407.17 ft) were inundated for more than 5% of the growing season and that areas at and below an elevation of 124.05 m (407.01 ft) were inundated for more than 12.5% of the growing season. In addition, areas of the site at and below an elevation of 124.10 m (407.17 ft) were inundated for 14 or more consecutive days during the growing season as per the 2010 Midwest Region supplement.

ADDITIONAL INFORMATION

- In December 2009, the beaver dam in Schneider Ditch was breached by employees of the levee district. This caused a precipitous drop in surface-water elevation on the site. In March 2010, it was observed that the beavers had repaired their dam.

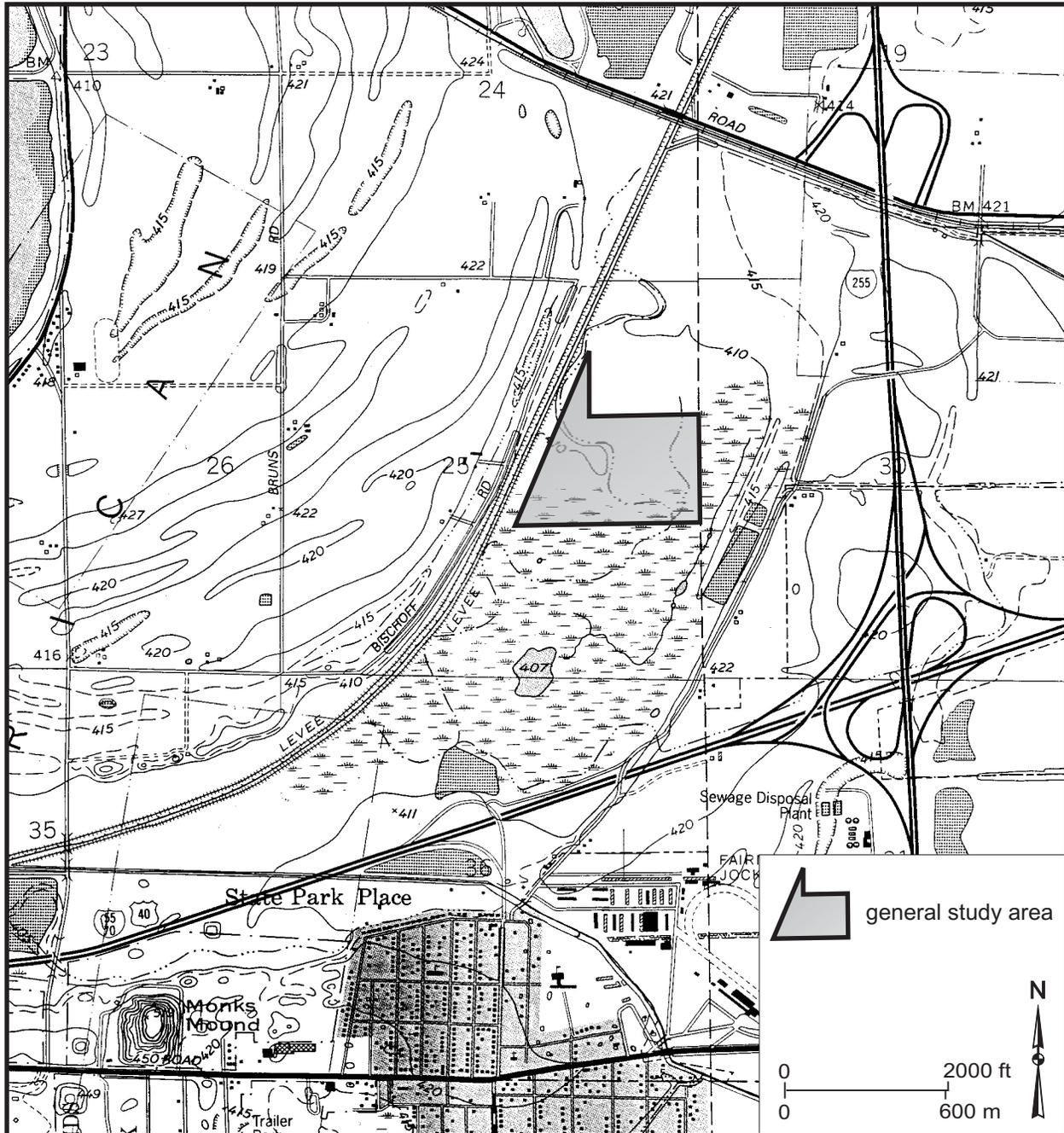
PLANNED FUTURE ACTIVITIES

- Monitoring of the site will continue until no longer required by IDOT.

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(FAP 14)**

Study Area and Vicinity

from the USGS Topographic Series, Monks Mound IL, 7.5-minute Quadrangle
(USGS 1954, photorevised 1993)
contour interval is 10 feet



Eckmann/Bischoff, New River Crossing Wetland Mitigation Site (FAP 14)

Estimated Areal Extent of 2010 Wetland Hydrology

September 1, 2009 through August 31, 2010
map based on USGS digital orthophotograph,
Monks Mound, SE quarter quadrangle
produced from March 2005 aerial photography (ISGS 2005)

1:4,950

2010 Wetland Hydrology

 >5% of growing season (1987 Manual)

 >12.5% of growing season (1987 Manual)

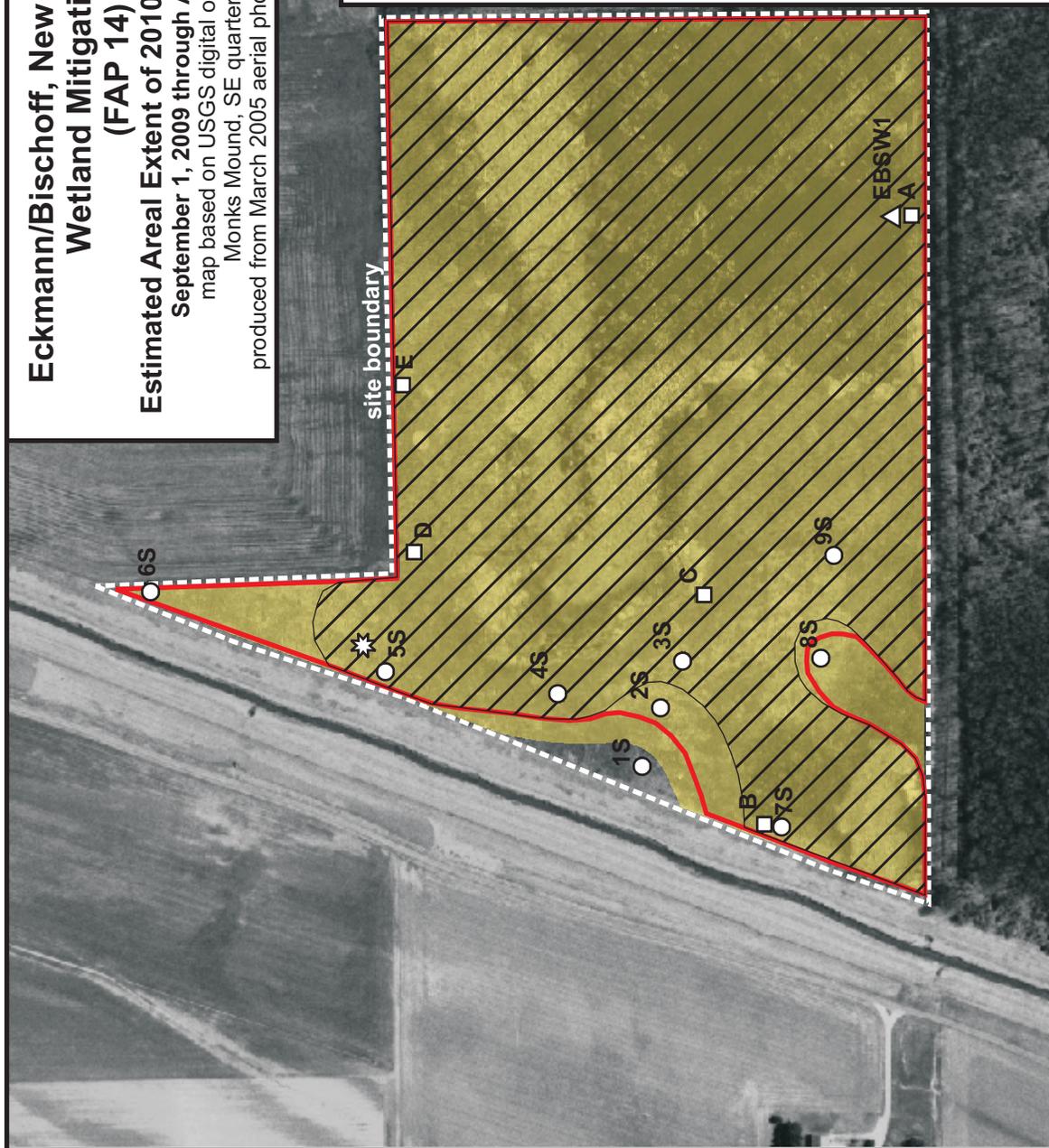
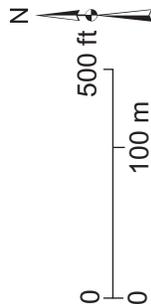
 14 days or more (2010 Midwest Region supplement)

 monitoring well

 staff gauge

 data logger

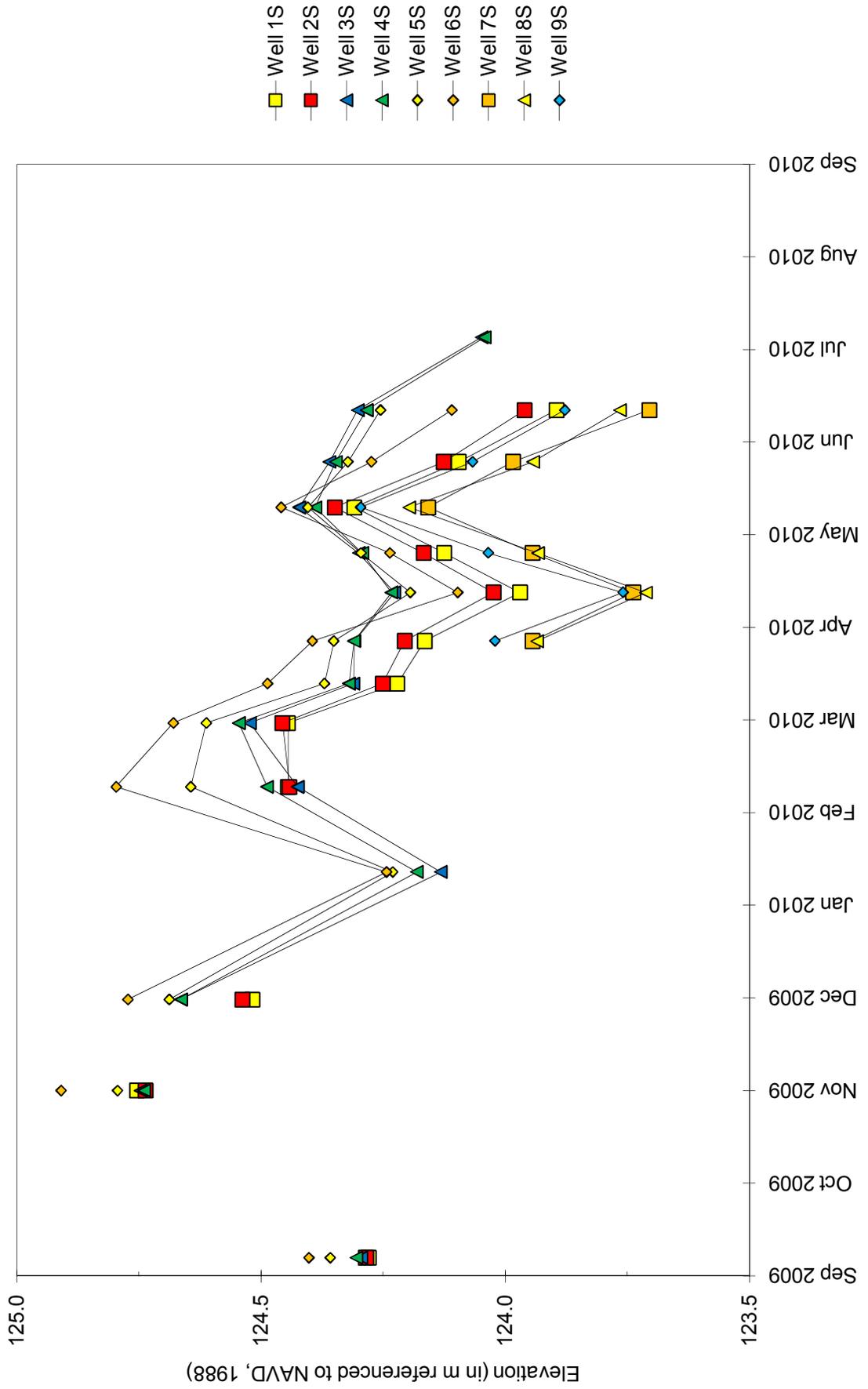
 rain gauge



Eckmann/Bischoff, New River Crossing Wetland Mitigation Site

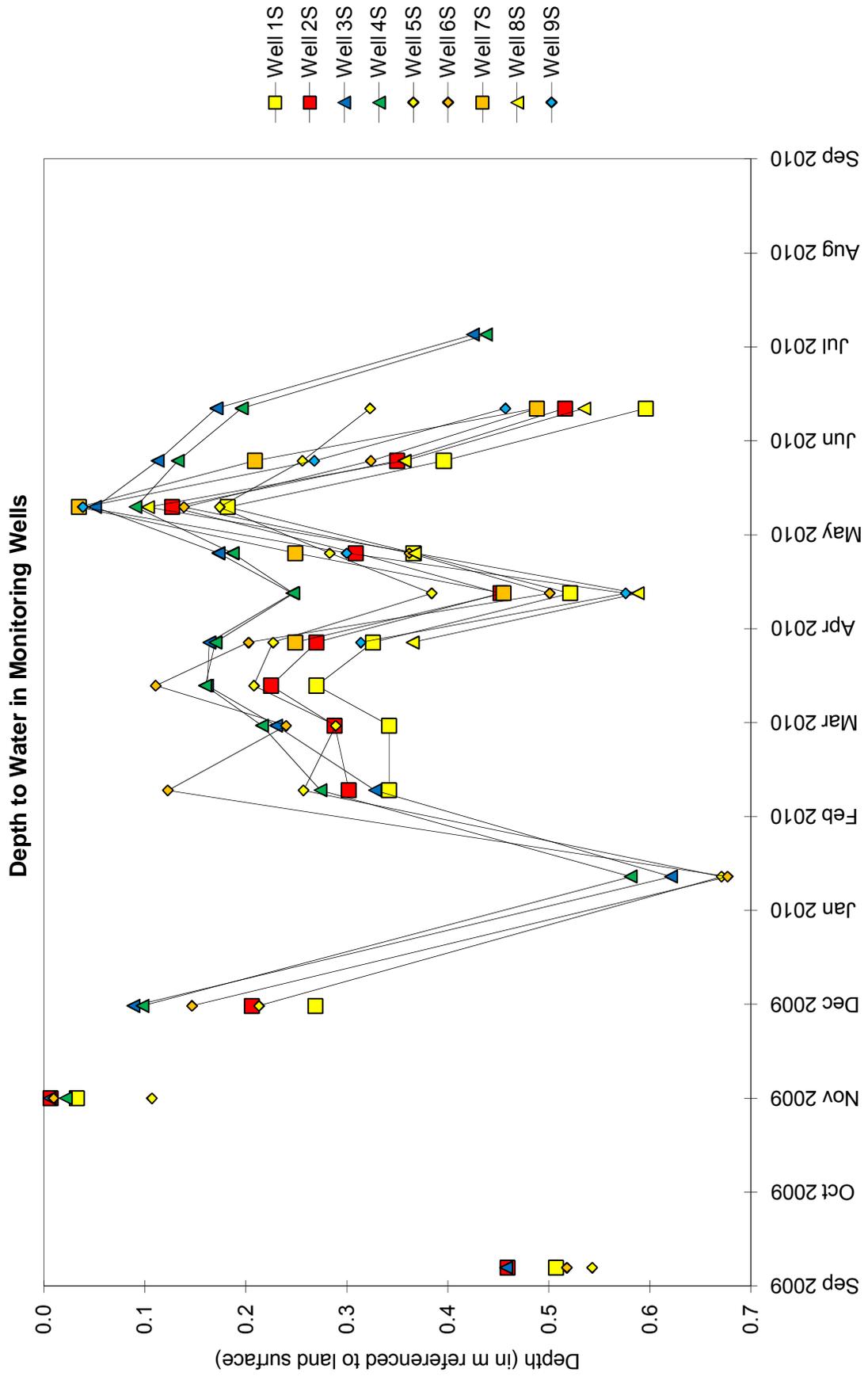
September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells



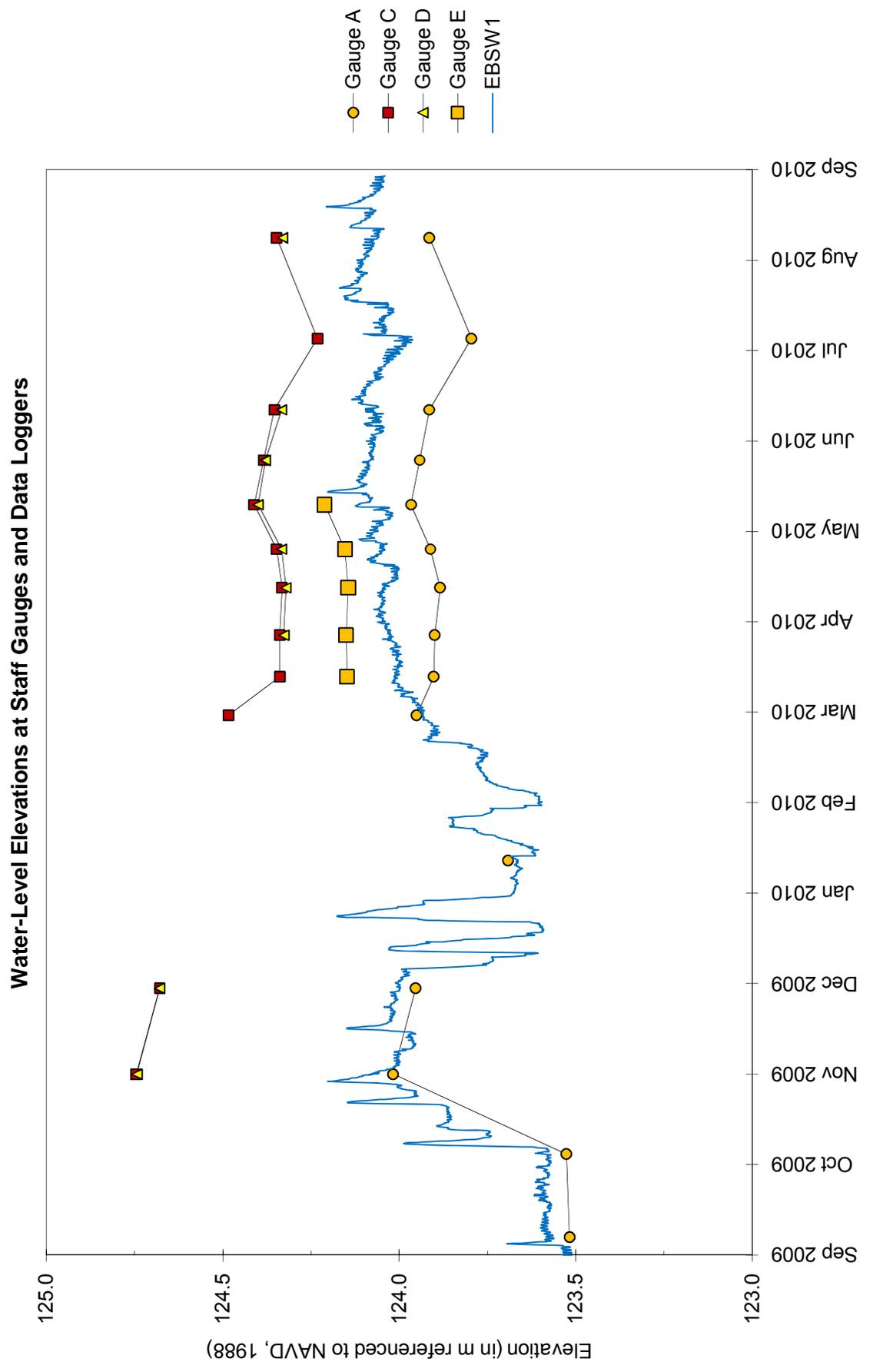
Eckmann/Bischoff, New River Crossing Wetland Mitigation Site

September 1, 2009 through August 31, 2010



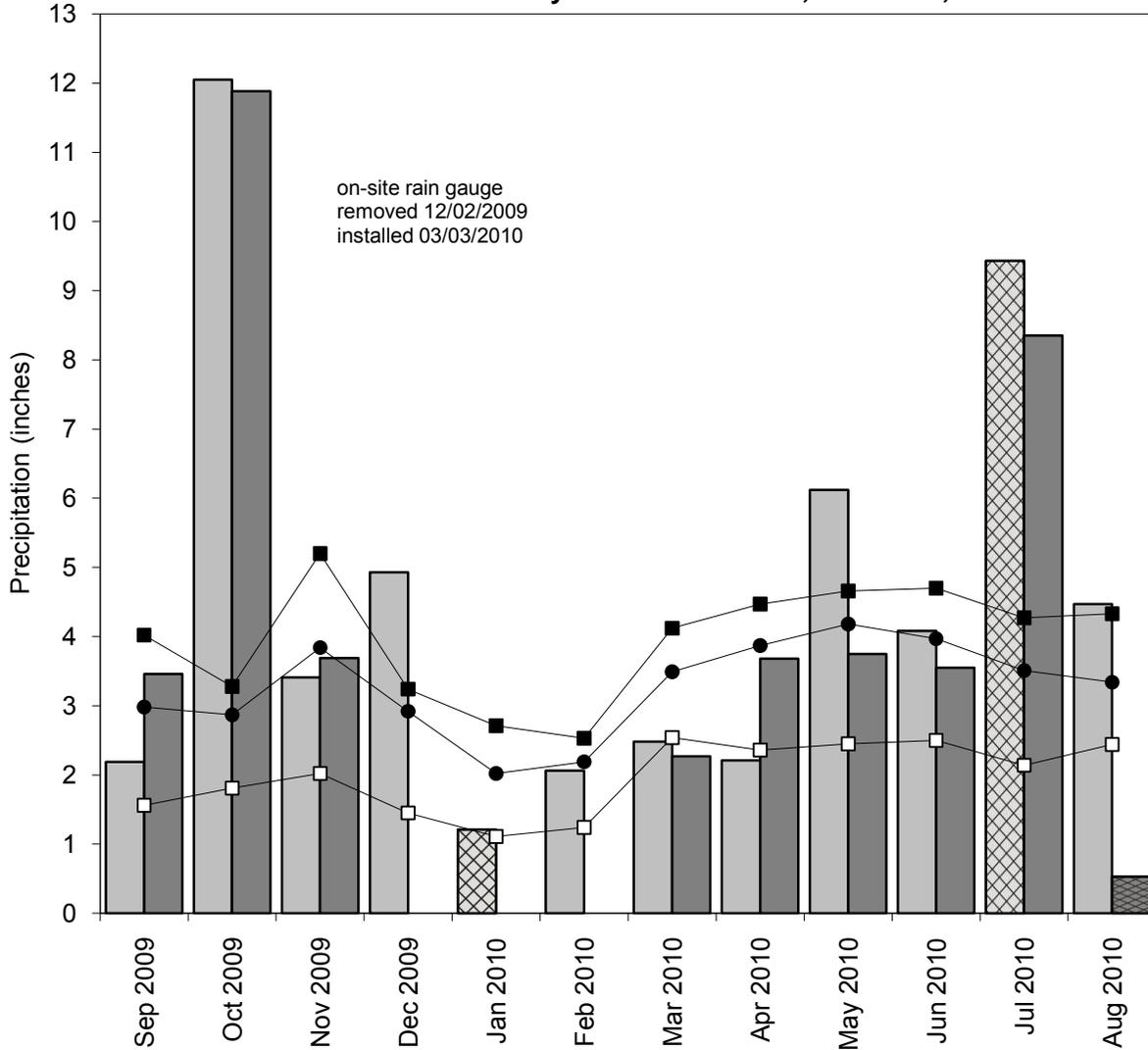
Eckmann/Bischoff, New River Crossing Wetland Mitigation Site

September 1, 2009 through August 31, 2010



Eckmann/Bischoff, New River Crossing Wetland Mitigation Site September 2009 through August 2010

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



- monthly precipitation recorded at Belleville, IL (MRCC)
- monthly precipitation recorded onsite by ISGS
- ▨ data incomplete
- 1971-2000 monthly 30% above average threshold at Belleville, IL (NWCC)
- 1971-2000 monthly average precipitation at Belleville, IL (NWCC)
- 1971-2000 monthly 30% below average threshold at Belleville, IL (NWCC)

Graph last updated September 29, 2010