

**MILAN BELTWAY, ROCK ISLAND
WETLAND MITIGATION SITE**

ISGS #76

FAU 5822

Sequence #67

Rock Island County, near Moline, Illinois

Primary Project Manager: Steven E. Benton

Secondary Project Manager: Kathleen E. Bryant

SITE HISTORY

- February 2008: The ISGS was tasked by IDOT to conduct 5-year monitoring.
- March 2008: A monitoring network was installed on the site by the ISGS.
- Summer 2010: A paved bicycle/walking path was installed.

WETLAND HYDROLOGY CALCULATION FOR 2010

The total area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for more than 5% of the 2010 growing season was estimated to be 3.8 ha (9.5 ac), and for more than 12.5% of the growing season was estimated to be 2.1 ha (5.2 ac) out of a total area of 4.1 ha (10.2 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 2.9 ha (7.2 ac), out of a total area of 4.1 ha (10.2 ac), satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. See Additional Information for individual wetland hydrology acreages in areas A, B, C, D, and E. These estimates are based on the following factors:

- According to the MRCC, the median date that the growing season begins at the nearby Quad City International Airport weather station in Moline, Illinois, is April 13 and the season lasts 196 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 18 was the start date of the 2010 growing season based on soil temperatures observed at the wetland mitigation site.
- Total precipitation during the monitoring period as recorded at the Quad City International Airport weather station in Moline, Illinois, was 121% of normal and total precipitation in Spring 2010 (March through May) was 109% of normal.
- In 2010, wetland hydrology occurred for more than 5% of the growing season at all of the monitoring wells except 17S. Wetland hydrology occurred for more than 12.5% of the growing season at monitoring wells 12S, 13S, 14S, 15S, 16S, 18S, 18VS, 19S, 20S, 21S, 21VS, 22S, and 23S. In addition, all of the monitoring wells except 1S, 2S, 4S, and 17S satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement.
- Portions of area D were inundated for the entire monitoring period. Surface-water elevations measured at gauge C reveal that the portions of area D at and above an elevation of 172.49 m (565.94 ft) were inundated for periods long enough to satisfy wetland hydrology criteria for more than 5% of the growing season and for more than 12.5% of the growing season. In addition, portions of area D at and above an elevation of 172.49 m (565.94 ft) were inundated for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement. Analysis of the data

recorded by RDS1 and RDS2 reveals that the Rock River flowed into the east and west ditches 5 times during the monitoring period. However, no peak that affected the site was greater than 4 days in duration.

ADDITIONAL INFORMATION

- The following are acreages of jurisdictional wetland hydrology in each area of the site: 0.6 ha (1.5 ac) of area A, 0.4 ha (1.0 ac) of area B, 0.7 ha (1.9 ac) of area C, 1.2 ha (3.0 ac) of area D, and 0.8 ha (2.1 ac) of area E satisfied wetland hydrology criteria for more than 5% of the growing season; 0.04 ha (0.09 ac) of area A, 0.03 ha (0.08 ac) of area B, 1.2 ha (3.0 ac) of area D, and 0.8 ha (2.1 ac) of area E satisfied wetland hydrology criteria for more than 12.5% of the growing season; 0.02 ha (0.05 ac) of area A, 0.1 ha (0.2 ac) of area B, 0.7 ha (1.9 ac) of area C, 1.2 ha (3.0 ac) of area D, and 0.8 ha (2.1 ac) of area E satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement.
- The construction of the bicycle/walking path has created an opportunity to alter the hydrology of the site and increase the duration of jurisdictional wetland hydrology in areas A and B. The path crosses the west ditch via a culvert and is raised above the surrounding landscape. Constructing a low-head dam across the ditch upstream of the culvert would inundate areas adjacent to the ditch by retaining runoff. The height of the dam would have to be determined by an elevational survey in order to maximize the area of inundation/saturation without inundating the path.

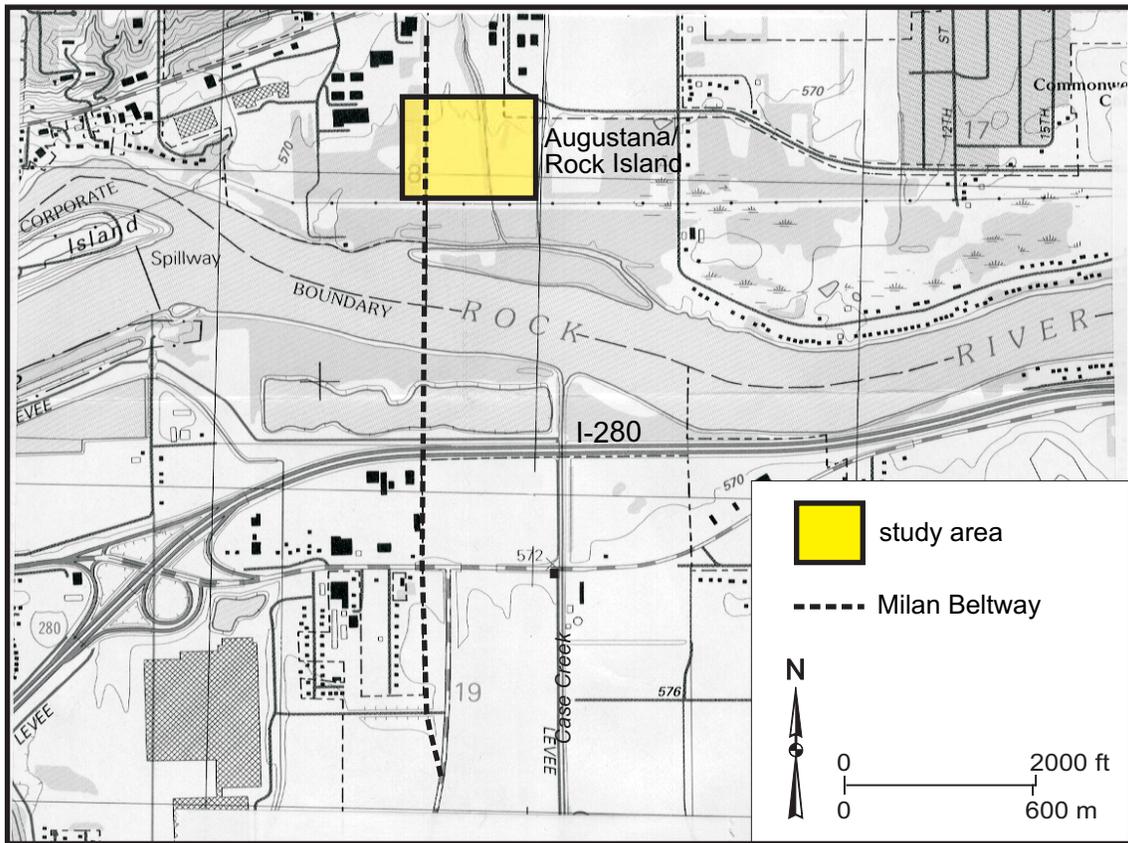
PLANNED FUTURE ACTIVITIES

- Monitoring activities will continue until no longer required by IDOT.

Milan Beltway, Rock Island Wetland Mitigation Site (FAU 5822)

General Study Area and Vicinity

from the USGS Topographic Series, Milan IL-IA, 7.5-minute Quadrangle (USGS 1992)
contour interval is 10 feet

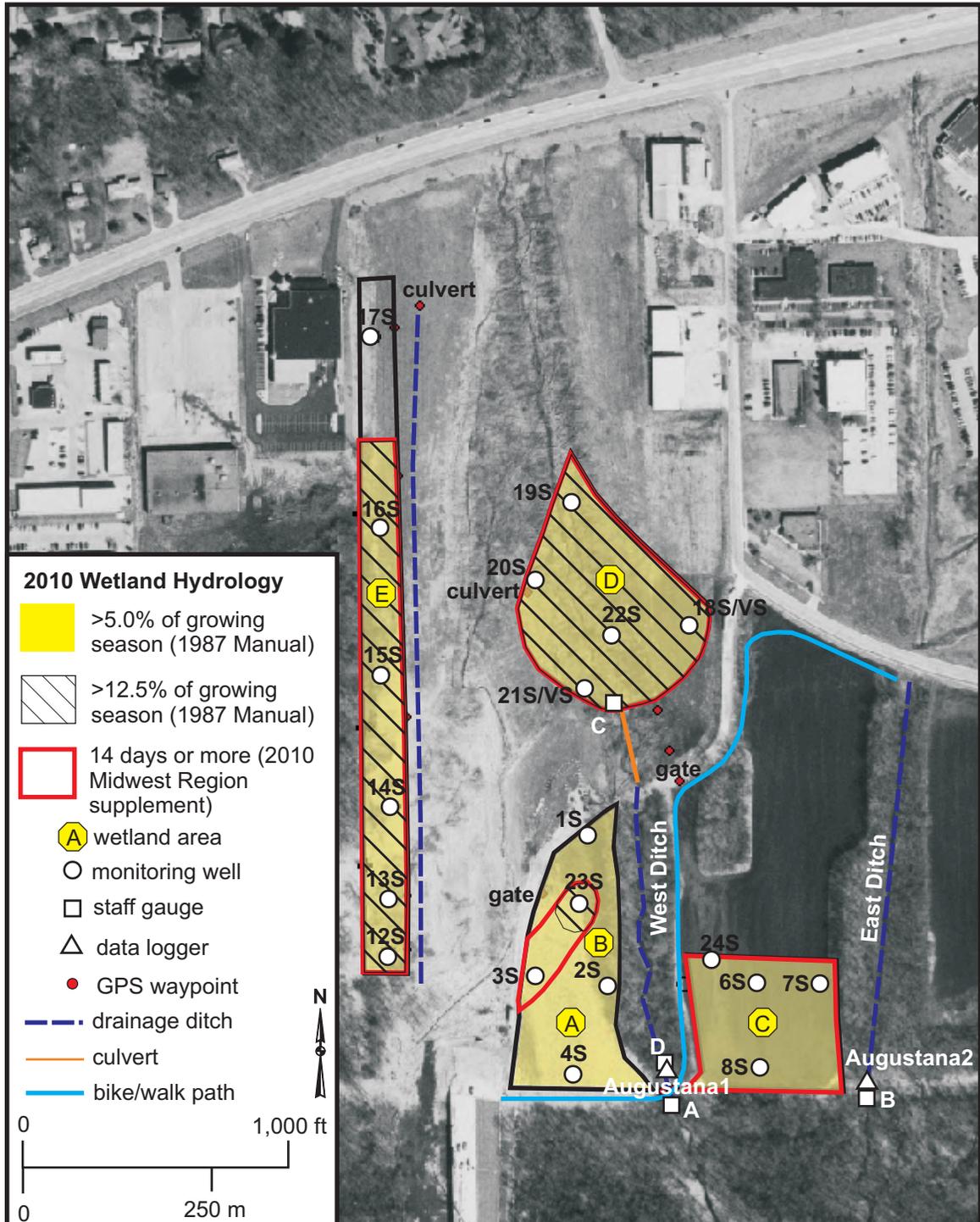


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Estimated Areal Extent of 2010 Wetland Hydrology

September 1, 2009 through August 31, 2010

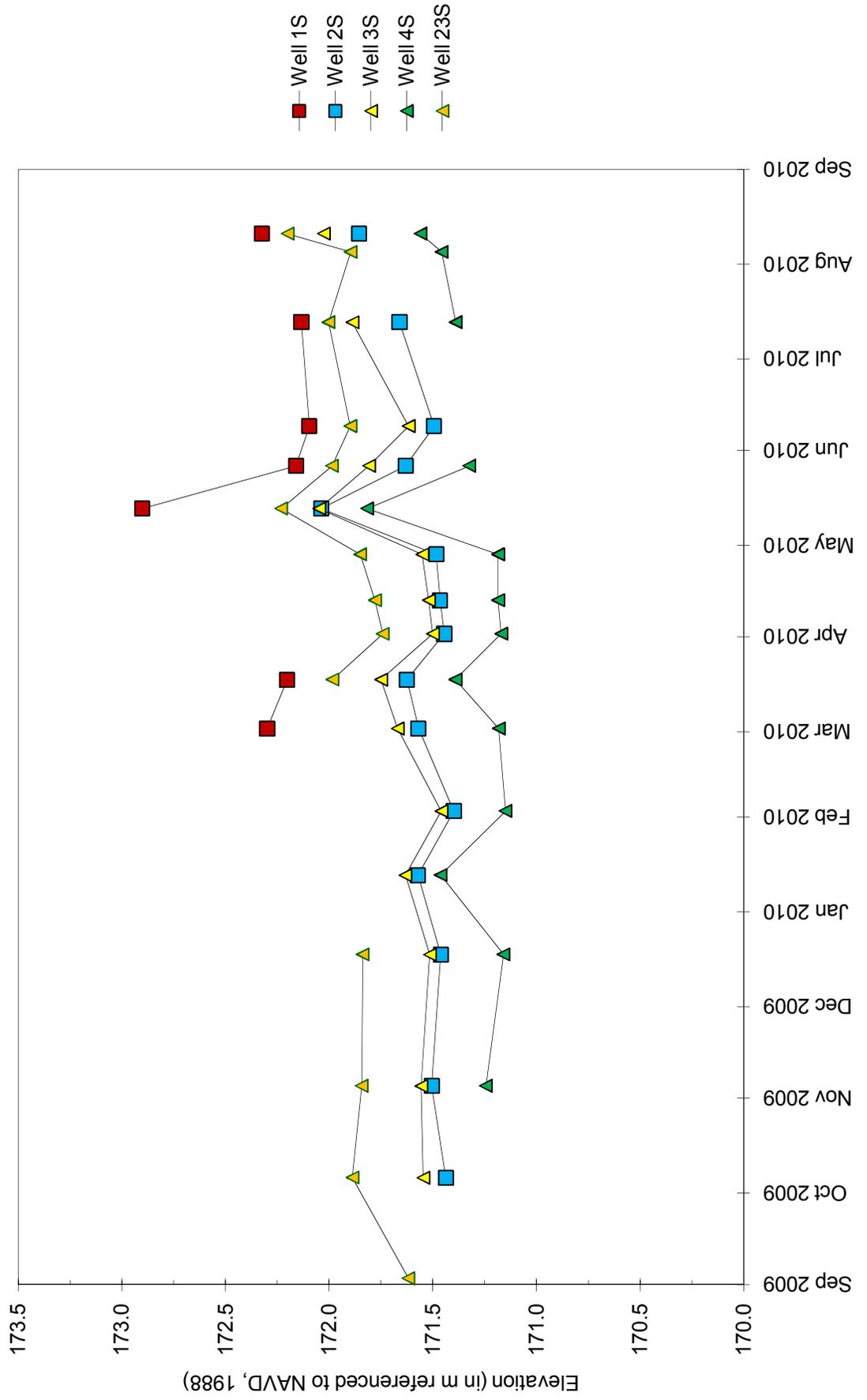
Map base is USGS digital orthophotography, Milan NE quarter quadrangle (ISGS 2009)



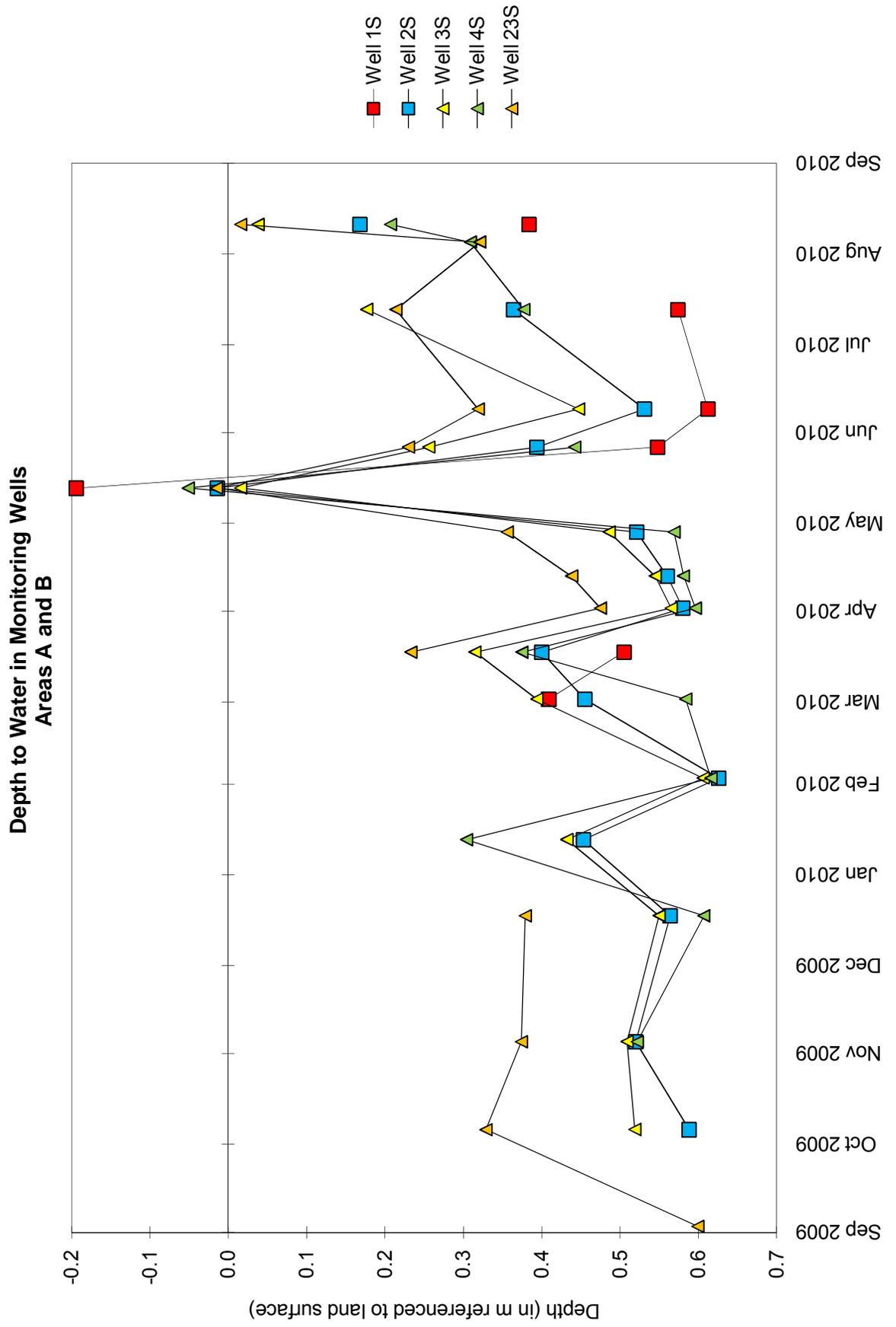
Milan Beltway, Rock Island Wetland Mitigation Site

September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells
Areas A and B

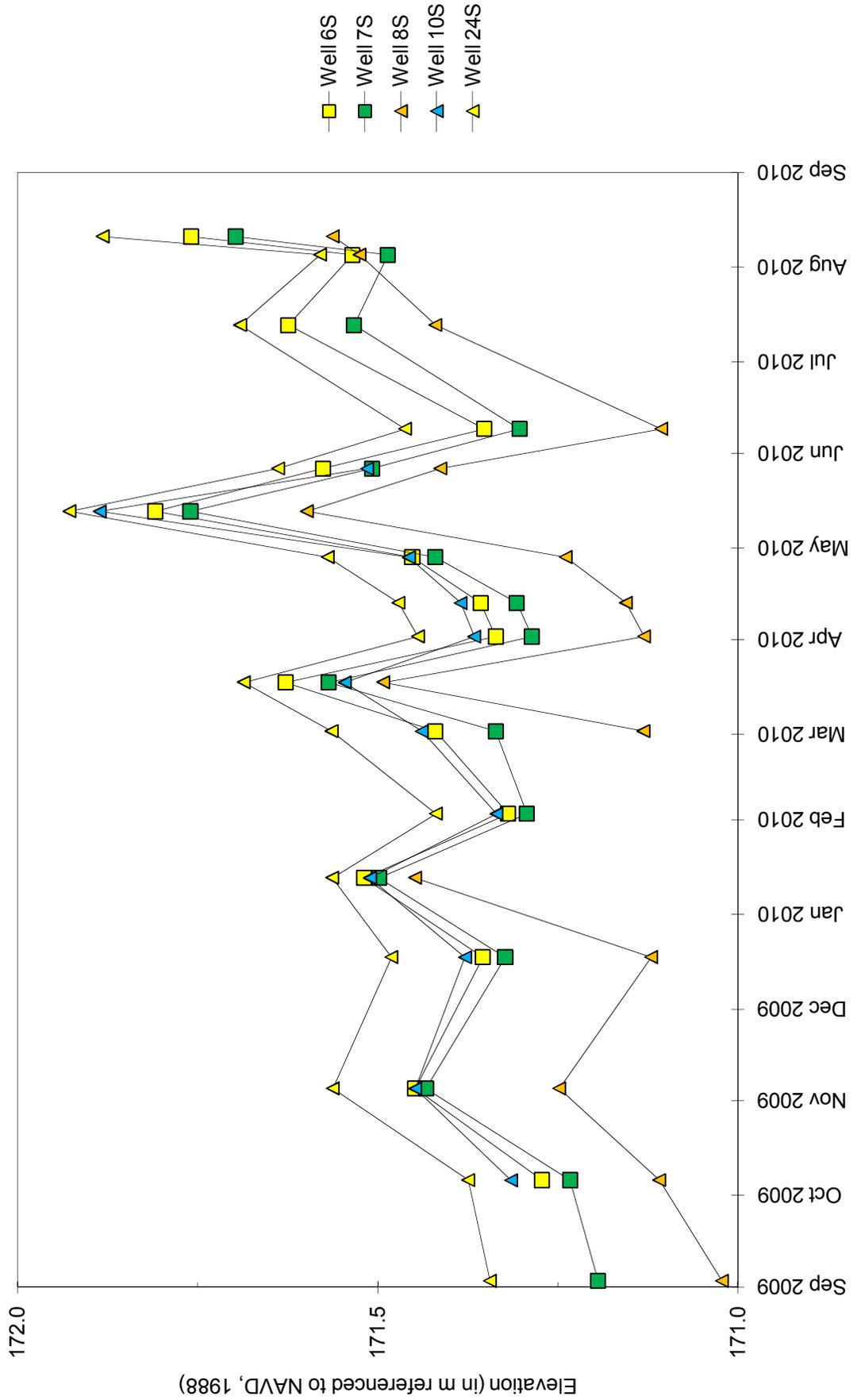


Milan Beltway, Rock Island Wetland Mitigation Site September 1, 2009 through August 31, 2010

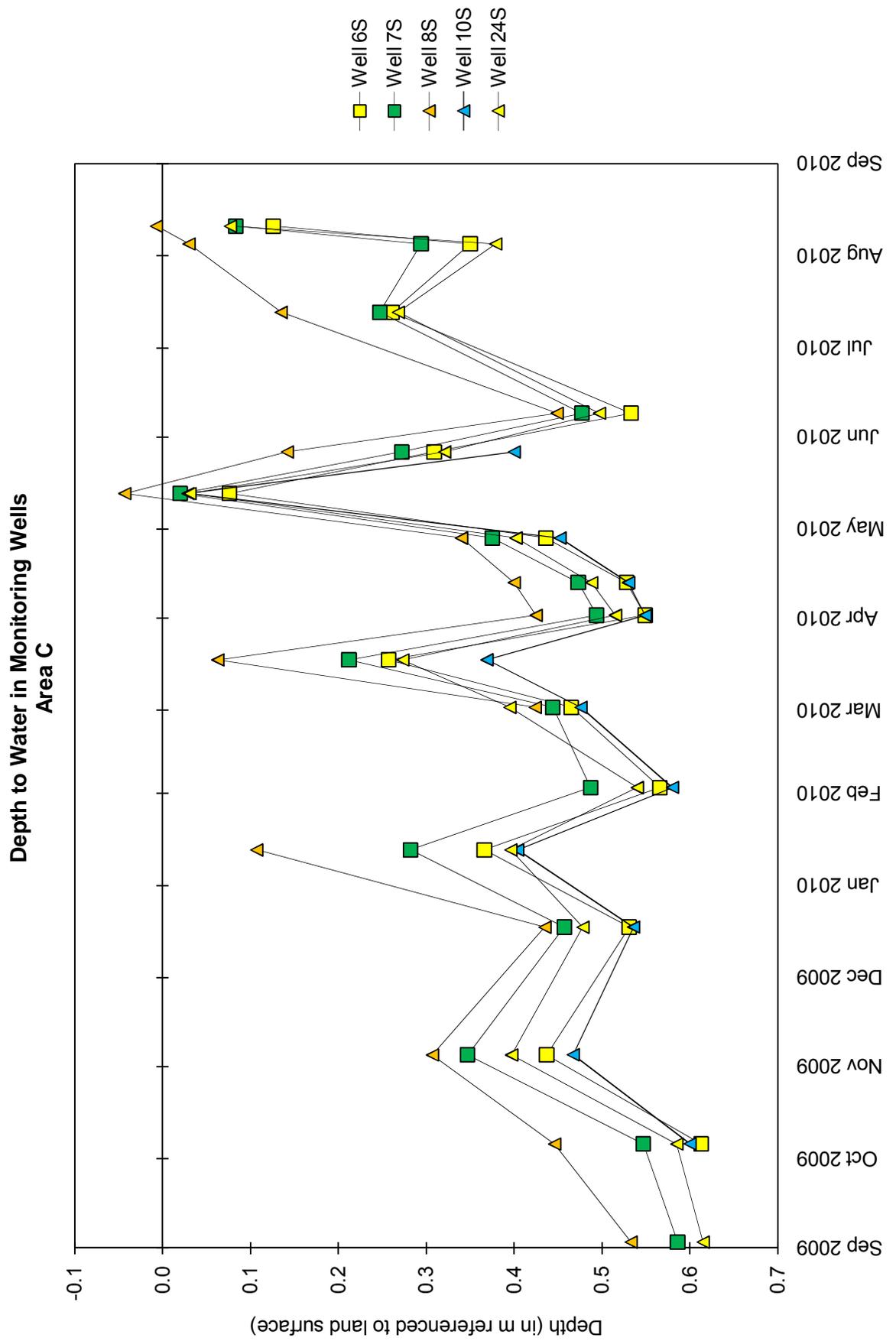


Milan Beltway, Rock Island Wetland Mitigation Site
September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells
Area C

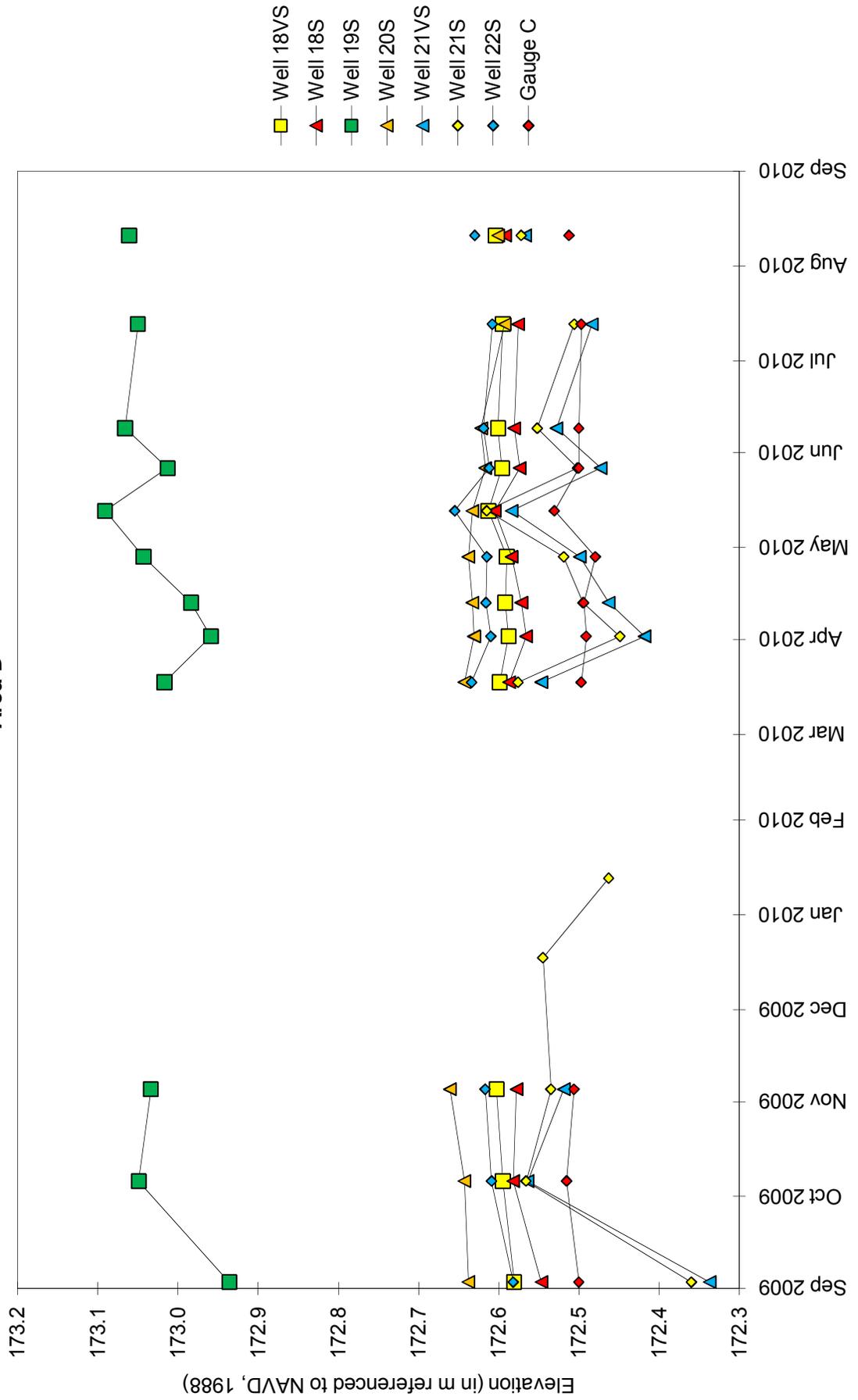


Milan Beltway, Rock Island Wetland Mitigation Site
 September 1, 2009 through August 31, 2010

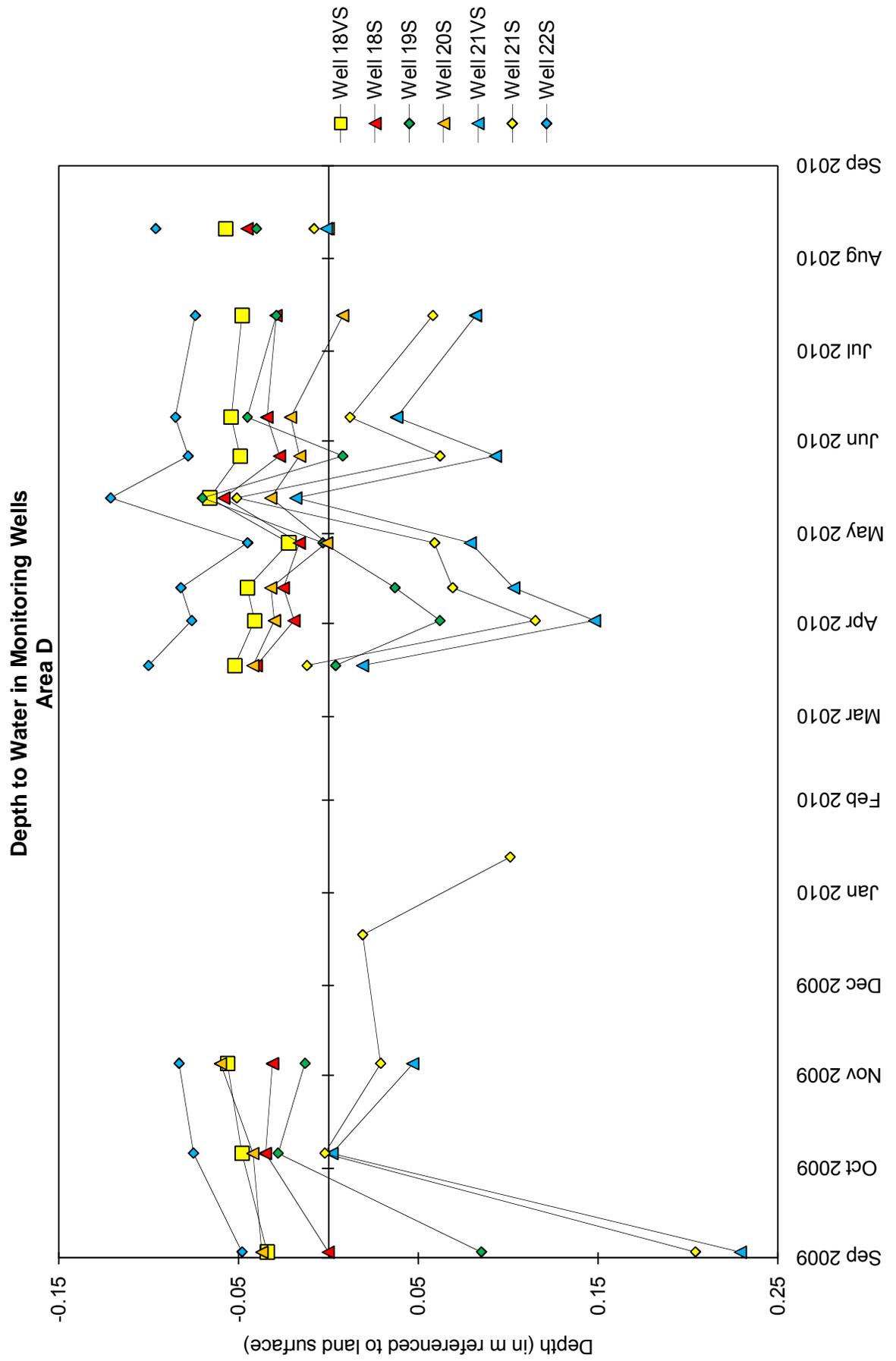


Milan Beltway, Rock Island Wetland Mitigation Site September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells Area D



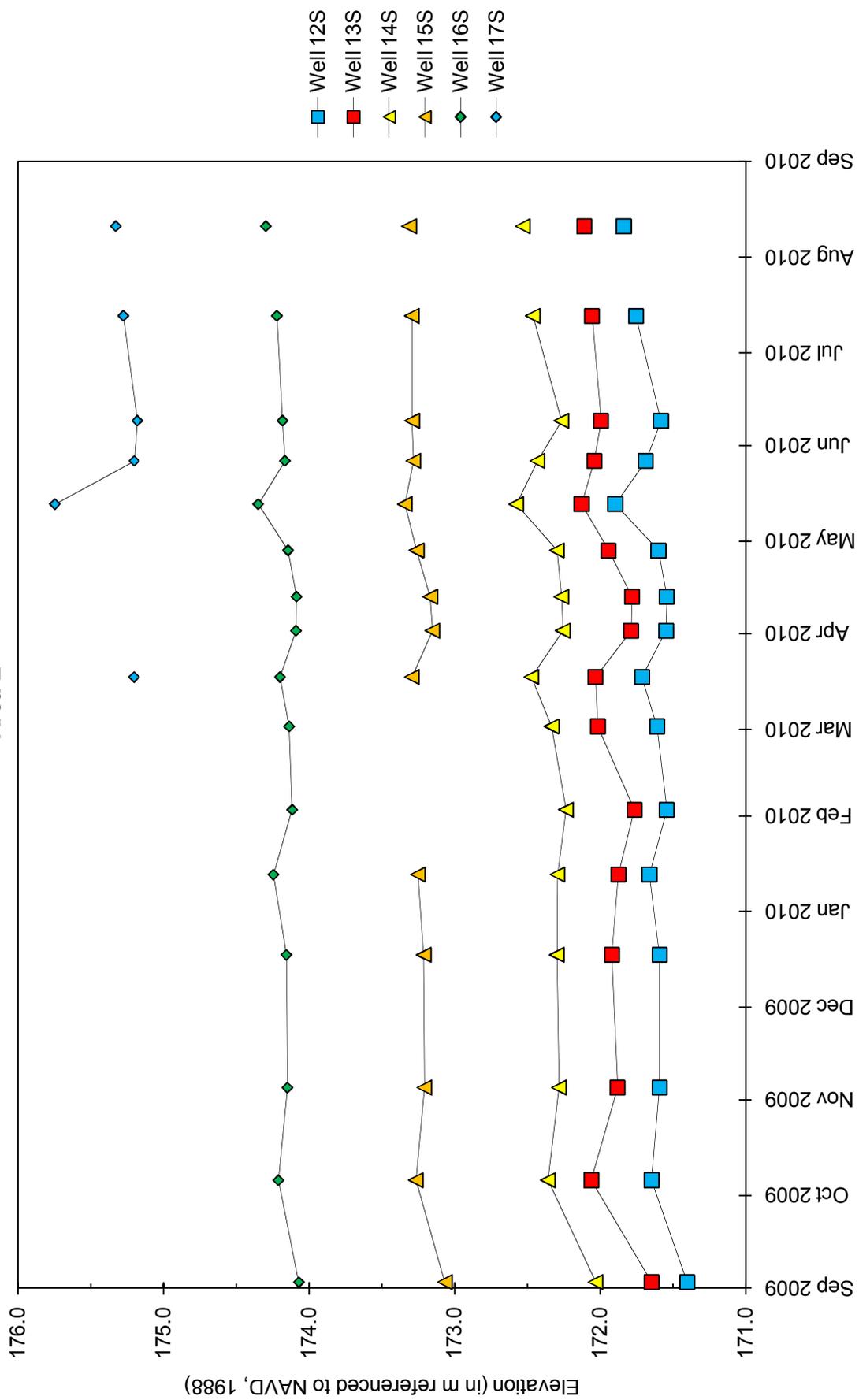
Milan Beltway, Rock Island Wetland Mitigation Site
September 1, 2009 through August 31, 2010



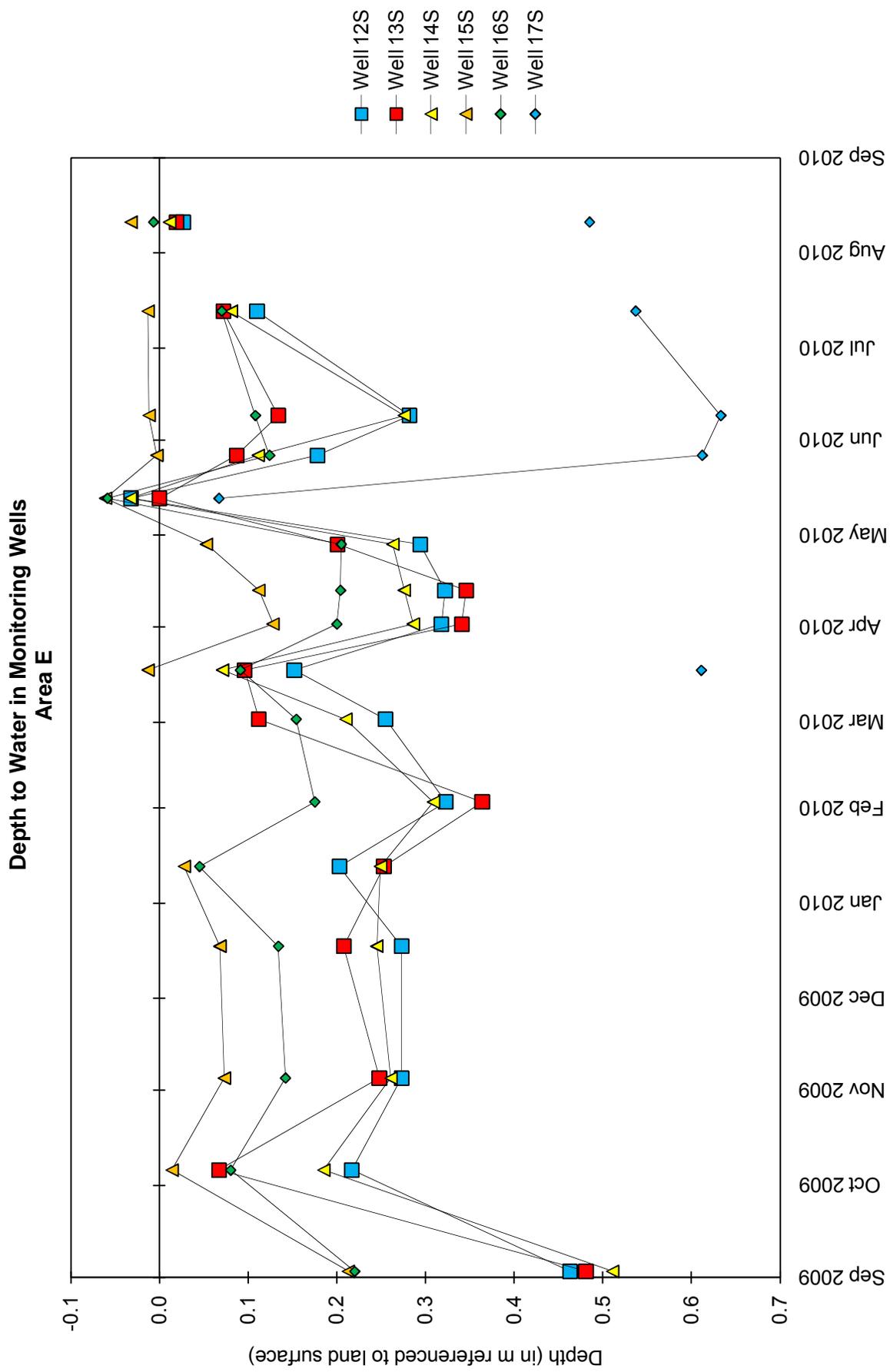
Milan Beltway, Rock Island Wetland Mitigation Site

September 1, 2009 through August 31, 2010

Water-Level Elevations in Monitoring Wells
Area E

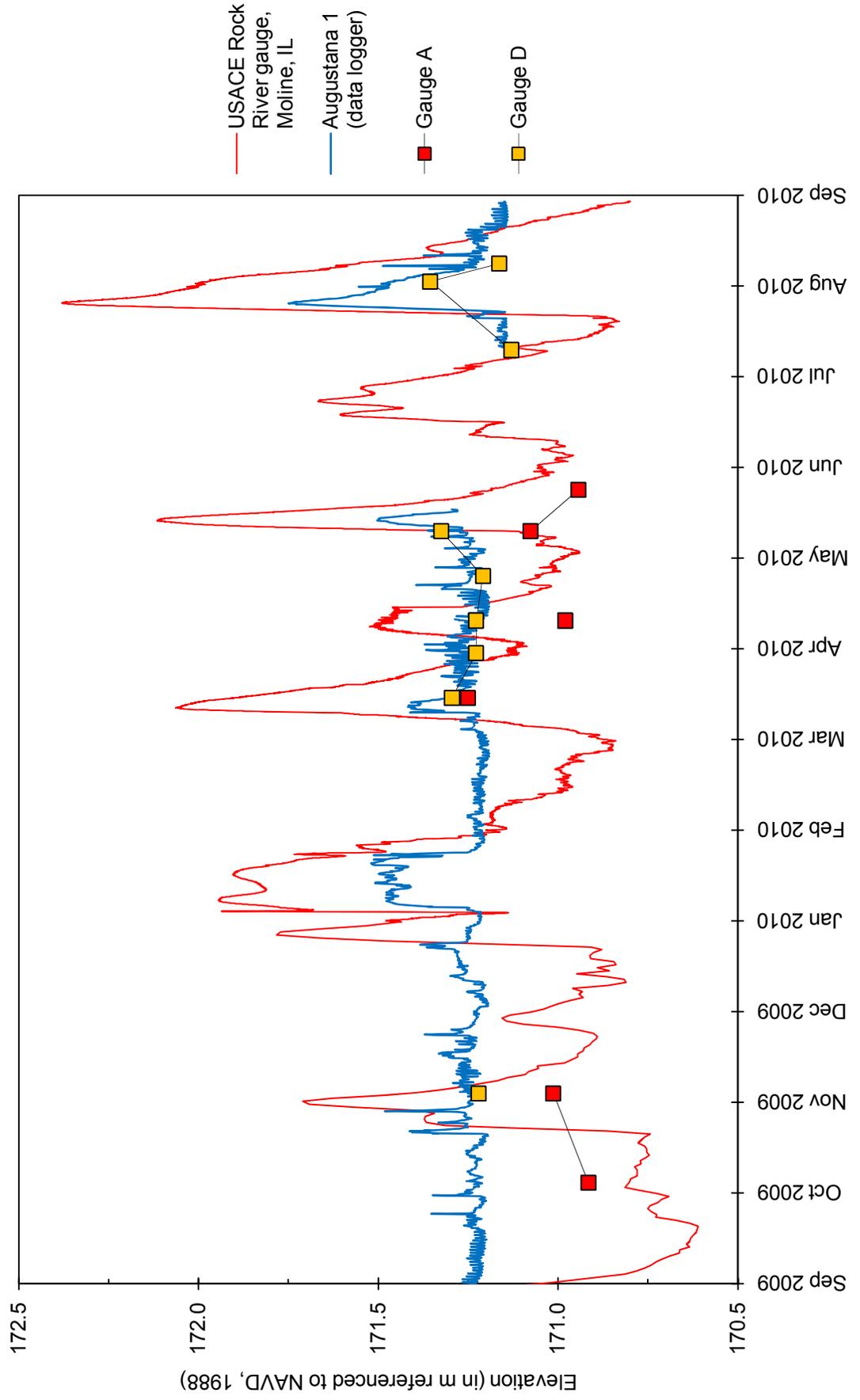


Milan Beltway, Rock Island Wetland Mitigation Site
September 1, 2009 through August 31, 2010



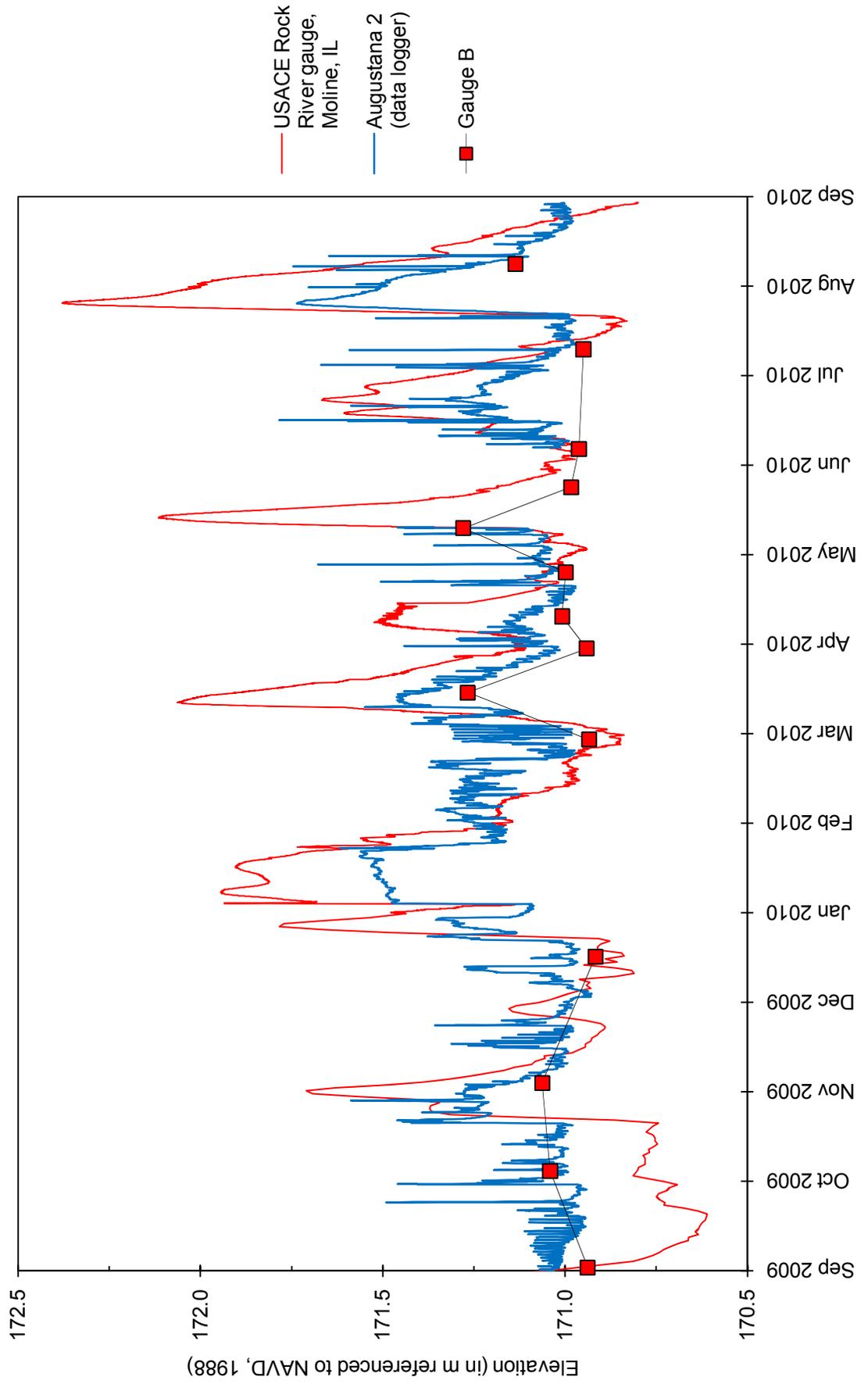
Milan Beltway, Rock Island Wetland Mitigation Site September 1, 2009 through August 31, 2010

Water-Level Elevations at Staff Gauges and Data Loggers in West Ditch

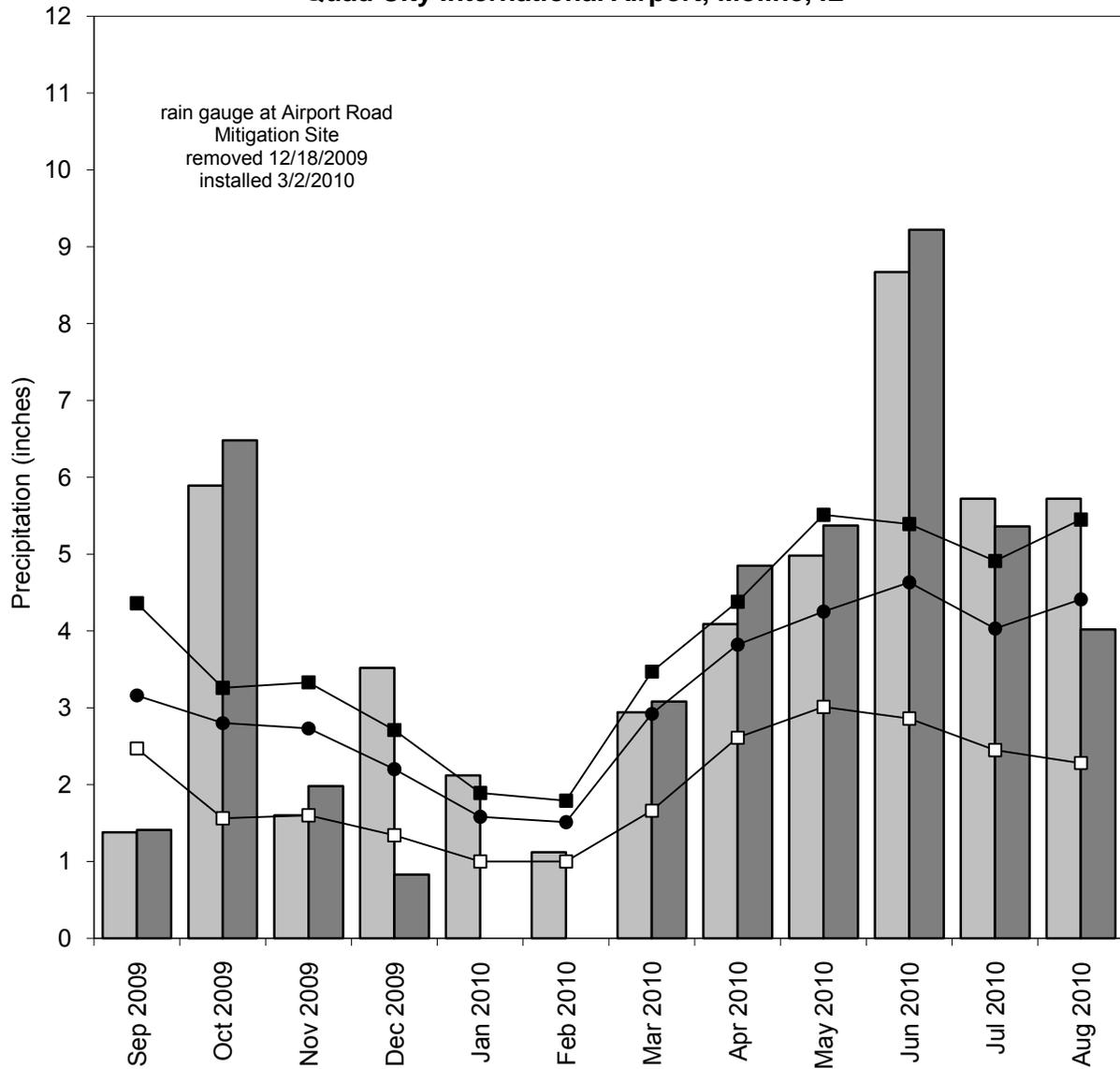


Milan Beltway, Rock Island Wetland Mitigation Site September 1, 2009 through August 31, 2010

Water-Level Elevations at Staff Gauges and Data Loggers in East Ditch



**Milan Beltway, Rock Island
Wetland Mitigation Site
September 2009 through August 2010
Total Monthly Precipitation Recorded on Site and at the
Quad City International Airport, Moline, IL**



- monthly precipitation recorded at Moline, IL (MRCC)
- monthly precipitation recorded on site by ISGS
- 1971-2000 monthly 30% above average threshold at Moline, IL (NWCC)
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- 1971-2000 monthly 30% below average threshold at Moline, IL (NWCC)

Graph last updated September 29, 2010