

**FREEPORT BYPASS WEST  
FORMER WEBER PROPERTY  
WETLAND MITIGATION SITE**

**ISGS #79**

US 20

FAP 301

Sequence #10487

Stephenson County, near Freeport, Illinois

**Primary Project Manager: Eric T. Plankell**

**Secondary Project Manager: not assigned**

**SITE HISTORY**

- November 2008: ISGS installed a pre-construction monitoring network.
- April 2009: ISGS was tasked by IDOT to provide a plan for obtaining borrow and creating wetlands at the site.
- September 2009: ISGS provided IDOT with plans for the borrow and wetland.
- September 2010: IDOT District 2 requested revised plans for wetland creation only. Plans were provided by ISGS and approved by IDOT, and wetland construction was started.

**WETLAND HYDROLOGY CALCULATION FOR 2010**

The area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the 2010 growing season is estimated to be 5.4 ha (13.4 ac) out of a total site area of 5.8 ha (14.3 ac). The area that satisfied wetland hydrology criteria for greater than 12.5% of the 2010 growing season is estimated to be 3.2 ha (8.0 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, it is estimated that 4.1 ha (10.1 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 Freeport, Illinois, is April 13, and the season lasts 183 days; 5% of the growing season is 9 days, and 12.5% of the growing season is 23 days. According to methods outlined in the 2010 Midwest Region supplement, it is estimated that March 16 was the starting date of the 2010 growing season based on soil temperatures observed at the adjacent Freeport Bypass West Wetland Mitigation Site 6W.
- Regional precipitation for the monitoring period, as recorded at the Freeport Wastewater Plant in Illinois, was 141% of normal, and was 103% of normal for the period March through May 2010. More than 13 inches of precipitation were recorded at the weather station in July 2010, and resulted in the largest flooding event to occur along the Pecatonica River during the 2010 growing season. This flood peaked on July 24, and along with additional precipitation through early August, resulted in the largest observed areas that satisfied wetland hydrology criteria for the 2009-2010 monitoring period.
- In 2010, water levels measured in all monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season. Water levels measured in wells 2S, 5S, and 6S satisfied wetland hydrology criteria for greater than 12.5% of the growing season. According to the 2010 Midwest Region supplement, wells 2S, 3S, 5S, and 6S

also satisfied wetland hydrology criteria for 14 or more consecutive days of the growing season. (Note: Well 6S is located outside the site boundary, and is not considered in the areas satisfying wetland hydrology discussed above).

- Water-level records for Gauge D indicated water levels on the Pecatonica River were sustained at elevations of 231.52 m (759.58 ft) and 230.39 m (755.87 ft), respectively, for greater than 5% of the growing season and for greater than 12.5% of the growing season. Per the 2010 Midwest Region supplement, water levels of 230.91m (757.58 ft) were sustained on the Pecatonica River for 14 or more consecutive days of the growing season.

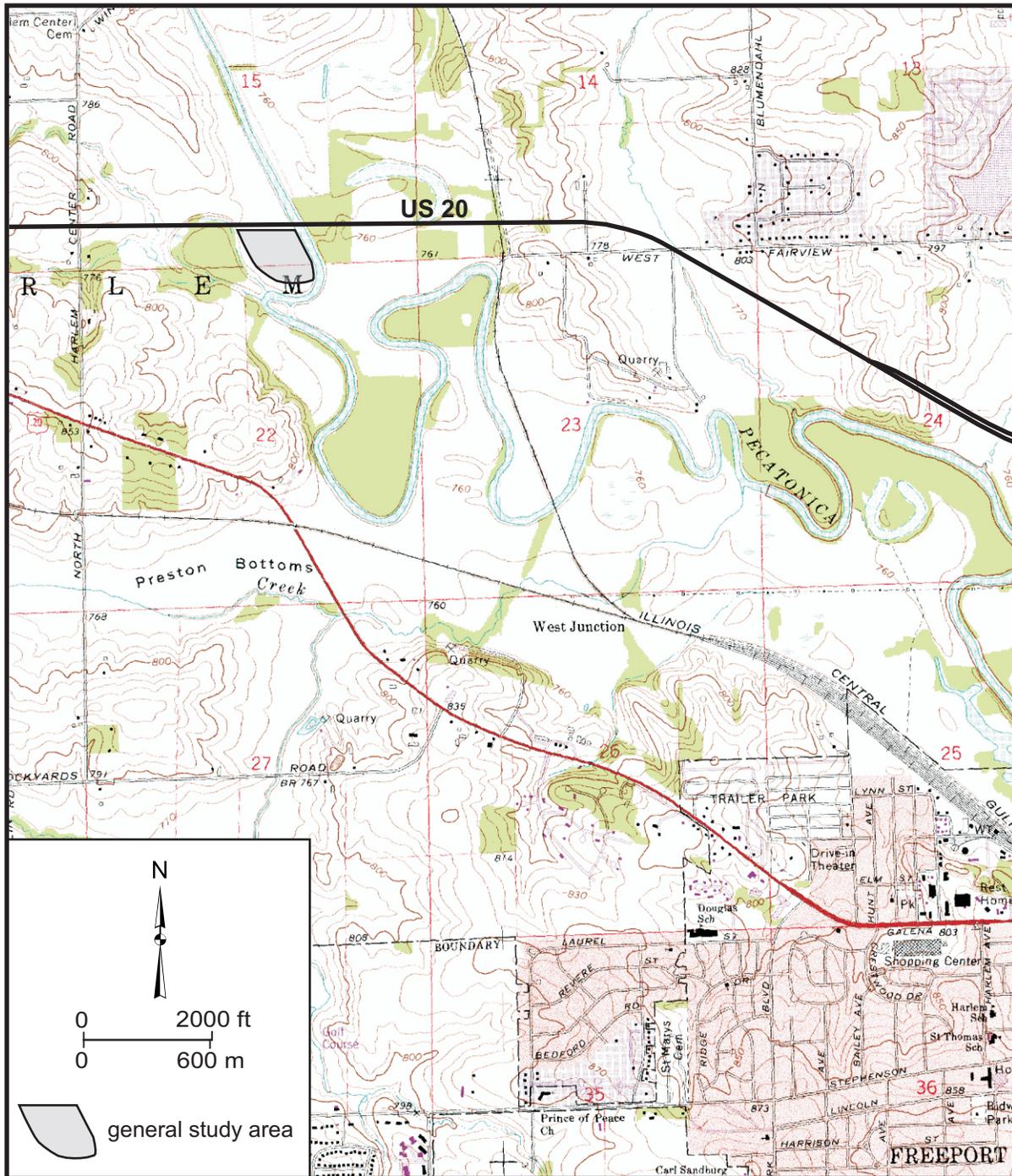
#### PLANNED FUTURE ACTIVITIES

- ISGS will install a new monitoring network and generate an “as-built” topographic map of the site following completion of construction activities.
- Monitoring will continue until no longer required by IDOT.

# Freeport Bypass West Former Weber Property Wetland Mitigation Site (FAP 301 [US 20])

## General Study Area and Vicinity

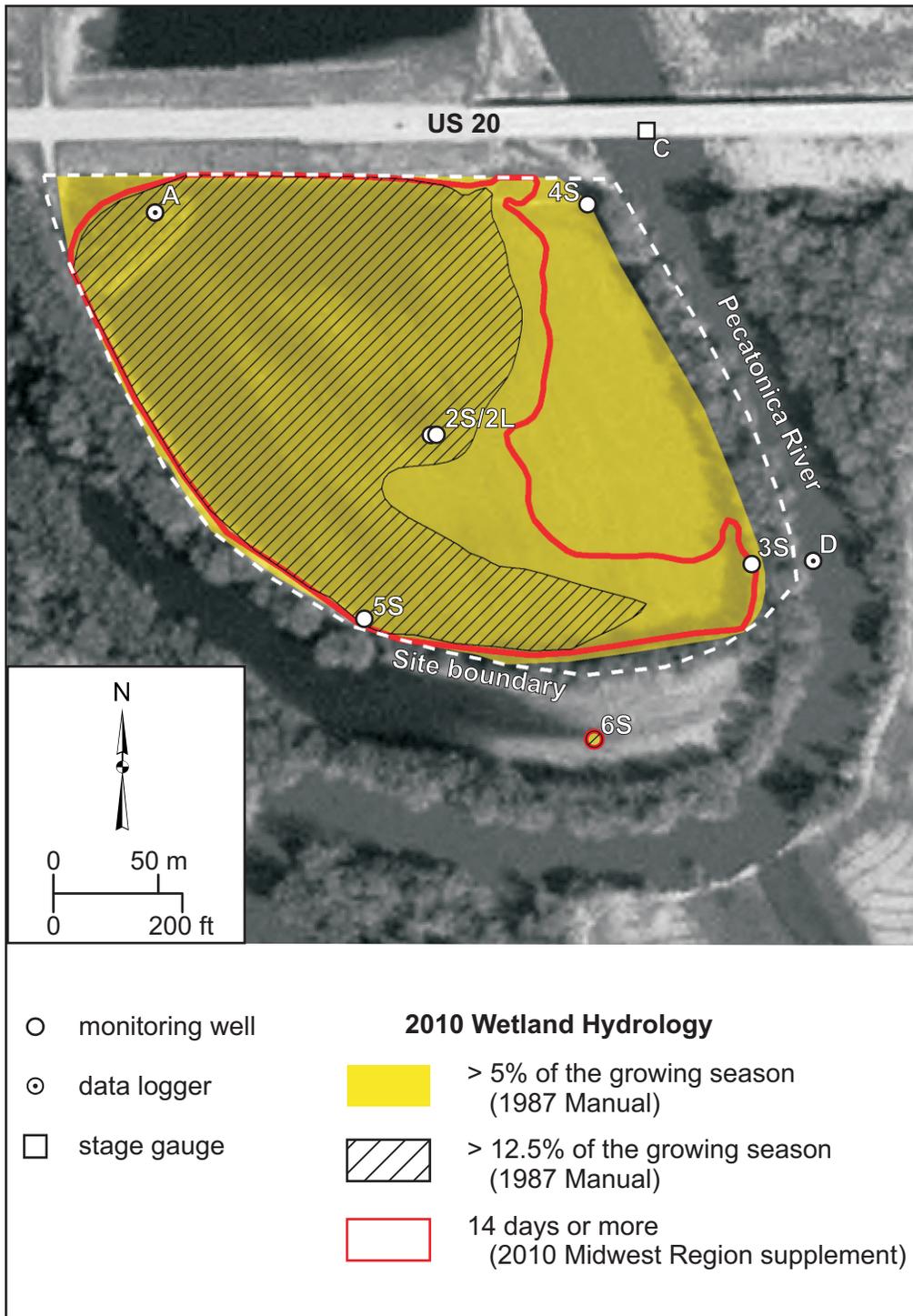
from the USGS Topographic Series, Freeport West, IL, 7.5-minute Quadrangle  
(USGS 1971, photorevised 1978). Contour interval is 10 feet.



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Former Weber Property Wetland Mitigation Site  
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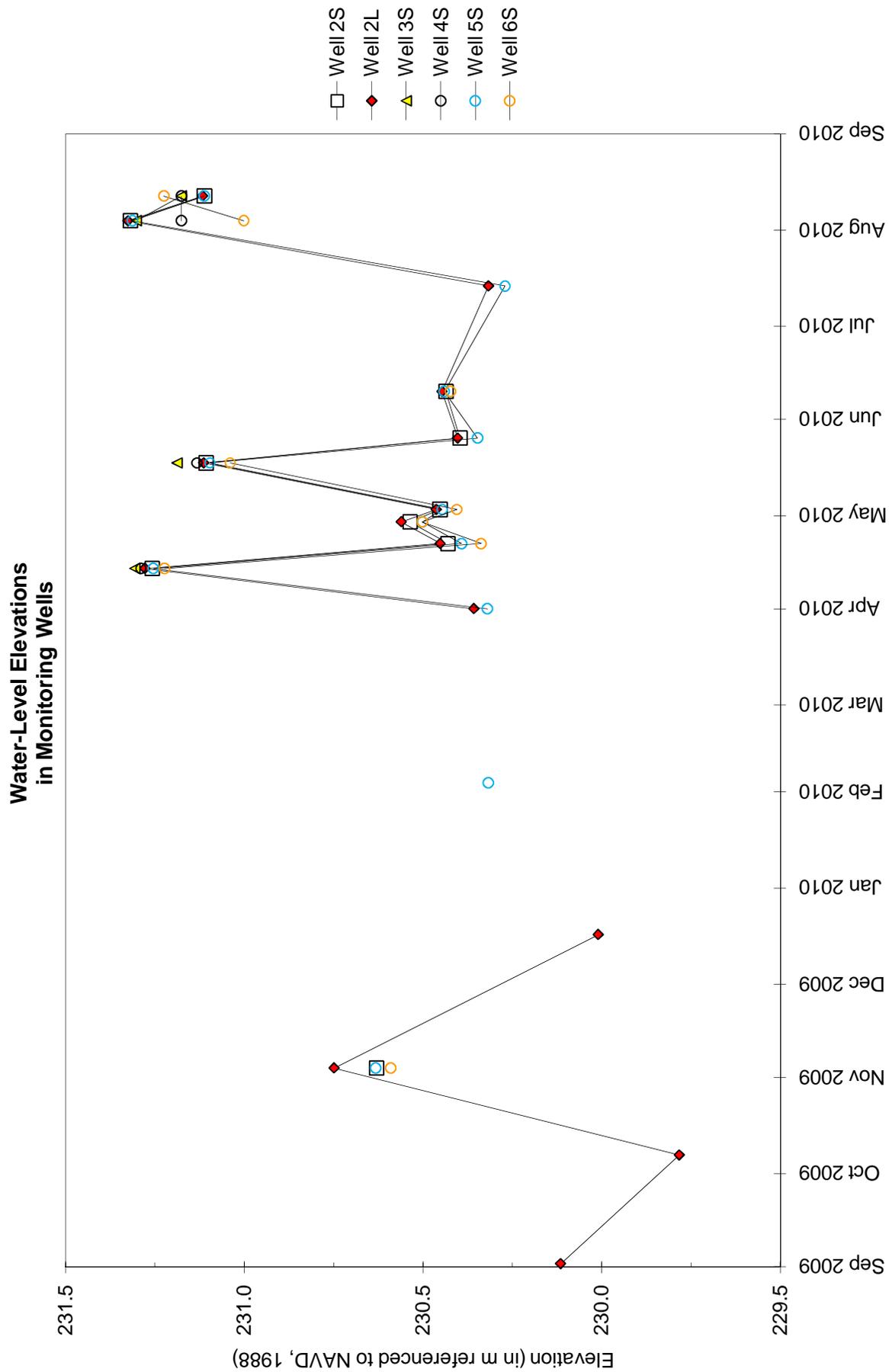
**Estimated Areal Extent of 2010 Wetland Hydrology  
September 1, 2009 through August 31, 2010**

Map based on USGS digital orthophotograph, Freeport West, NE quarter-quadrangle (ISGS 1998)

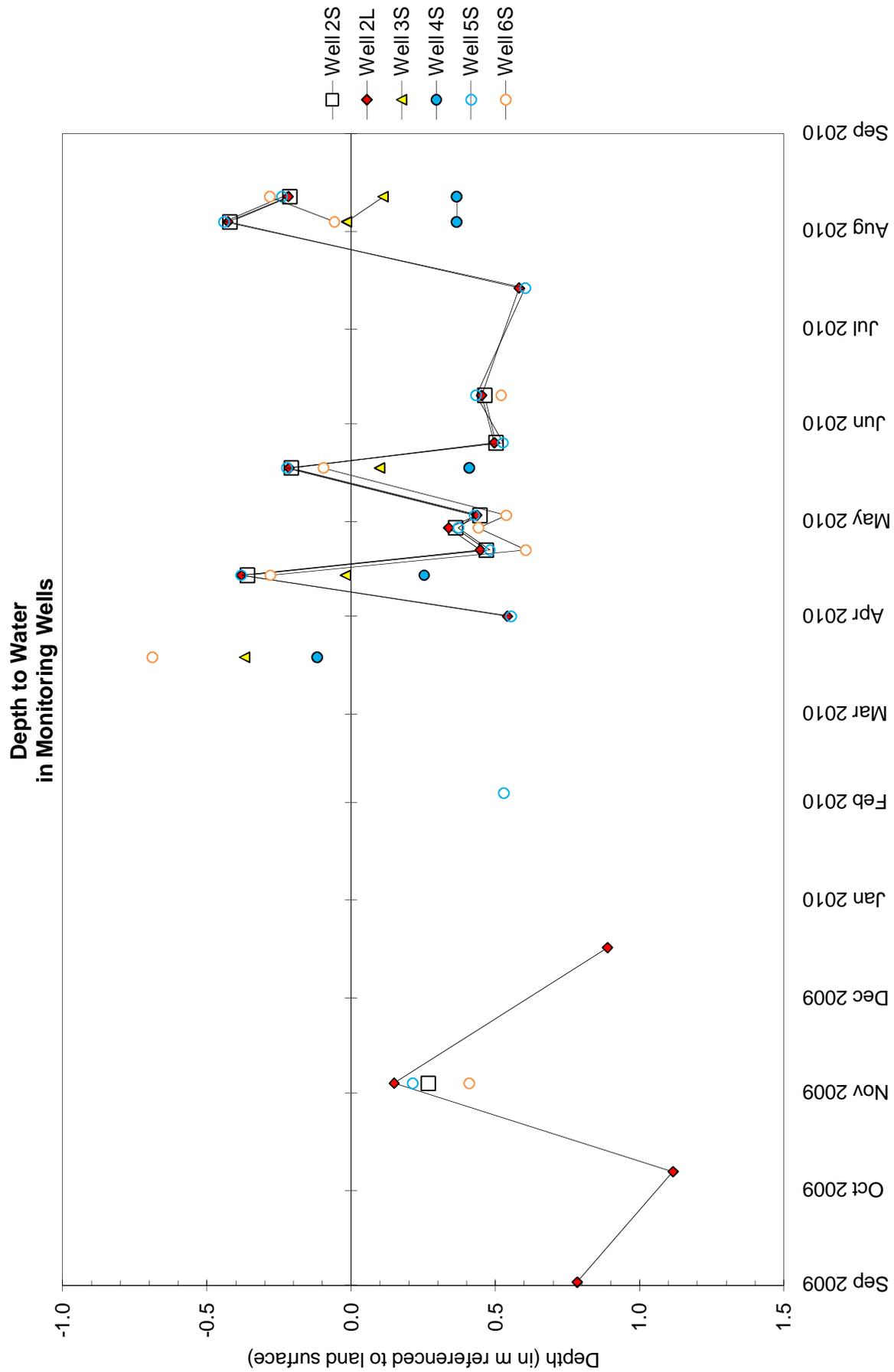


# Freeport Bypass West, Former Weber Property Wetland Mitigation Site

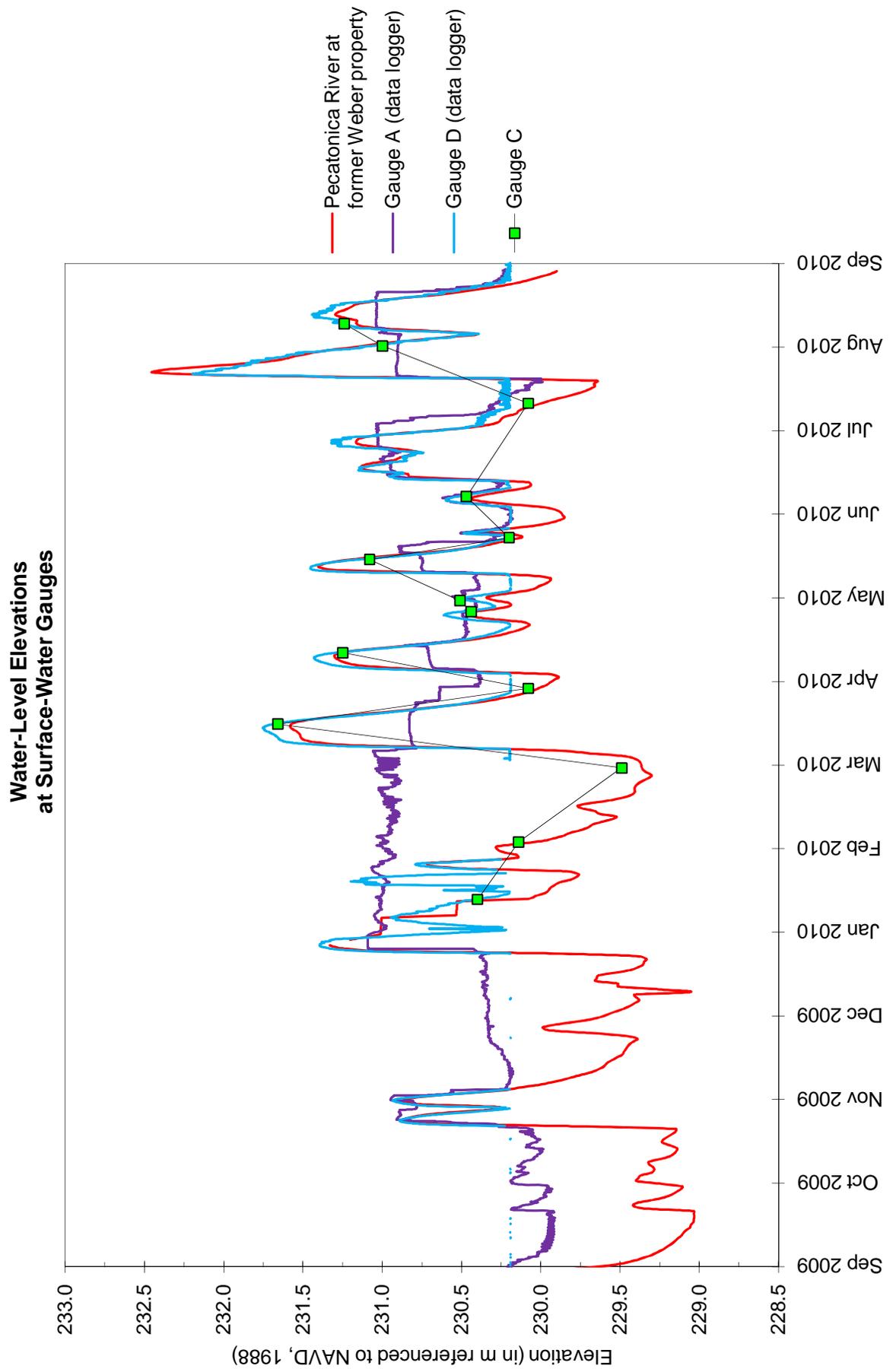
## September 1, 2009 through August 31, 2010



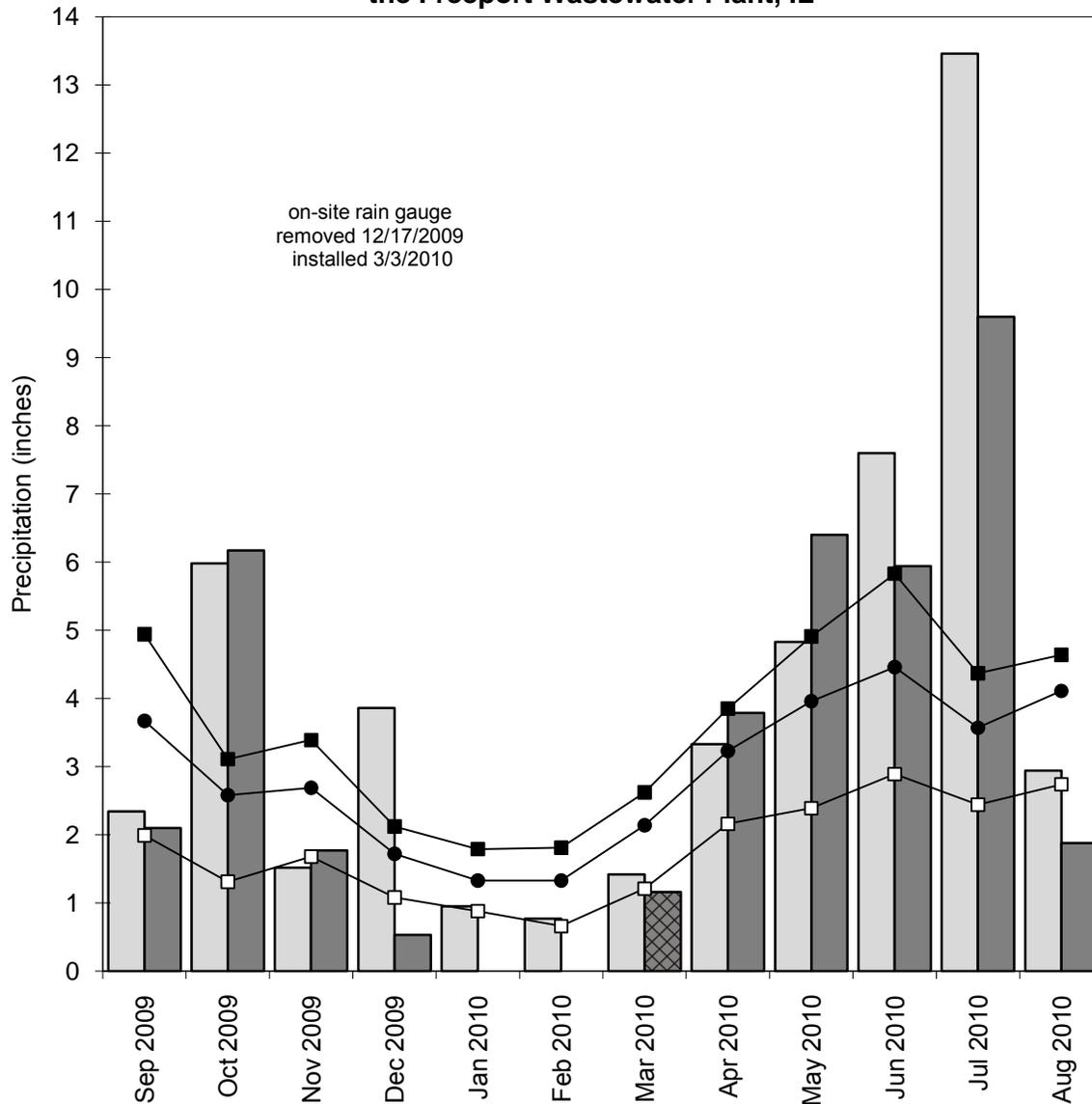
**Freeport Bypass West, Former Weber Property Wetland Mitigation Site**  
**September 1, 2009 through August 31, 2010**



# Freeport Bypass West, Former Weber Property Wetland Mitigation Site September 1, 2009 through August 31, 2010



**Freeport Bypass West**  
**Former Weber Property Wetland Mitigation Site**  
**September 2009 through August 2010**  
**Total Monthly Precipitation Recorded at Site 6W and at**  
**the Freeport Wastewater Plant, IL**



- monthly precipitation recorded at Freeport, IL (MRCC)
- monthly precipitation recorded at Site 6W by ISGS
- ▨ data incomplete
- 1971-2000 monthly 30% above average threshold at Freeport, IL (NWCC)
- 1971-2000 monthly average precipitation at Freeport, IL (NWCC)
- 1971-2000 monthly 30% below average threshold at Freeport, IL (NWCC)

Graph last updated September 29, 2010