**PECATONICA RIVER FOREST PRESERVE** **ISGS #73**
**WETLAND MITIGATION SITE**
Harrison Avenue Extension
Sequence #3746
Winnebago County, near Pecatonica, Illinois
**Primary Project Manager: Eric T. Plankell**
**Secondary Project Manager: Steven E. Benton**

SITE HISTORY

- April 2005: ISGS began on-site monitoring with the installation of a monitoring network.

- March 2010: IDOT notified the ISGS to discontinue monitoring at this site. However, monitoring was continued through September 2010 in order to study differences between the 2010 Midwest Region supplement and the 1987 Manual.

WETLAND HYDROLOGY CALCULATION FOR 2010

No estimate of the area satisfying wetland hydrology criteria is given for the 2009-2010 monitoring period due to IDOT ending monitoring in March 2010.

- According to the MRCC, the median date that the growing season begins in nearby 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 19 was the starting date of the 2010 growing season based on vegetation growth and development at the site.

- 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 site on July 24.

- In 2010, water levels measured in all monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season. Water levels in wells 1S, 2S, 4S, 6SR, 7S, 8SR, 9S, 10S, 11S, 13S, 17S, and 19S satisfied wetland hydrology criteria for greater than 12.5% of the growing season. According to the 2010 Midwest Region supplement, all wells except for well 16S satisfied wetland hydrology criteria for 14 or more consecutive days of the growing season.

- Surface-water levels at data loggers C and H indicated inundation at or above 225.82 m (740.88 ft) and 225.49 m (739.80 ft), respectively, for greater than 5% of the growing season, and inundation at or above 225.01 m (738.22 ft) and 225.14 m (738.65 ft) for greater than 12.5% of the growing season. Based on the 2010 Midwest Region supplement, surface-water levels at data loggers C and H indicated inundation at or above 225.52 m (739.90 ft) and 225.48 m (739.76 ft), respectively, for 14 or more consecutive days of the growing season. Water levels exceeded the sensor ranges of data loggers C and H for greater than 5% of the growing season and of data logger H for 14 or more consecutive days of the growing season. Therefore, the water levels recorded by these data loggers for these time periods reflect the minimum water level during those periods.

ADDITIONAL INFORMATION

- A beaver dam, first discovered in April 2009 and located approximately 140 m (460 ft) north of the Pecatonica River in the western ditch, is helping to sustain water levels in the northern mitigation area and along the western edge of the site (including wells 1S, 2S, 3S, 4S, 5S, 6S, 14S, 17S, 18S, 19S, and 20S) for longer than has been typically observed in previous monitoring years.

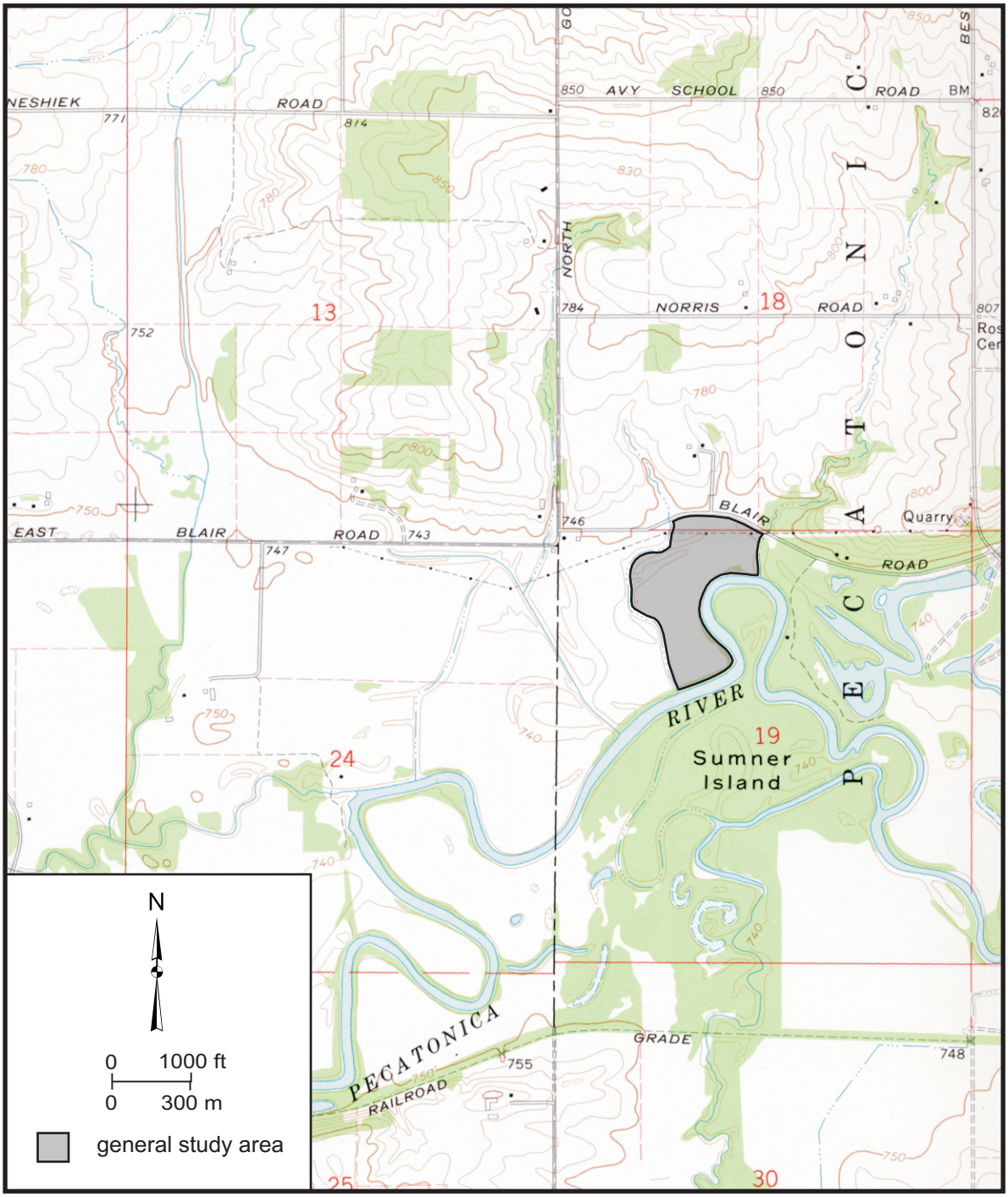
PLANNED FUTURE ACTIVITIES

- The site is scheduled to be decommissioned following the end of the 2010 growing season.

# Pecatonica River Forest Preserve Wetland Mitigation Site (Harrison Avenue Extension)

## General Study Area and Vicinity

from the USGS Topographic Series, Ridott, IL, 7.5-minute Quadrangle (USGS 1971)
contour interval is 10 feet

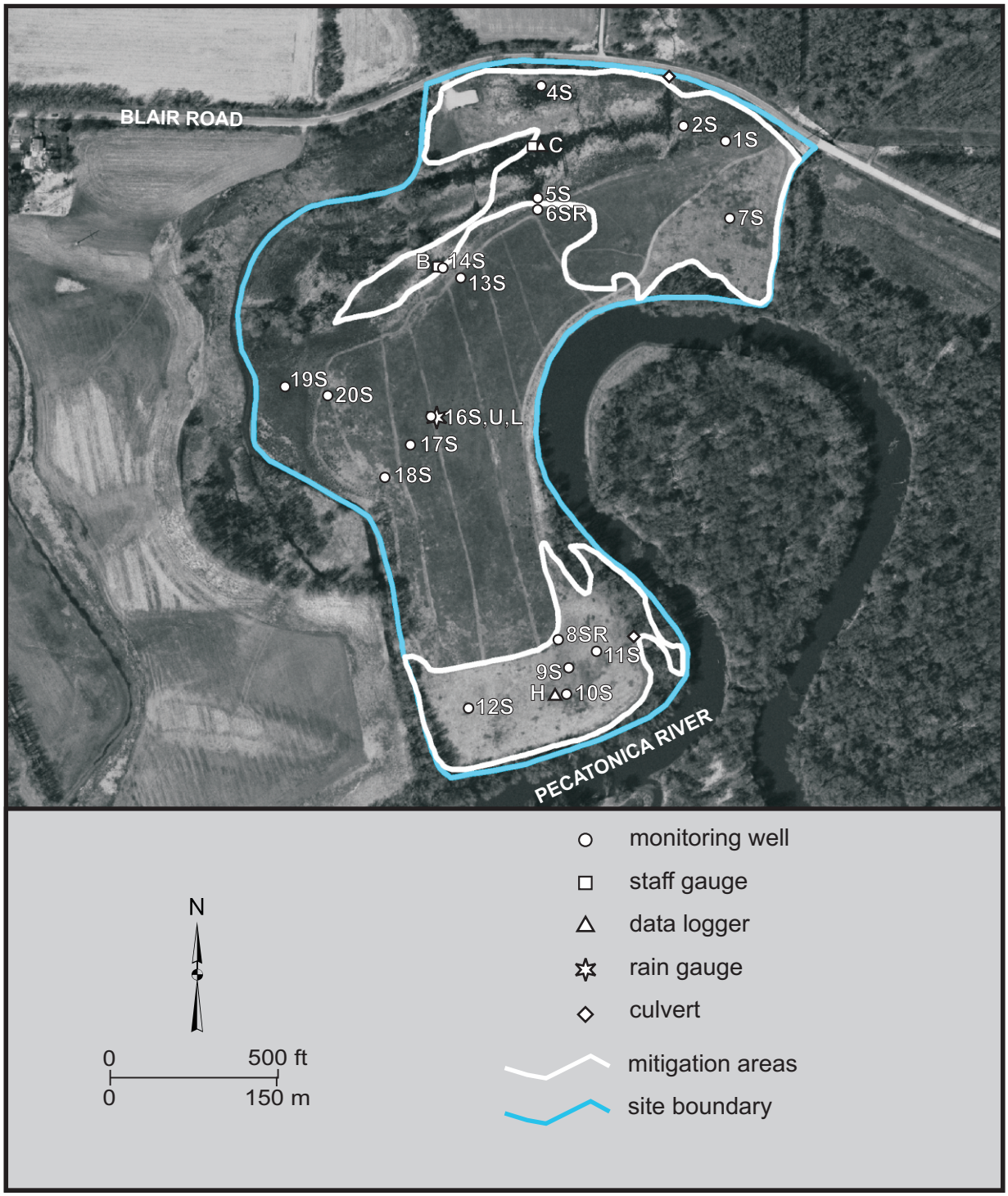


# Pecatonica River Forest Preserve Wetland Mitigation Site (Harrison Avenue Extension)

## ISGS Monitoring Network and Mitigation Areas

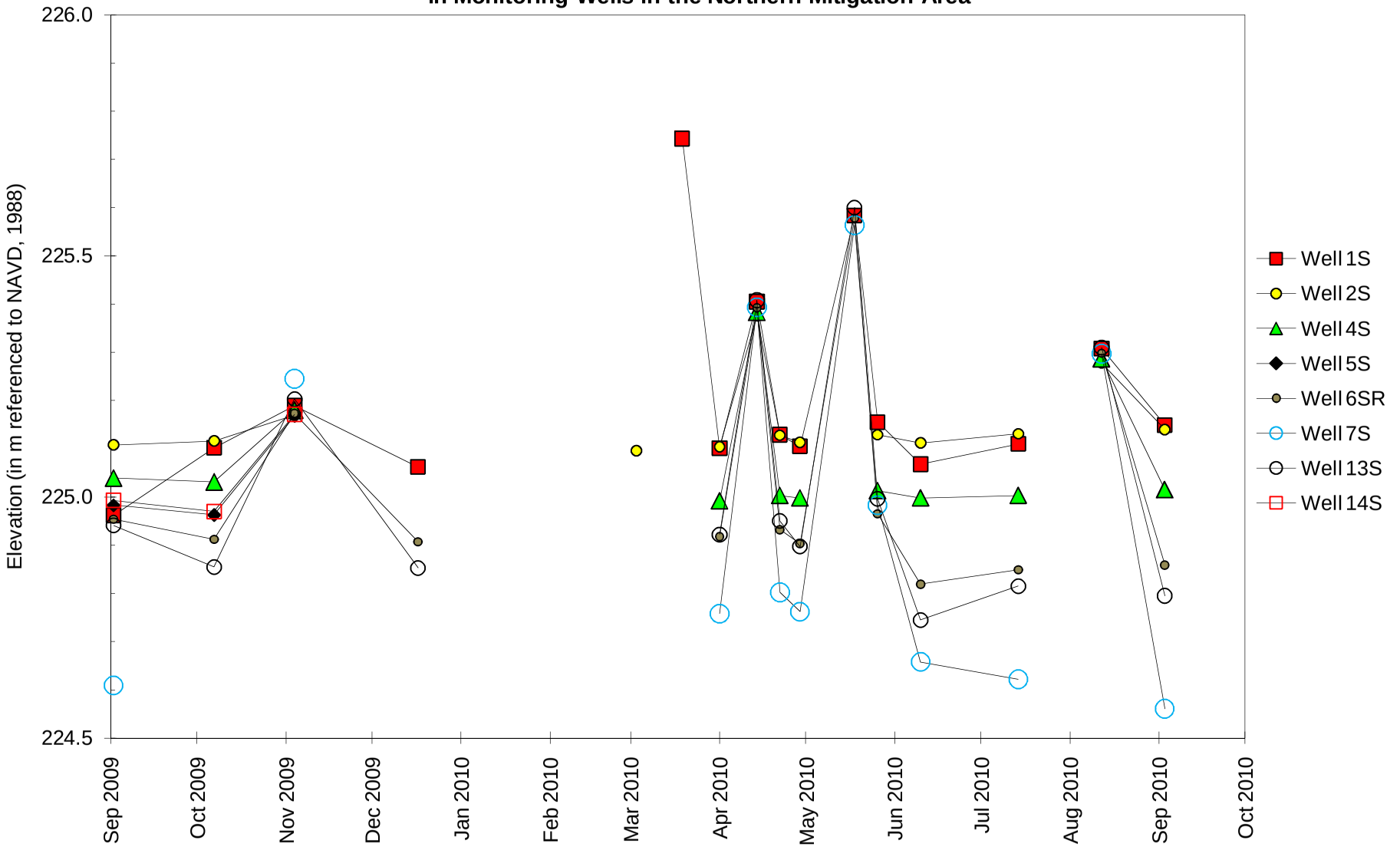
### September 1, 2009 through October 1, 2010

Map based on USGS digital orthophotograph Ridott, NE quarter-quadrangle
Produced from 4/8/99 aerial photography (ISGS 2005)



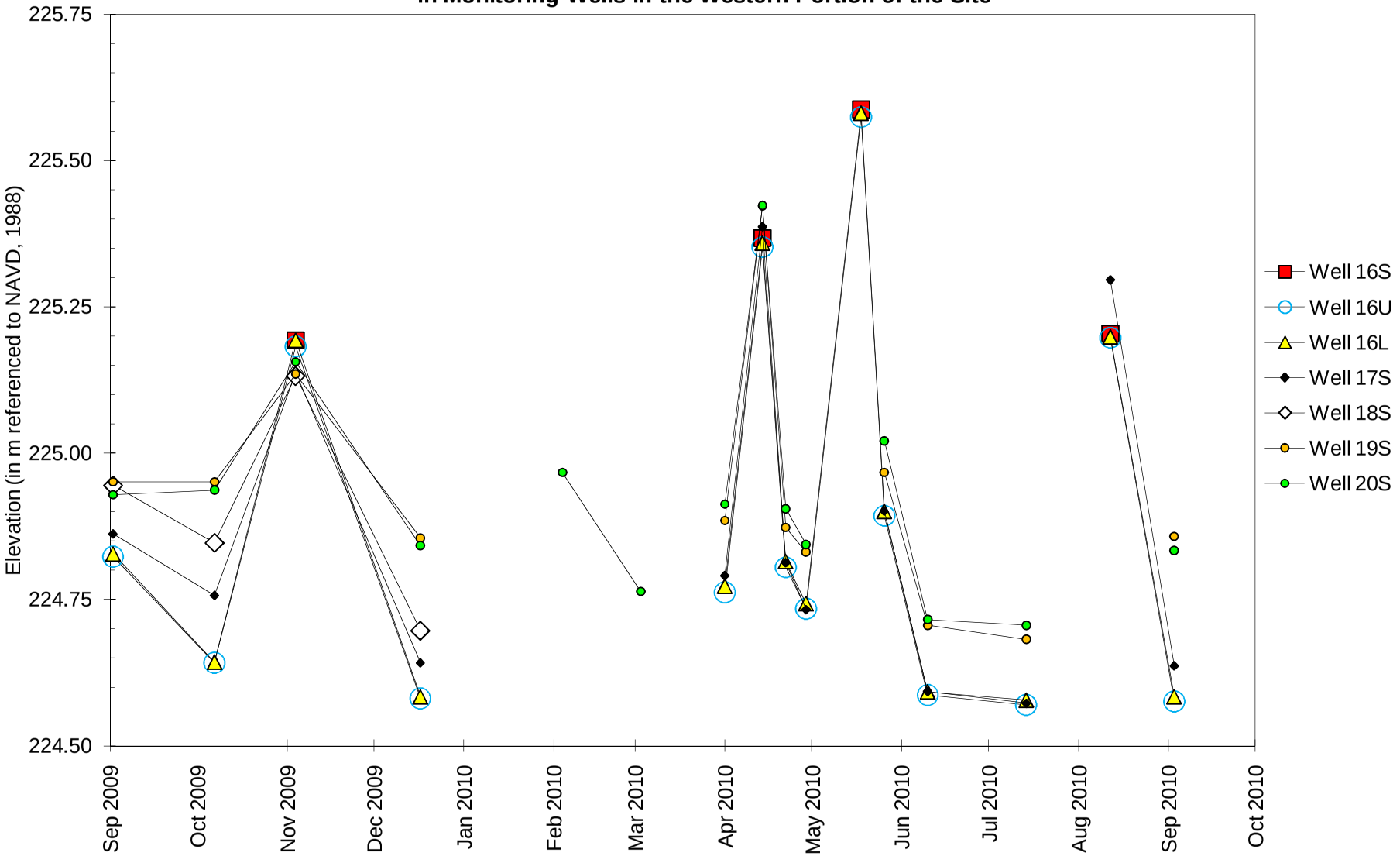
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Water-Level Elevations
### in Monitoring Wells in the Northern Mitigation Area



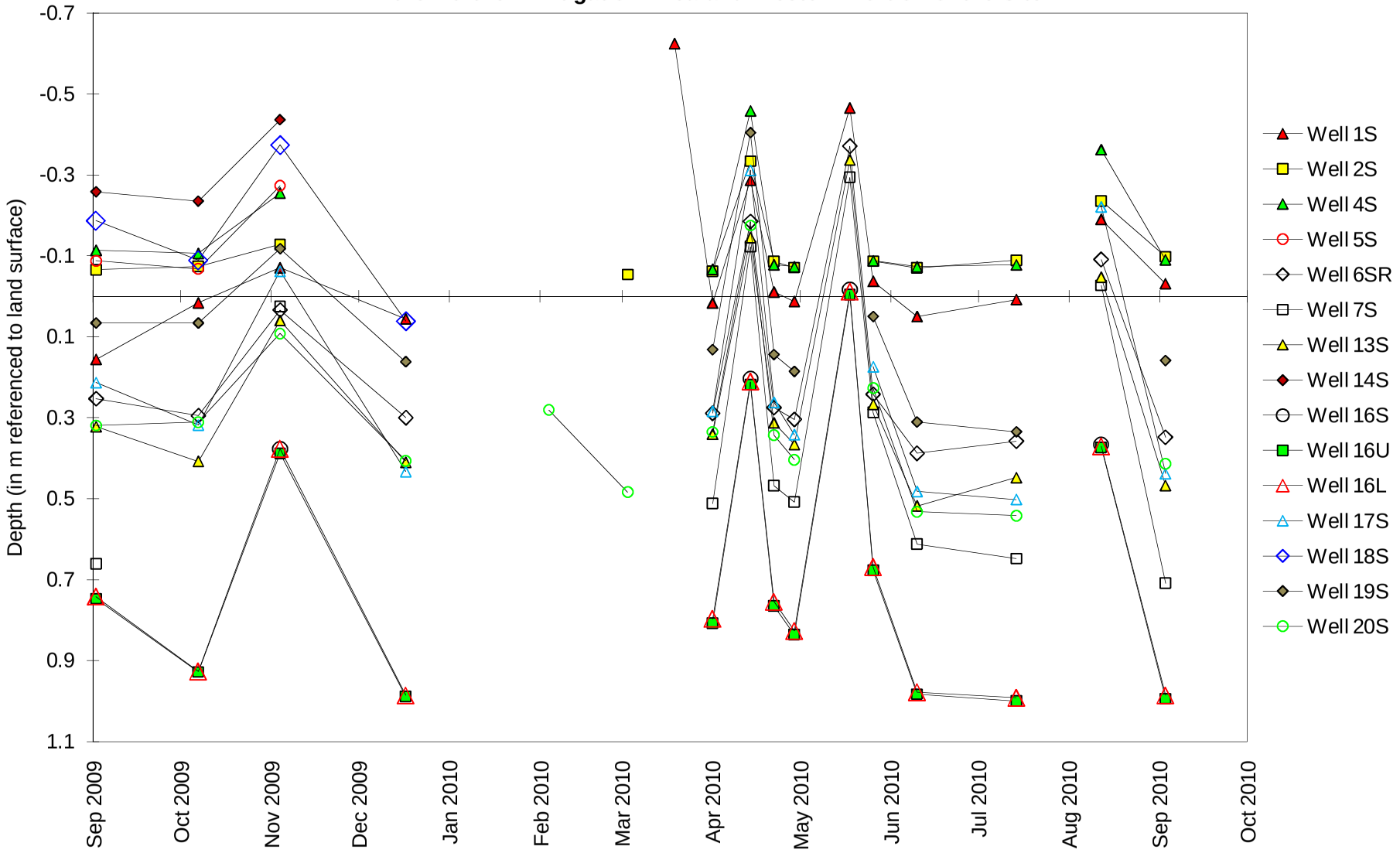
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Water-Level Elevations
### in Monitoring Wells in the Western Portion of the Site



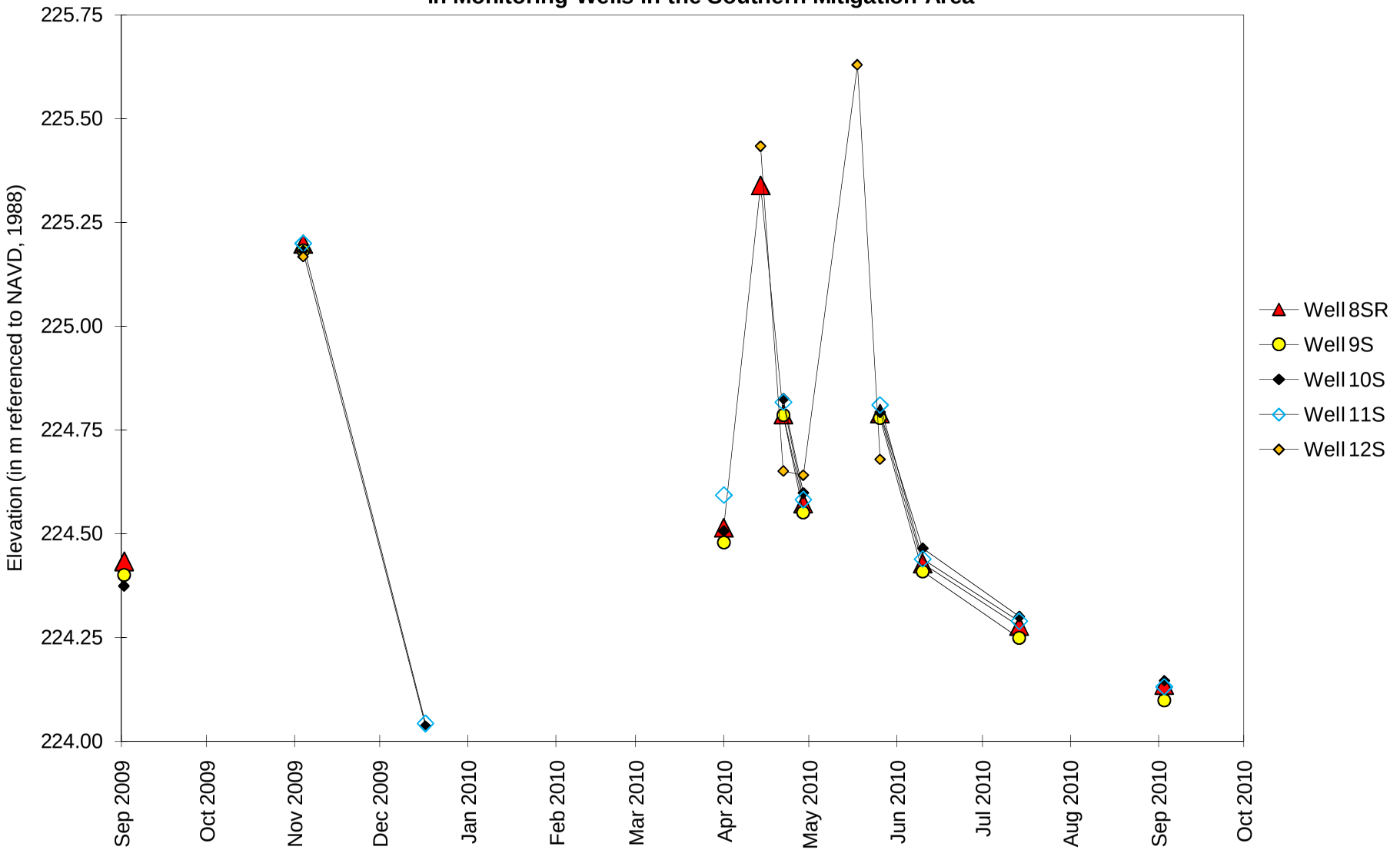
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Depth to Water in Monitoring Wells
### in the Northern Mitigation Area and Western Portion of the Site



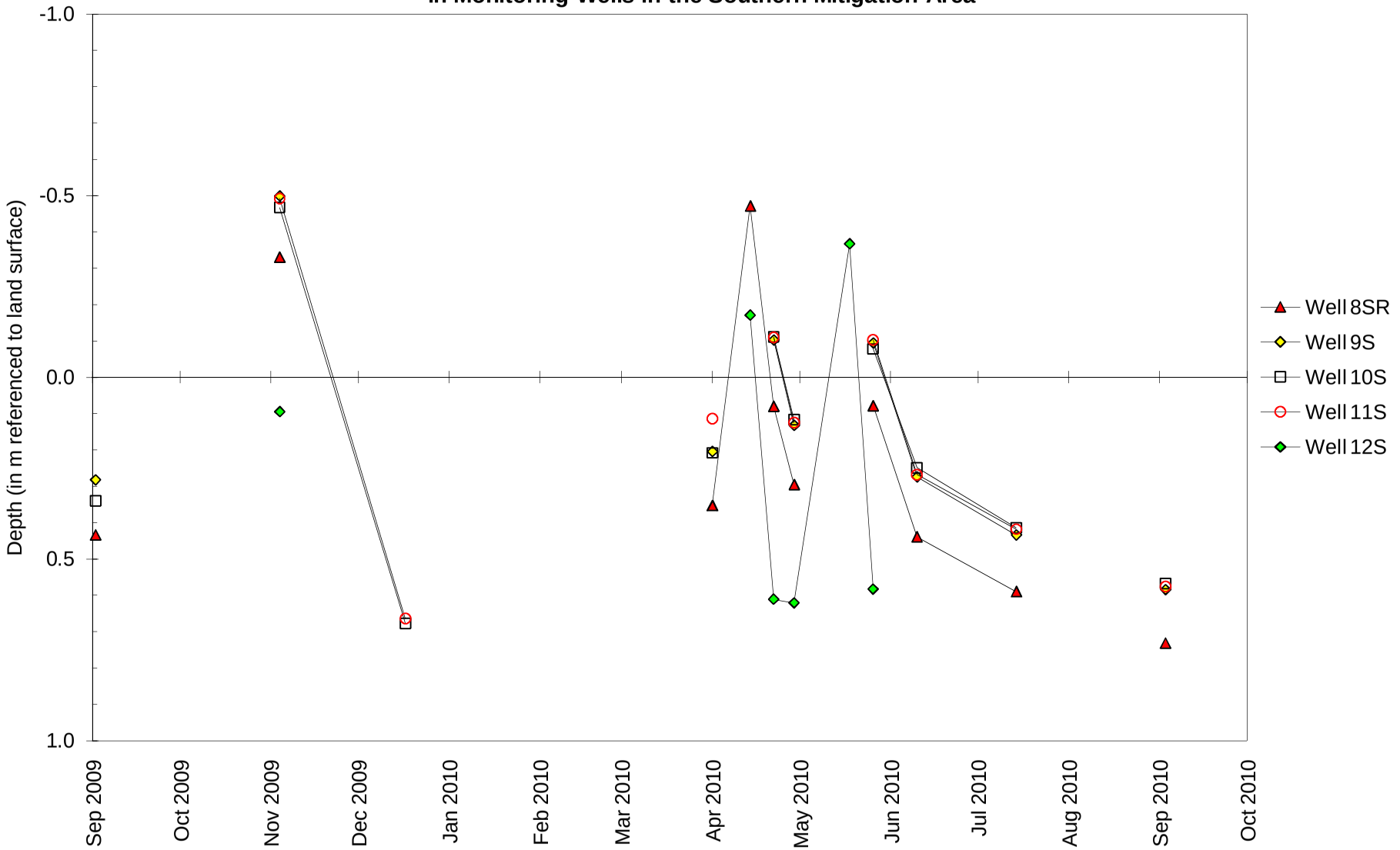
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Water-Level Elevations
### in Monitoring Wells in the Southern Mitigation Area



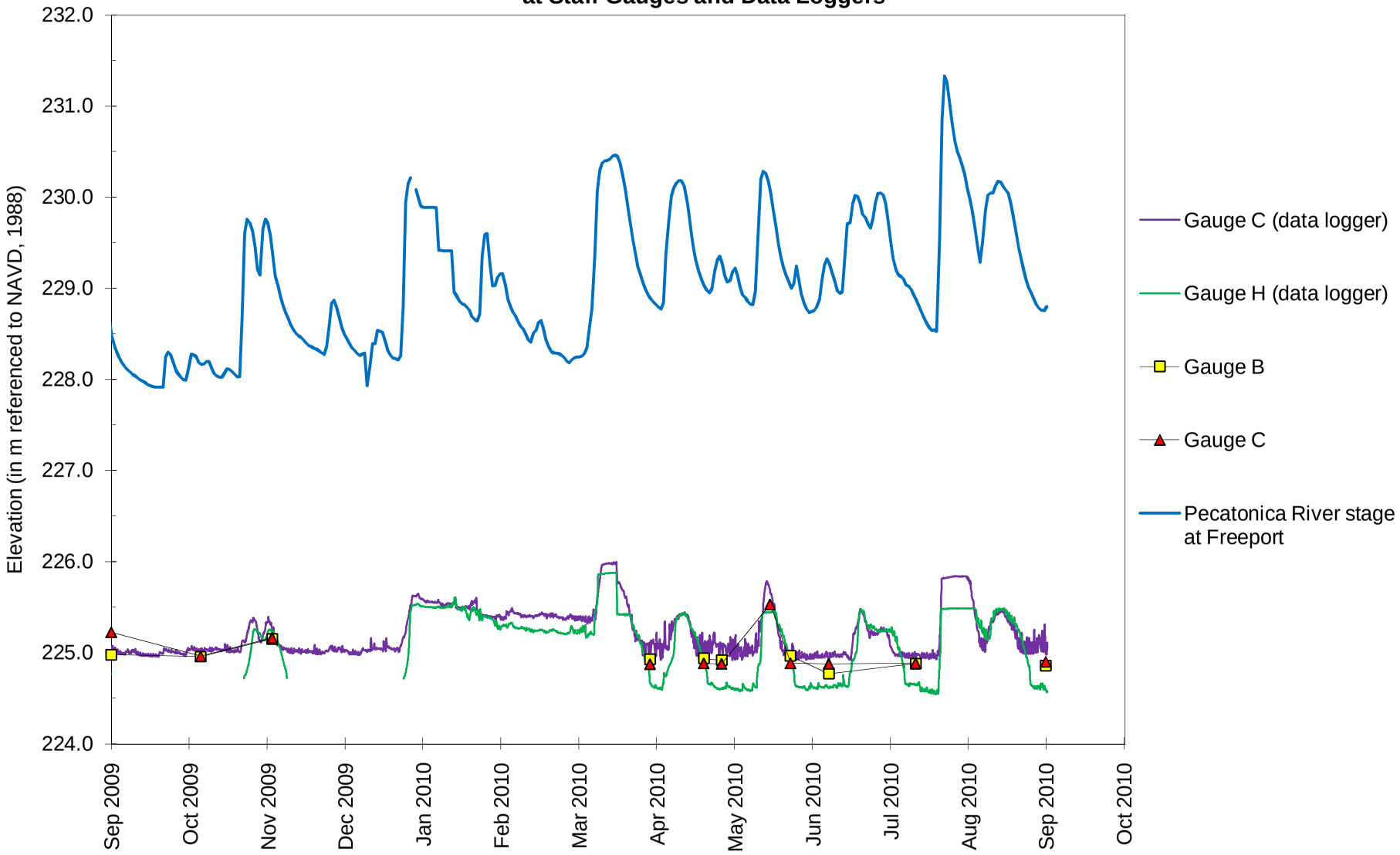
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Depth to Water
### in Monitoring Wells in the Southern Mitigation Area



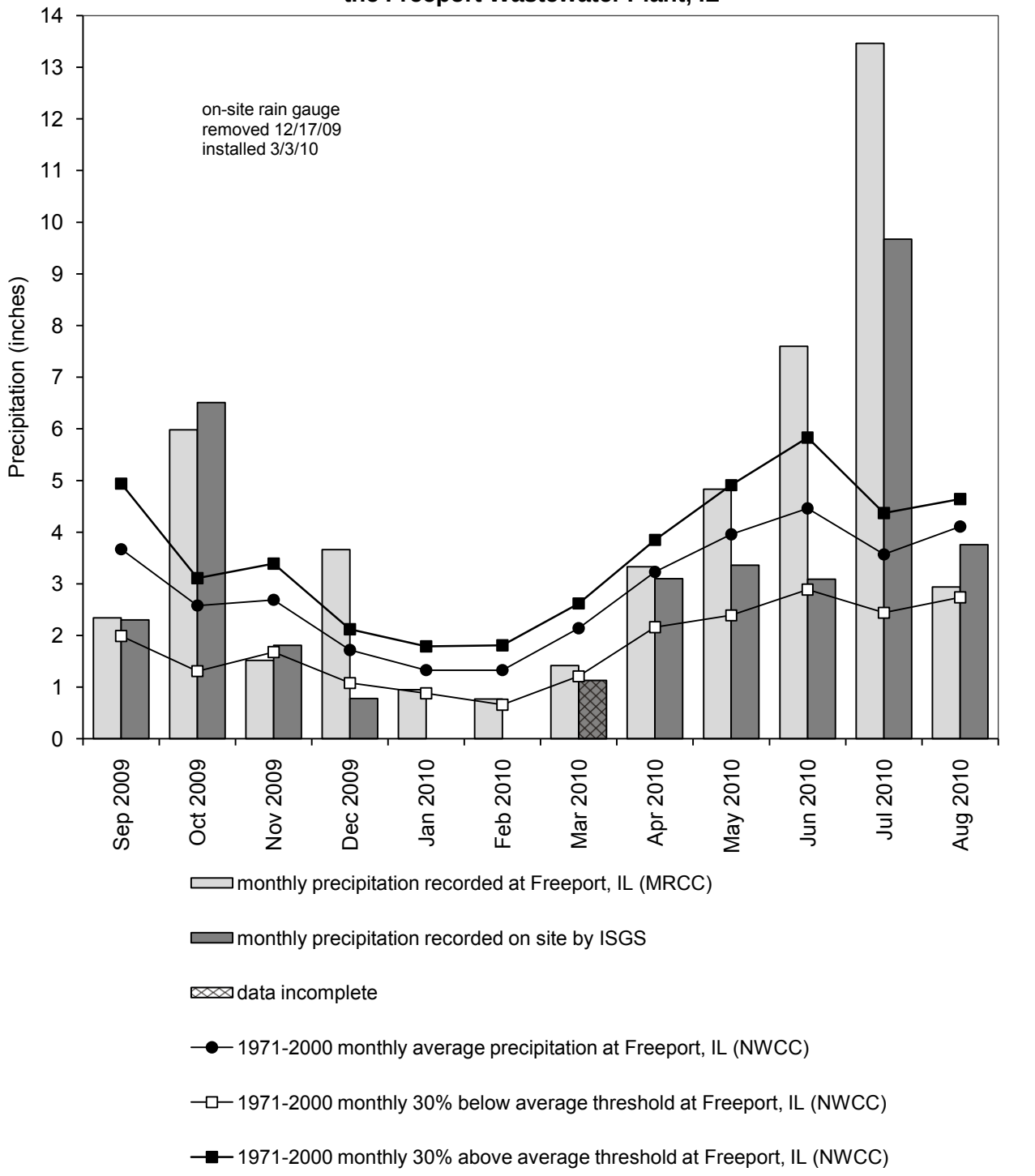
# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 1, 2009 through October 1, 2010

### Water-Level Elevations
### at Staff Gauges and Data Loggers



# Pecatonica River Forest Preserve Wetland Mitigation Site
## September 2009 through August 2010

### Total Monthly Precipitation Recorded on Site and at the Freeport Wastewater Plant, IL




Graph last updated September 29, 2010