

**SUGAR CAMP CREEK
WETLAND COMPENSATION SITE**

ISGS #74

FAP 312 and Wetland and Stream Mitigation Bank
Sequence #9282

Franklin County, Northern Township, Illinois

Primary Project Manager: Geoffrey E. Pociask

Secondary Project Manager: not assigned

SITE HISTORY

- December 2004: ISGS submitted an initial site evaluation report to IDOT.
- Spring 2005: IDOT tasked ISGS to conduct a Level II hydrogeologic characterization of the site and to prepare a draft wetland banking instrument for the site. Water-level monitoring was initiated in March 2005.
- August 2006: ISGS submitted a draft wetland banking prospectus to IDOT.
- March 2007: ISGS submitted the Level II hydrogeologic characterization report to IDOT (ISGS Open-File Series 2007–02).
- June 2009: Wetland and stream mitigation banking instrument approved by the Interagency Review Team.

WETLAND HYDROLOGY CALCULATION FOR 2009

We estimate that 36.8 ha (90.9 ac) of the total site area of 50.9 ha (125.7 ac), including the FAP 312 wetland compensation site, satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2009, whereas 33.4 ha (82.5 ac) satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Within the 8.3-ha (20.5-ac) FAP 312 wetland compensation site, 8.3 ha (20.4 ac) satisfied wetland hydrology criteria for greater than 5% of the growing season, of which 7.8 ha (19.4 ac) also satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Using new guidance proposed by the U.S. Army Corps of Engineers (2008), we estimate that 34.9 ha (86.2 ac) of the entire parcel and 7.8 ha (19.4 ac) of the FAP 312 wetland compensation site 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 Du Quoin, Illinois, is April 5 and the season lasts 207 days; 5% of the growing season is 10 days, and 12.5% of the growing season is 26 days. According to methods outlined in the Midwest Regional Supplement (U.S. Army Corps of Engineers 2008), we estimate that March 5 was the starting date of the 2009 growing season based on soil temperatures observed at the wetland compensation site.
- Total precipitation for the reporting period from September 2008 through August 2009 was 114% of normal. Drier than normal conditions prevailed in September and November 2008, in December 2008 through March 2009 and in June and August 2009. Precipitation was at or above normal in October 2008, and in April, May and July 2009.

- In 2009, all wells except for 25S satisfied wetland hydrology criteria for greater than 5% of the growing season, for 14 or more consecutive days during the growing season, and for greater than 12.5% of the growing season.
- Data from gauges A and F in Sugar Camp Creek indicated that 13 floods inundated large portions of the site during the 2009 growing season. Data from this data logger indicated that the duration of inundation from each of these floods was less than 5% of the growing season.
- Surface-water data from Gauge I in the FAP 312 mitigation area showed that water-level elevation was at or above 123.2 m (404.2 ft) for greater than 5% of the growing season, for 14 or more consecutive days during the growing season, and for greater than 12.5% of the growing season. Furthermore, surface-water data from Gauge J showed water levels at or above 123.5 m (405.2 ft) for greater than 5% of the growing season, for 14 or more consecutive days during the growing season, and for greater than 12.5% of the growing season. Gauge H, west of Sugar Camp Creek, was damaged during the reporting period and was not used for the wetland hydrology determination.

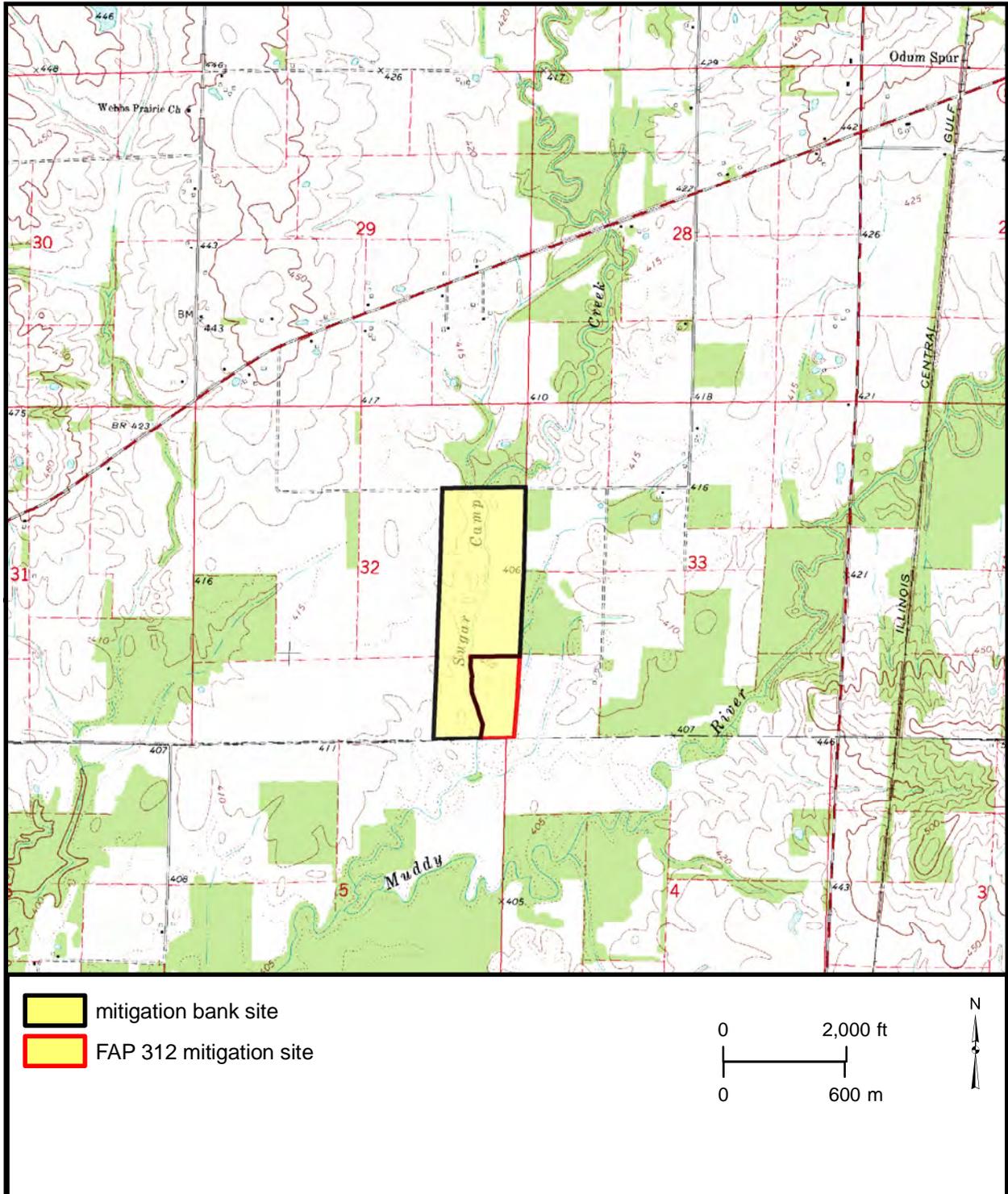
PLANNED FUTURE ACTIVITIES

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

Sugar Camp Creek Wetland Compensation Site (FAP 312 and Wetland and Stream Mitigation Bank)

General Study Area and Vicinity

from the USGS Topographic Series, Ewing, IL 7.5-minute Quadrangle (USGS 1974).
contour interval is 10 feet

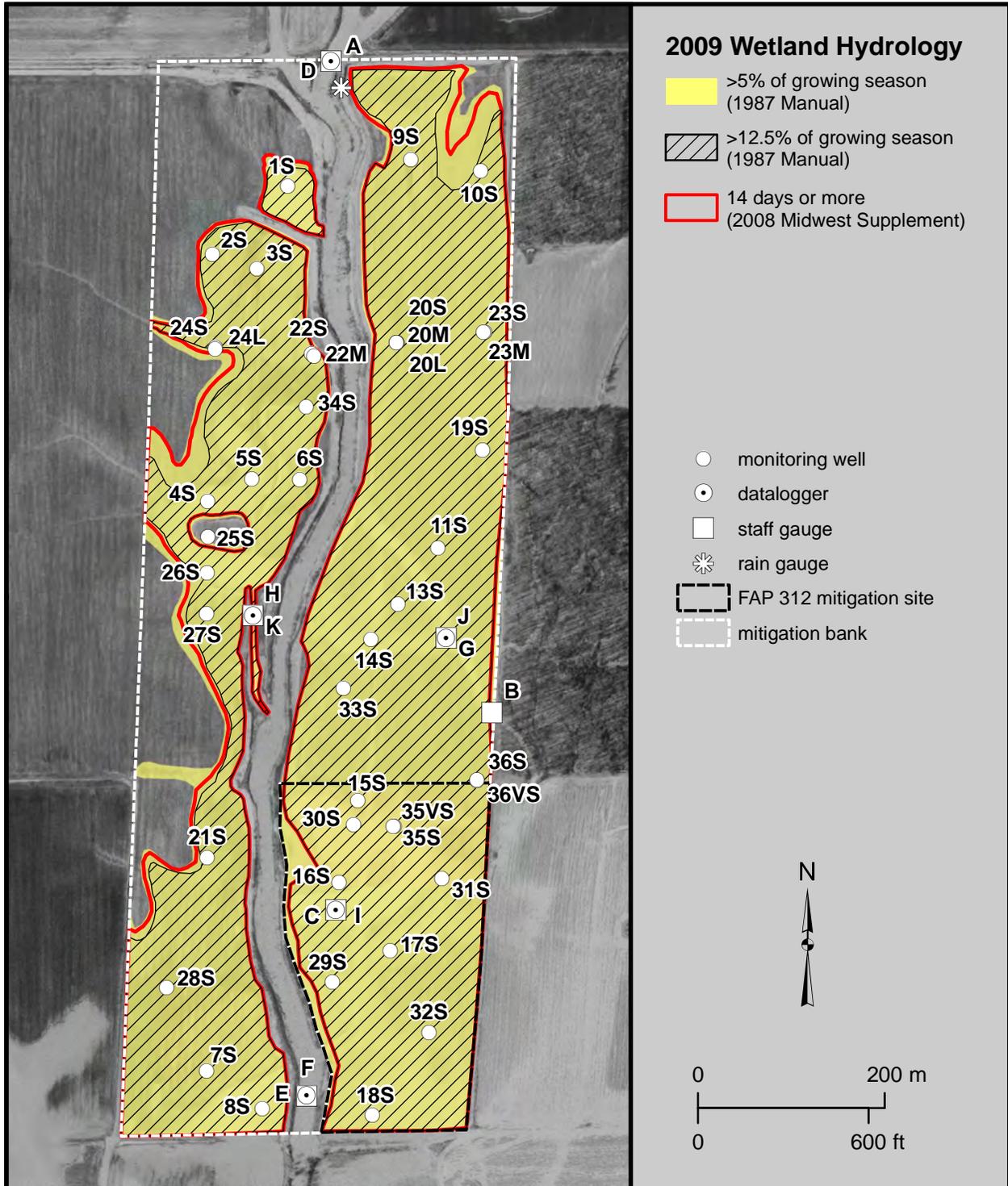


Sugar Camp Creek Wetland Compensation Site (FAP 312 and Proposed Wetland Mitigation Bank)

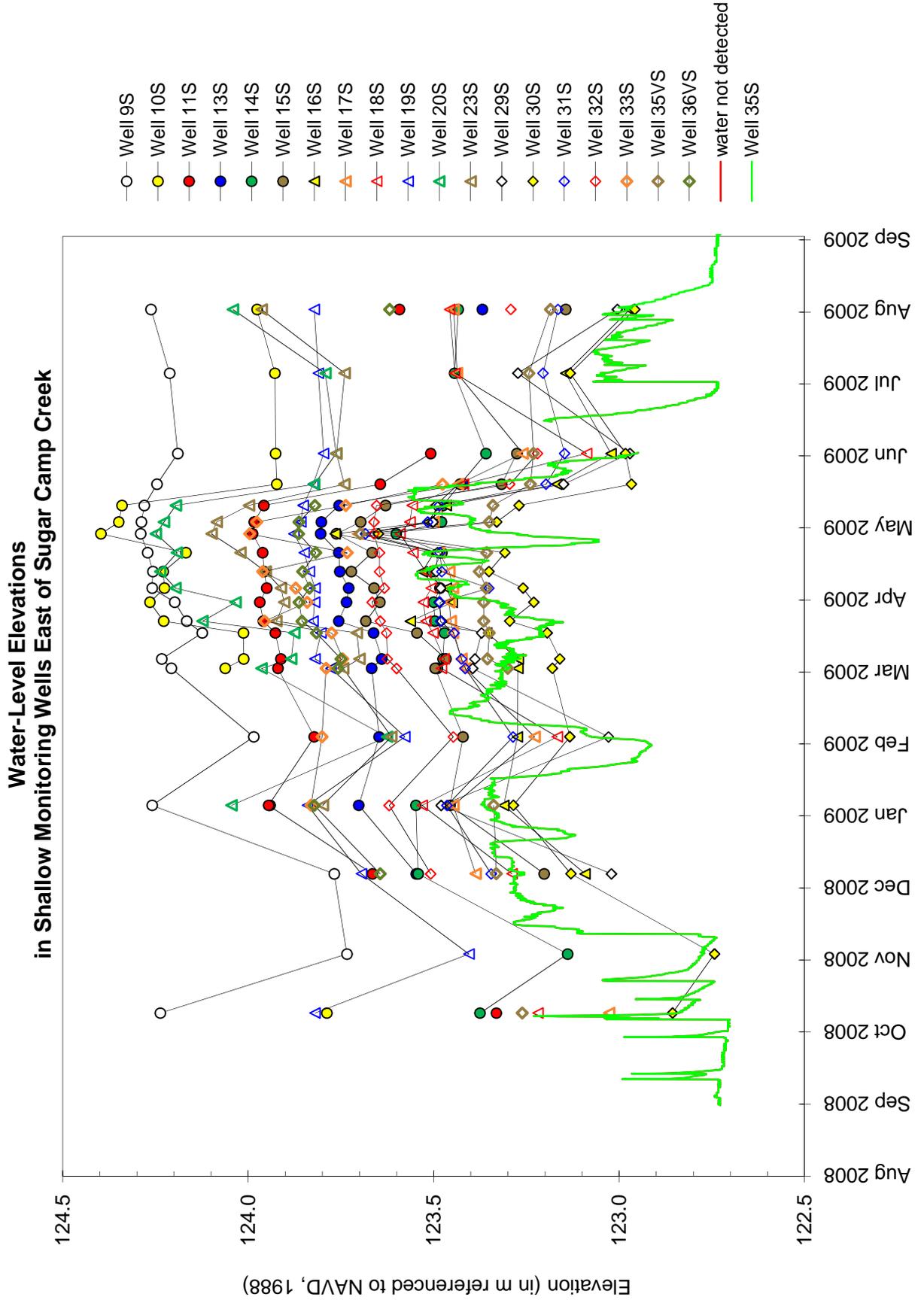
Estimated Areal Extent of 2009 Wetland Hydrology

September 1, 2008 through August 31, 2009

Map based on USGS digital orthophotograph, Ewing SE quarter quadrangle,
aerial photography from April 1998 (ISGS 2000)

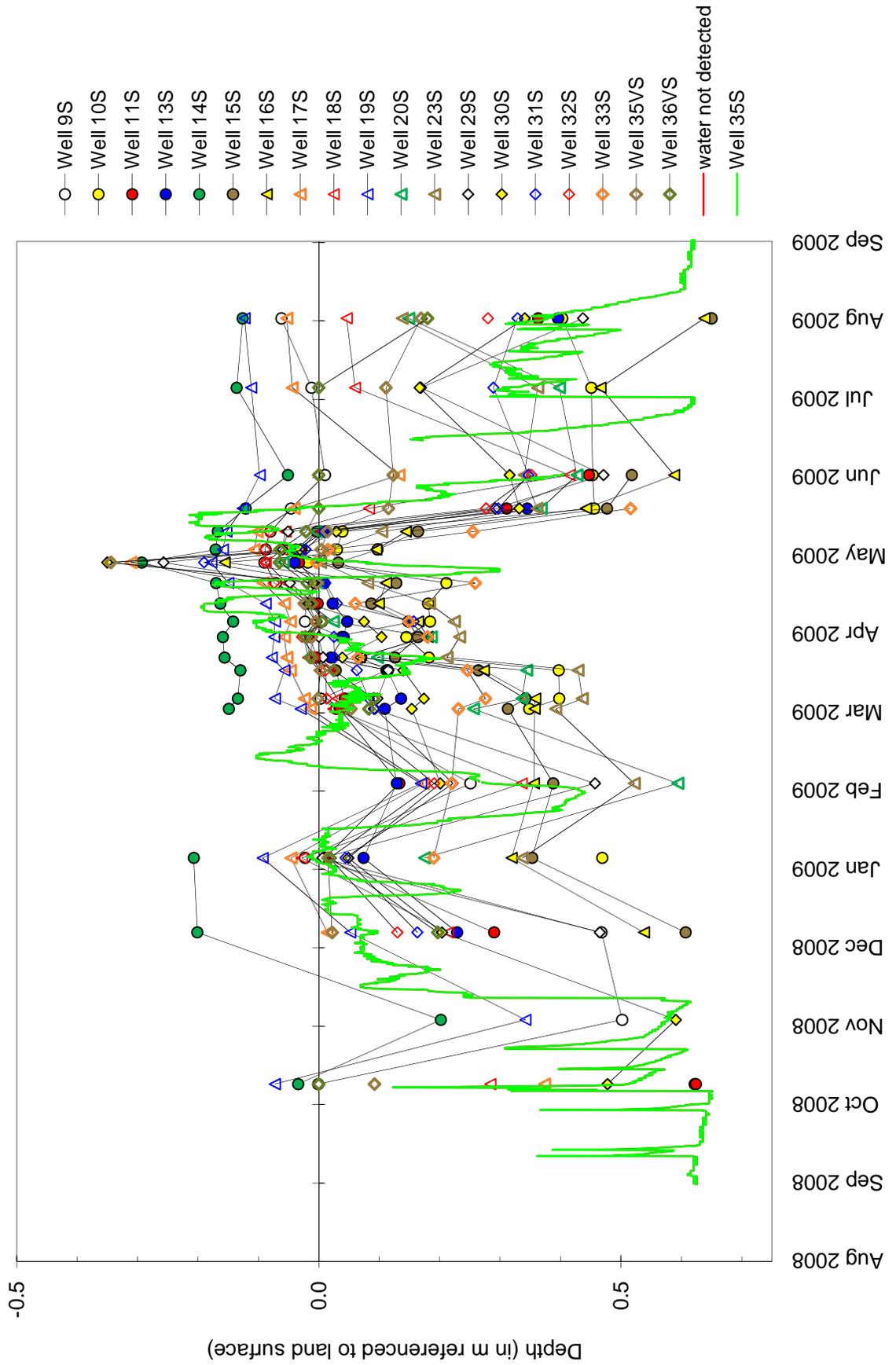


Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009



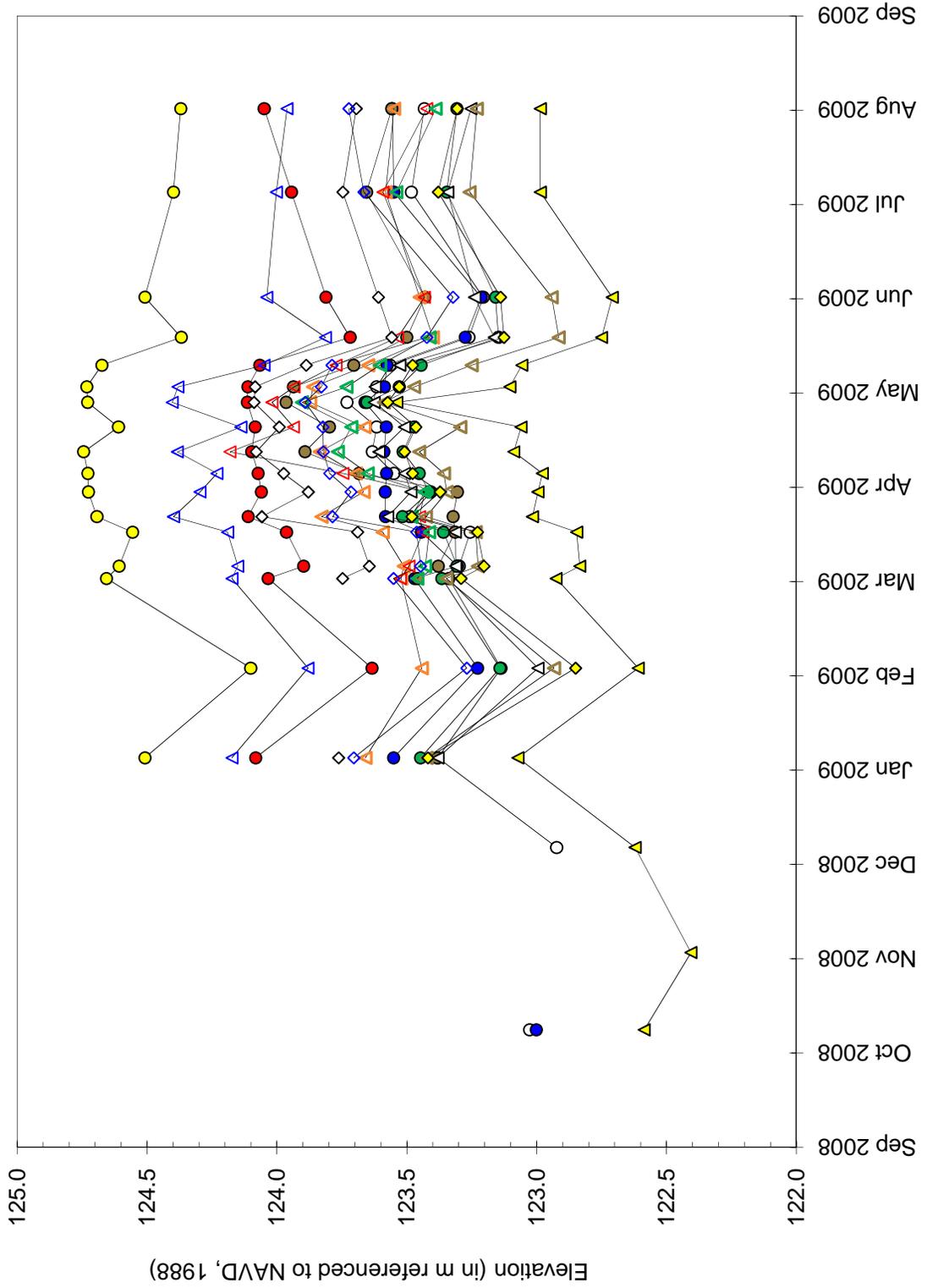
Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009

Depth to Water
in Shallow Monitoring Wells East of Sugar Camp Creek



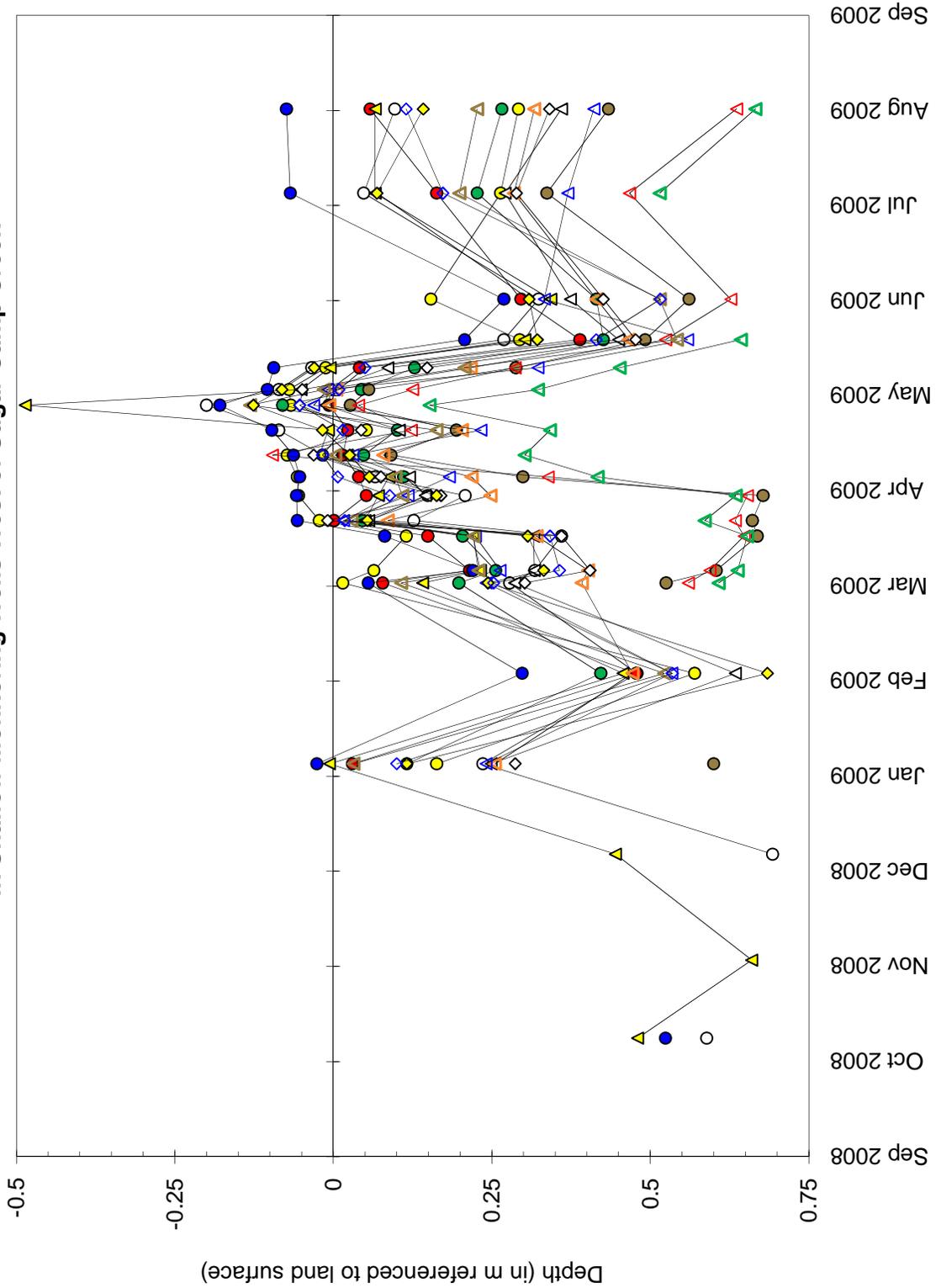
Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009

Water-Level Elevations in Shallow Monitoring Wells West of Sugar Camp Creek

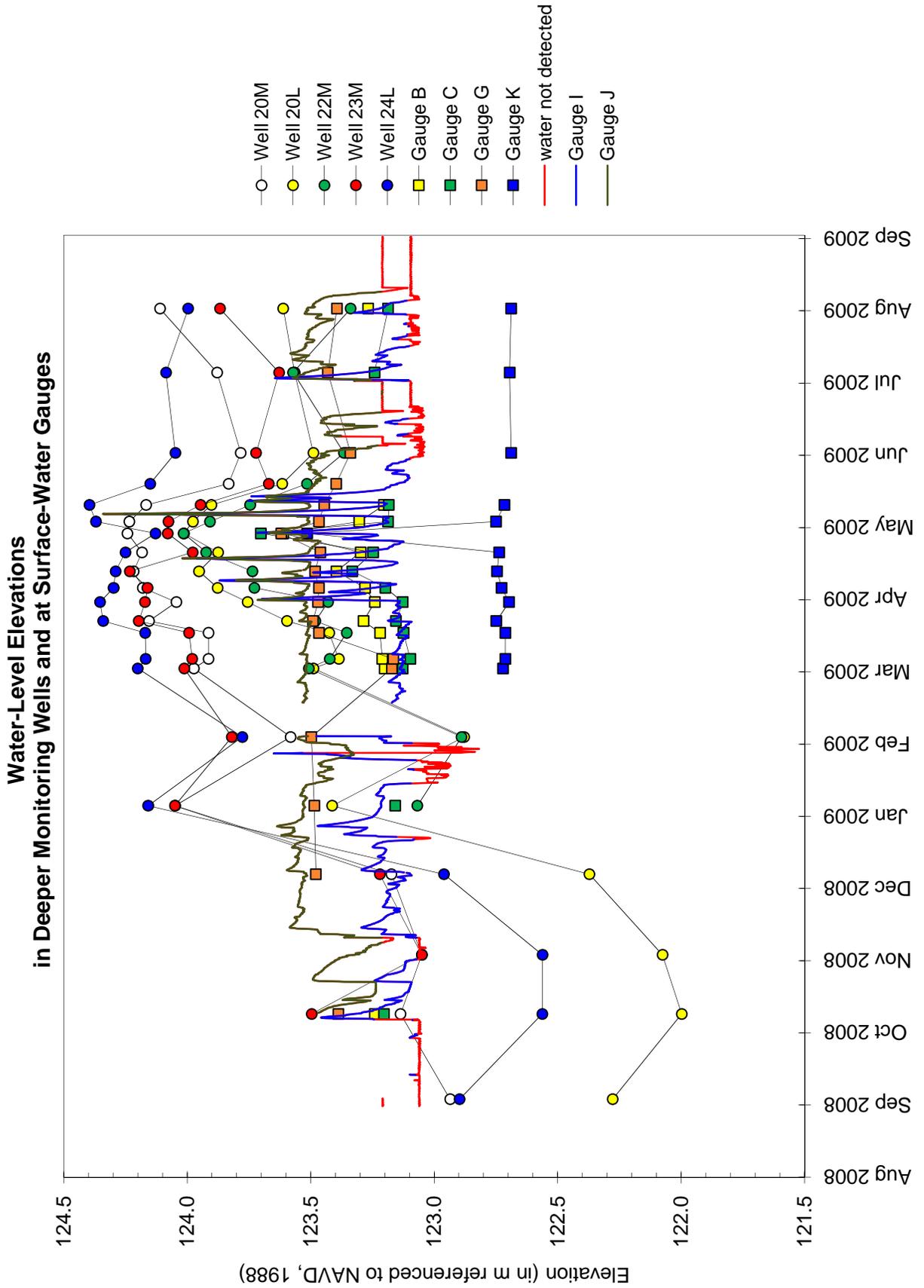


Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009

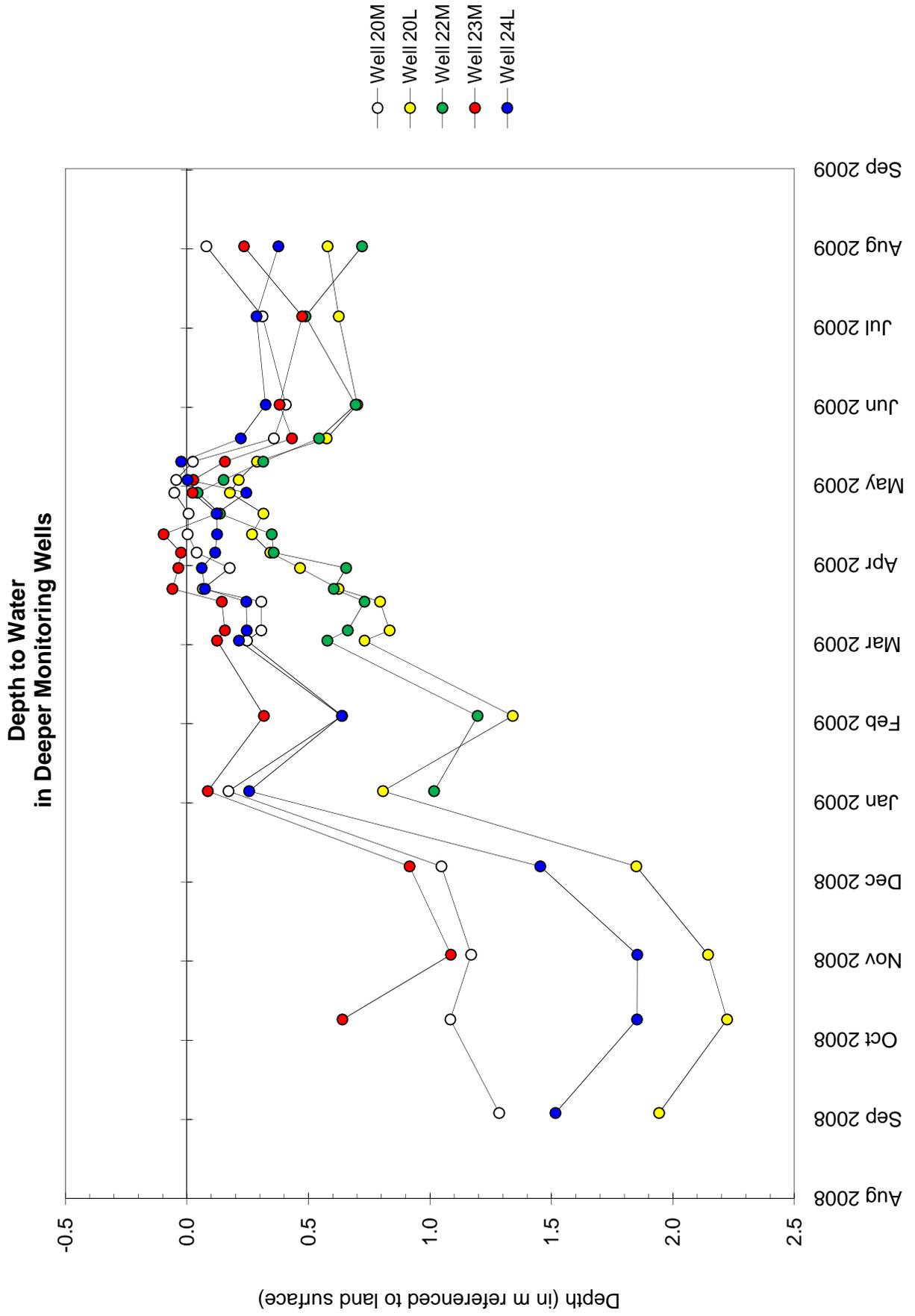
Depth to Water
in Shallow Monitoring Wells West of Sugar Camp Creek



Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009

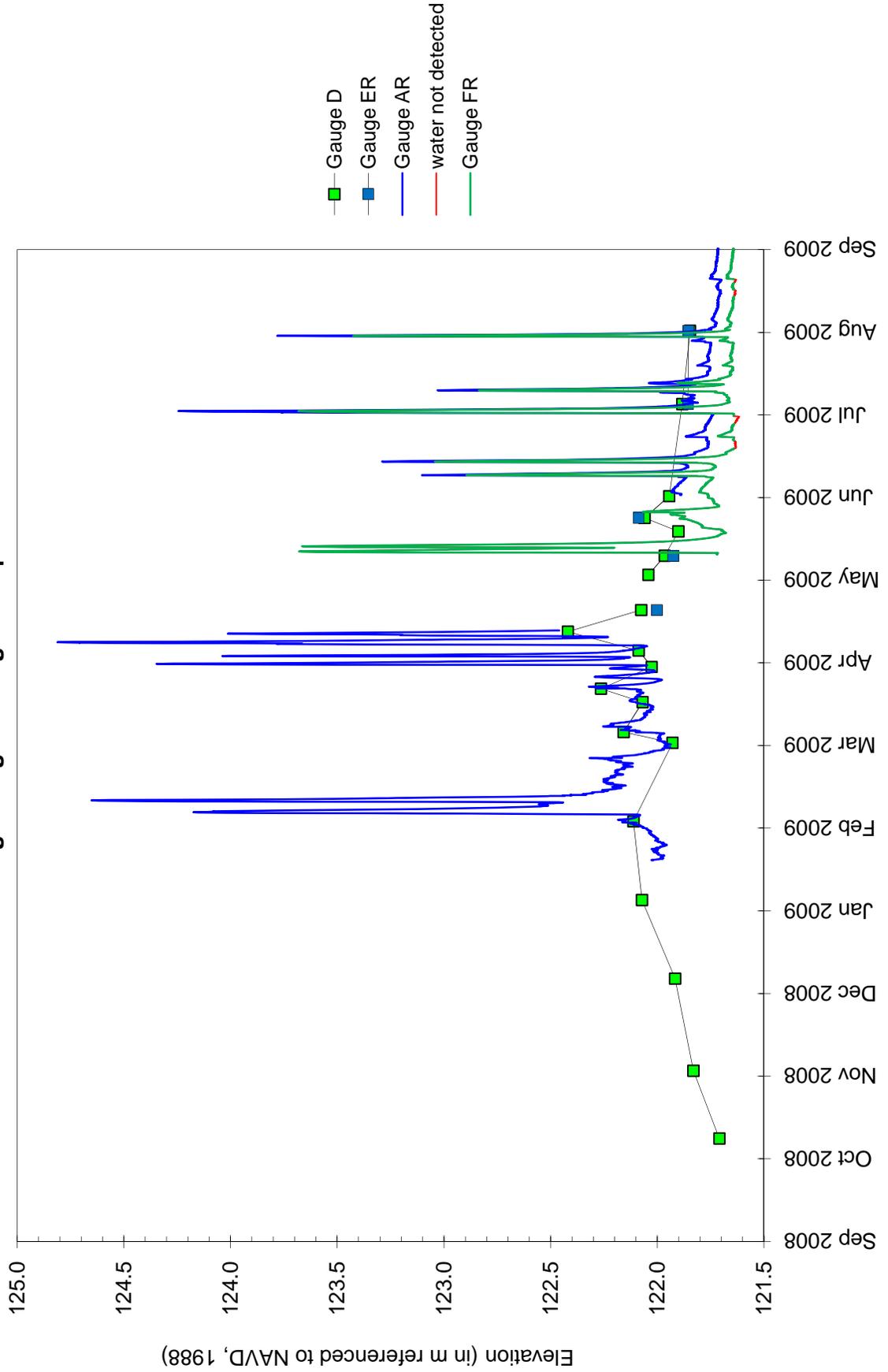


Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009



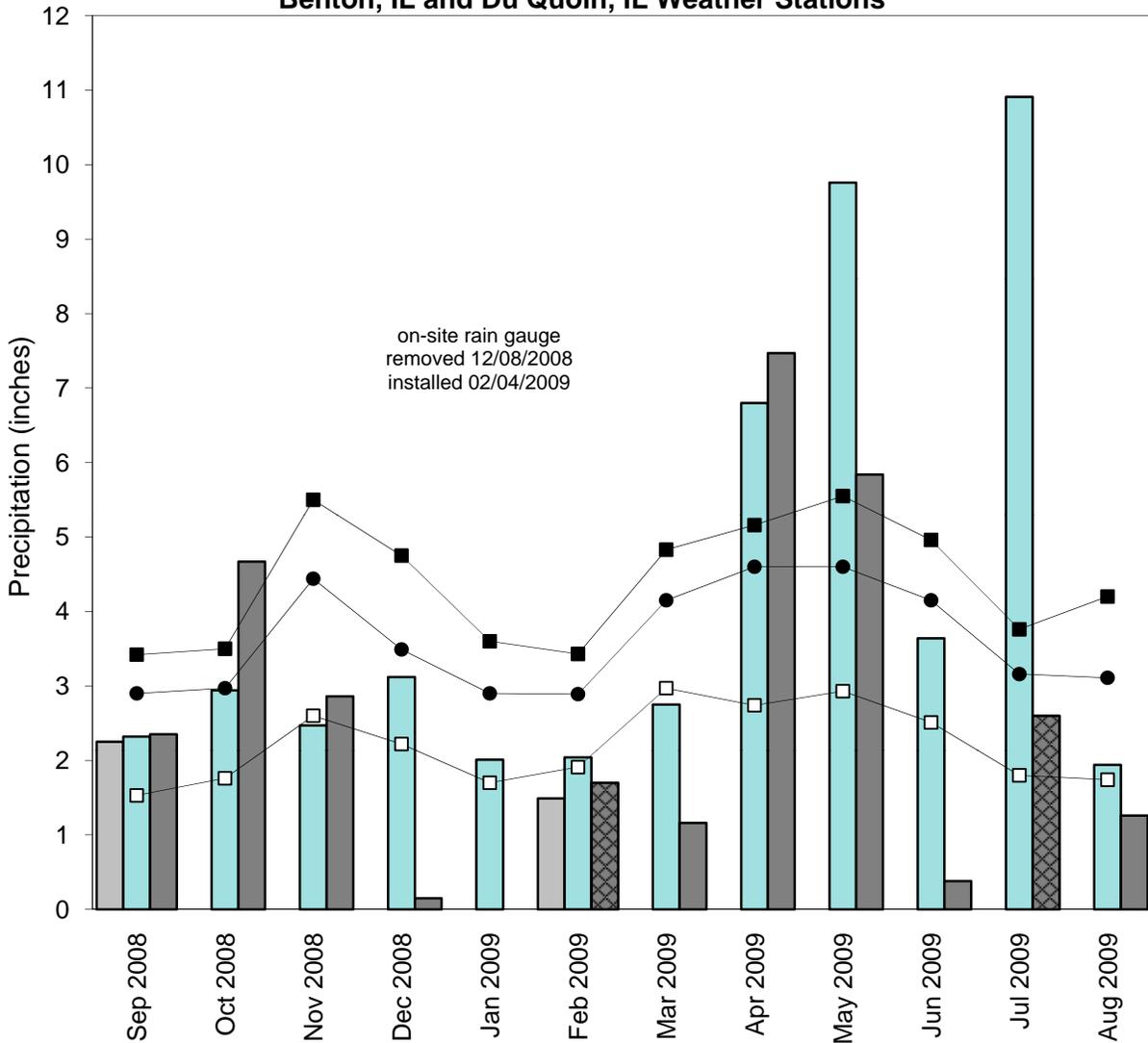
Sugar Camp Creek Wetland Compensation Site September 1, 2008 through August 31, 2009

Water-Level Elevations at Stage Gauges in Sugar Camp Creek



Sugar Camp Creek Potential Wetland Compensation Site September 2008 through August 2009

**Total Monthly Precipitation Recorded On Site and at the
Benton, IL and Du Quoin, IL Weather Stations**



- monthly precipitation recorded at Benton (Midwestern Regional Climate Center)
- monthly precipitation recorded at Du Quoin (Midwestern Regional Climate Center)
- monthly precipitation recorded on site by ISGS
- ▨ data incomplete
- 1971-2000 monthly 30% above average threshold (National Water and Climate Center)
- 1971-2000 monthly average precipitation (National Water and Climate Center)
- 1971-2000 monthly 30% below average threshold (National Water and Climate Center)

Graph last updated October 19, 2009