

**MILAN BELTWAY, AIRPORT ROAD  
WETLAND COMPENSATION SITE**

**ISGS #17**

FAU 5822

Sequence #67

Rock Island County, near Milan, Illinois

**Primary Project Manager: Steven E. Benton**

**Secondary Project Manager: Kathleen E. Bryant**

**SITE HISTORY**

- Spring 1997: The sump pump on the east side of the site was turned off and later removed.
- August 1997: ISGS data collection was initiated with the installation of monitoring wells and staff gauges.
- August 2004: Construction of the Milan Bypass began. Wetland mitigation began with the excavation of the southern portion of the site. Tree planting began in Fall 2004 and was completed in Spring 2005.
- January 2005: A Level II hydrogeologic characterization report was submitted to IDOT (ISGS Open-File Series 2005–04).
- December 2005: The ISGS was tasked by IDOT to perform post-construction monitoring.

**WETLAND HYDROLOGY CALCULATION FOR 2008**

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for more than 5% of the 2008 growing season was estimated to be 6.1 ha (15.1 ac) out of a total area of 8.9 ha (22.0 ac). The area that satisfied wetland hydrology criteria for more than 12.5% of the growing season was estimated to be 4.7 ha (11.6 ac). These estimates are based on the following factors:

- According to the MRCC, the median date that the growing season begins at the Quad City International Airport in nearby 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.
- Total precipitation during the monitoring period was 99% of normal. Precipitation was at or above normal in December 2007, and in February, April, May, June, and July 2008. Total precipitation in the spring (April, May, and June) was 138% of normal.
- In 2008, wetland hydrology criteria were satisfied for more than 5% of the growing season at wells 1SR, 2SR, 5S, 6S, 7S, 8S, 10SR, 11S, 13S, 14S, 15S, 16S, 17S, and 18S, and for more than 12.5% of the growing season at wells 1SR, 2SR, 5S, 6S, 7S, 8S and 17S.
- Surface-water gauges showed that inundation occurred at gauges F, G, H, and I, and at RDS 4 during the growing season. At gauges F and G, in the excavated southern basin, surface water was observed on two dates, April 10 and June 11. However, the period of inundation was brief, insufficient to satisfy wetland hydrology criteria at even 5% of the growing season. At gauges H and I, and RDS 4, inundation persisted for almost 4 months

(April 10 to August 6), inundation occurred at an elevation greater than 171.84 m (563.81 ft) for more than 5% of the growing season, and 171.82 m (563.74 ft) for more than 12.5% of the growing season.

- Limitations of the wetland hydrology determination are as follows:
  - The area of wetland hydrology includes pre-existing wetland.

#### ADDITIONAL INFORMATION

- Approximately 0.5 ha (1.4 ac) of the excavated southern portion of the site, designated forested wetland on the as-built plan, satisfied wetland hydrology criteria at 5% of the growing season. This appears to be due primarily to runoff from Airport Road generated by heavy rain events on April 8 (0.17 in.) and April 10 (0.18 in.). Surface water was observed at gauges F and G on April 10, and soil saturation persisted at monitoring wells 10SR, 13S, 14S, 15S, and 16S for the first 10 days (5%) of the growing season.

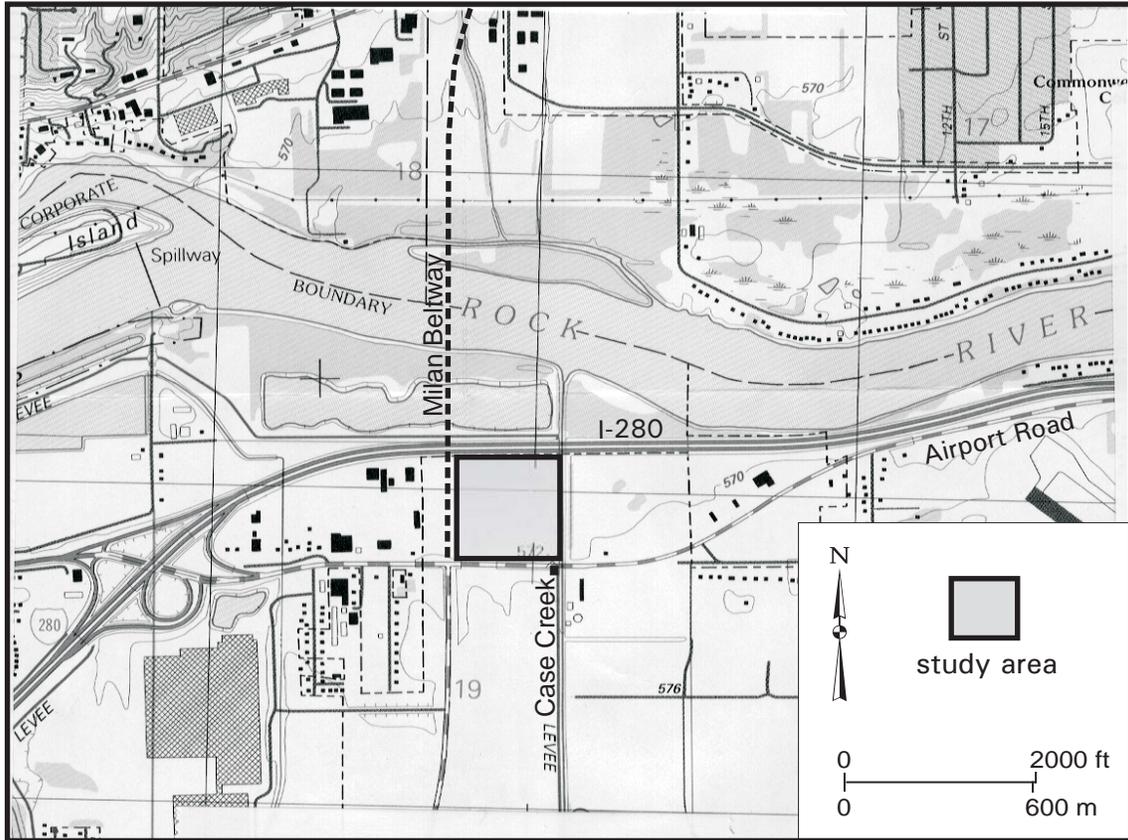
#### PLANNED FUTURE ACTIVITIES

- Monitoring of the southern excavated basin in 2009 will include not only biweekly to weekly well readings, but also readings after heavy (>0.75 in.) rain events.
- Monitoring of the site will continue until notified otherwise by IDOT.

# Milan Beltway, Airport Road Wetland Compensation 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

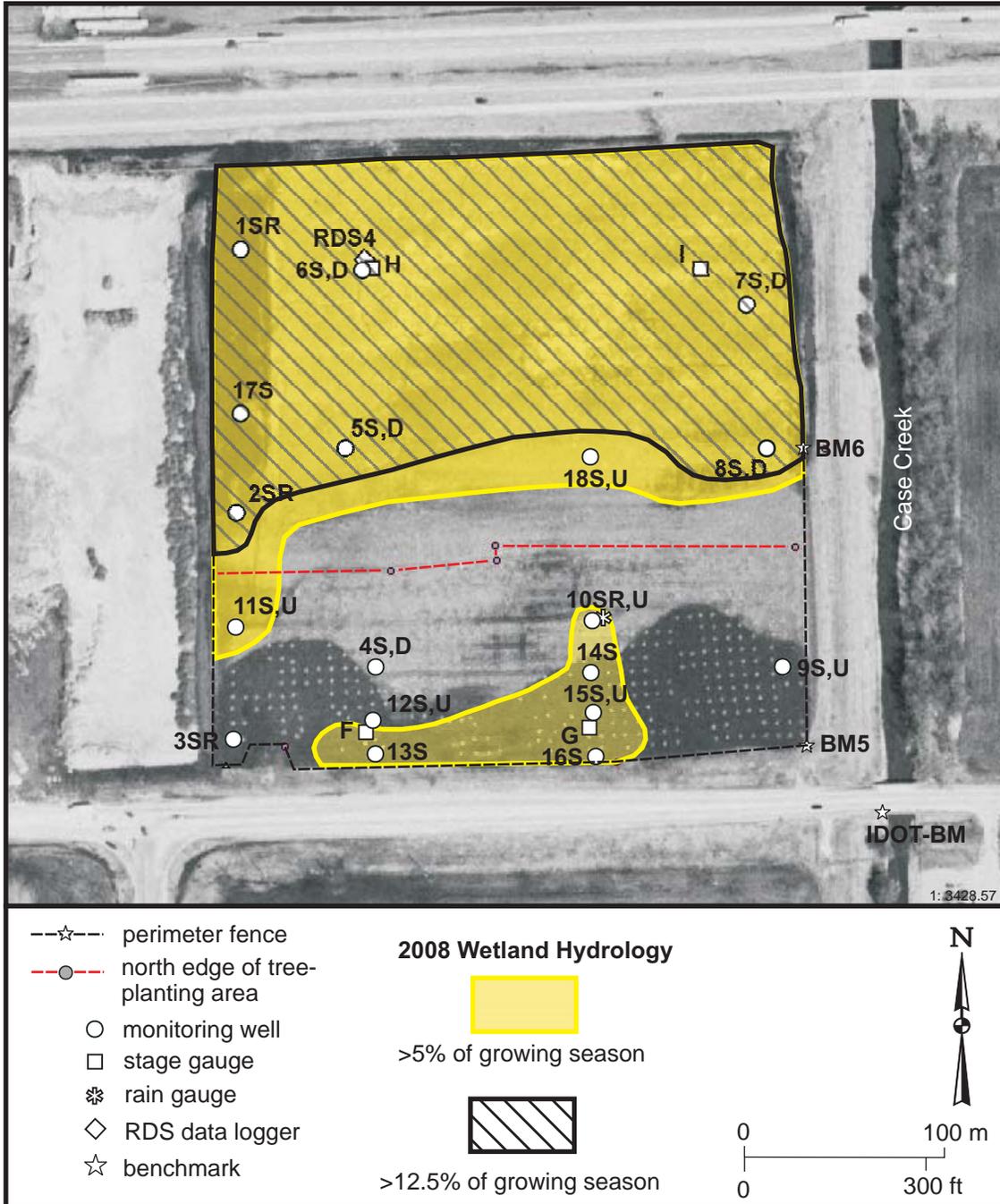


# Milan Beltway, Airport Road Wetland Compensation Site (FAU 5822)

## Estimated Areal Extent of 2008 Wetland Hydrology

based on data collected between September 1, 2007 and September 1, 2008

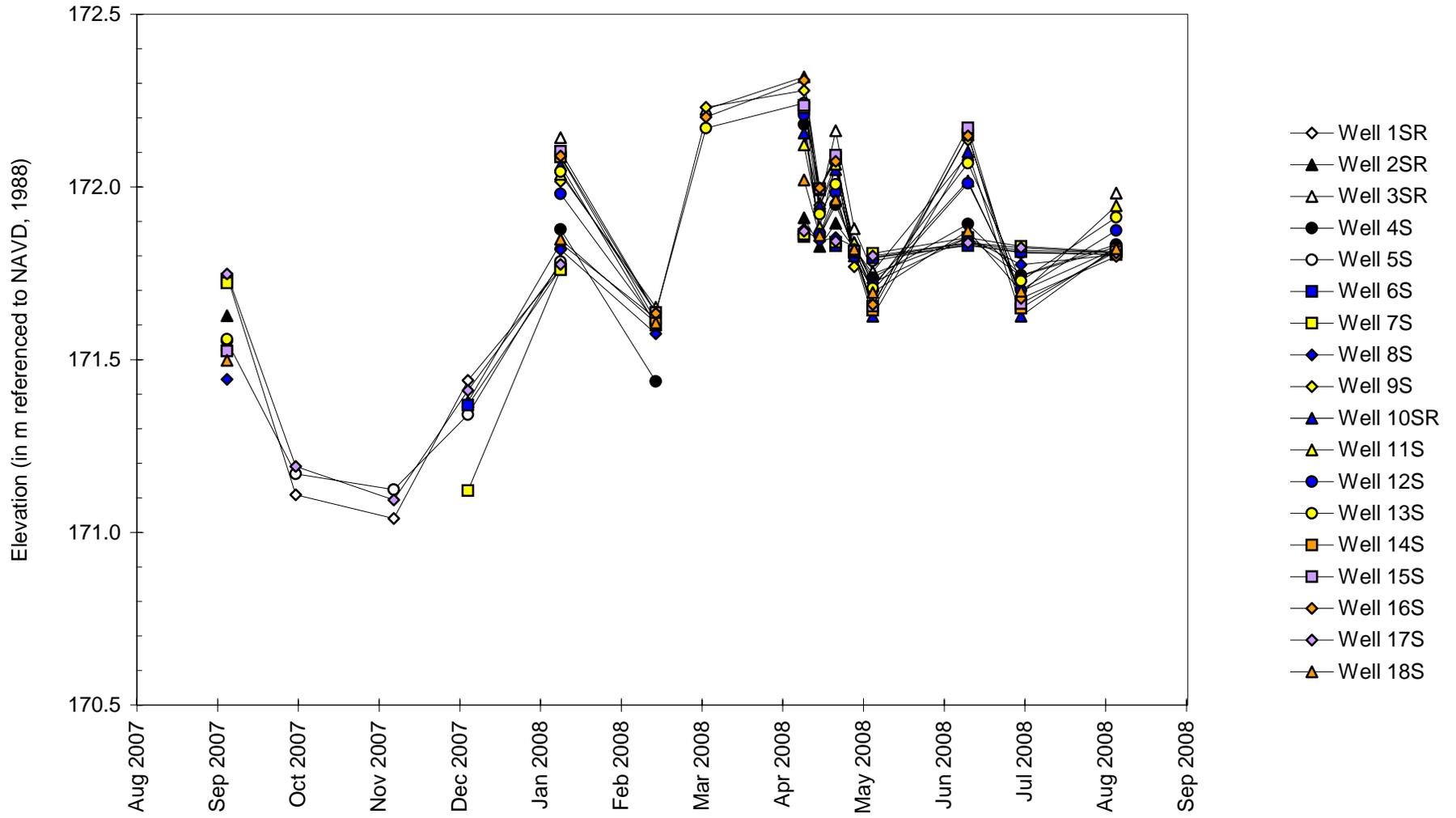
Map based on USGS digital orthophotograph, Milan SW quarter quadrangle  
from 03/30/2000 aerial photography (ISGS 2005)



# Milan Beltway, Airport Road Wetland Compensation Site

September 1, 2007 to September 1, 2008

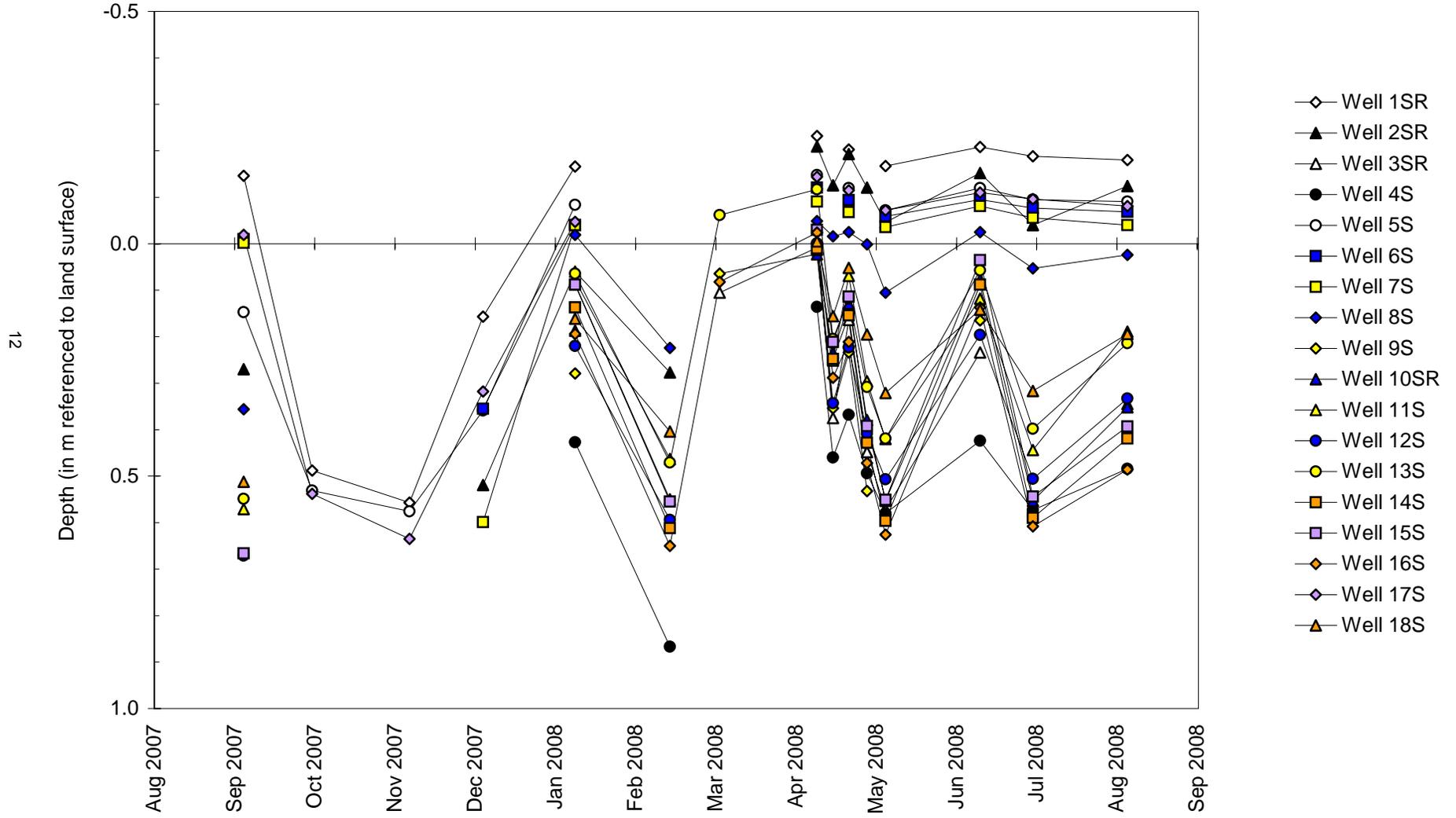
## Water-Level Elevations in Soil-Zone Monitoring Wells



# Milan Beltway, Airport Road Wetland Compensation Site

September 1, 2007 to September 1, 2008

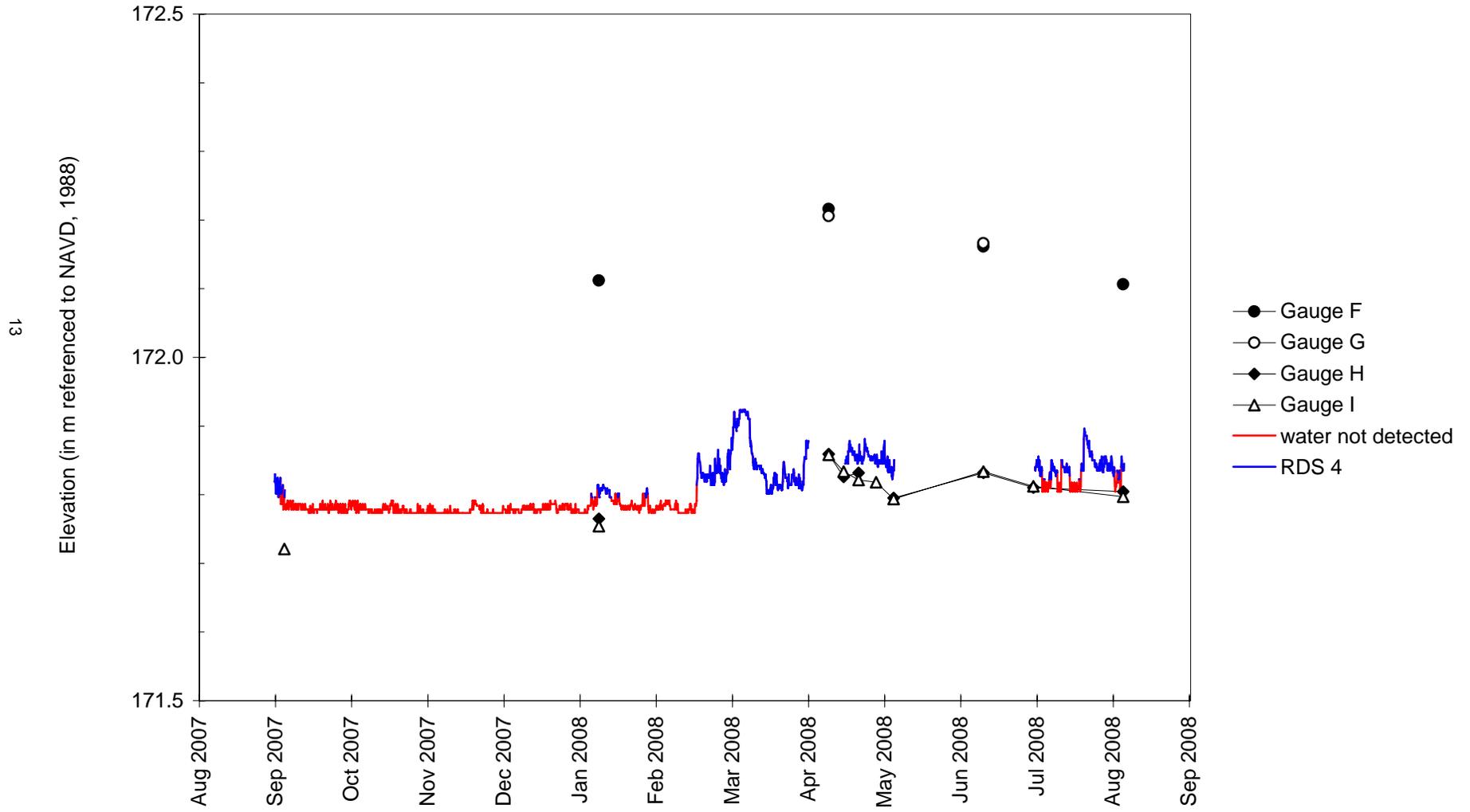
## Depths to Water in Soil-Zone Monitoring Wells



# Milan Beltway, Airport Road Wetland Compensation Site

September 1, 2007 to September 1, 2008

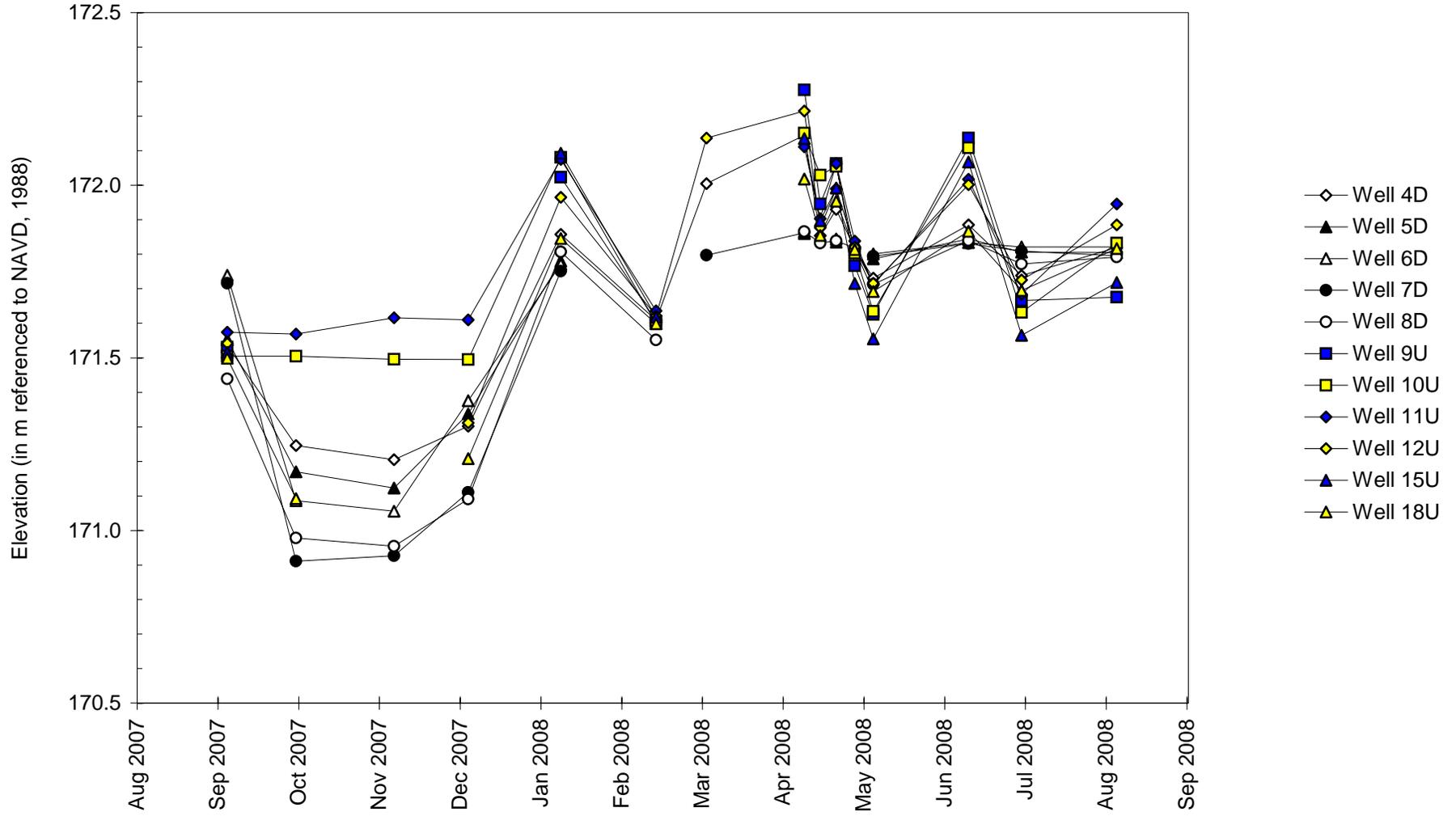
## Water-Level Elevations at Surface-Water Gauges



# Milan Beltway, Airport Road Wetland Compensation Site

September 1, 2007 to September 1, 2008

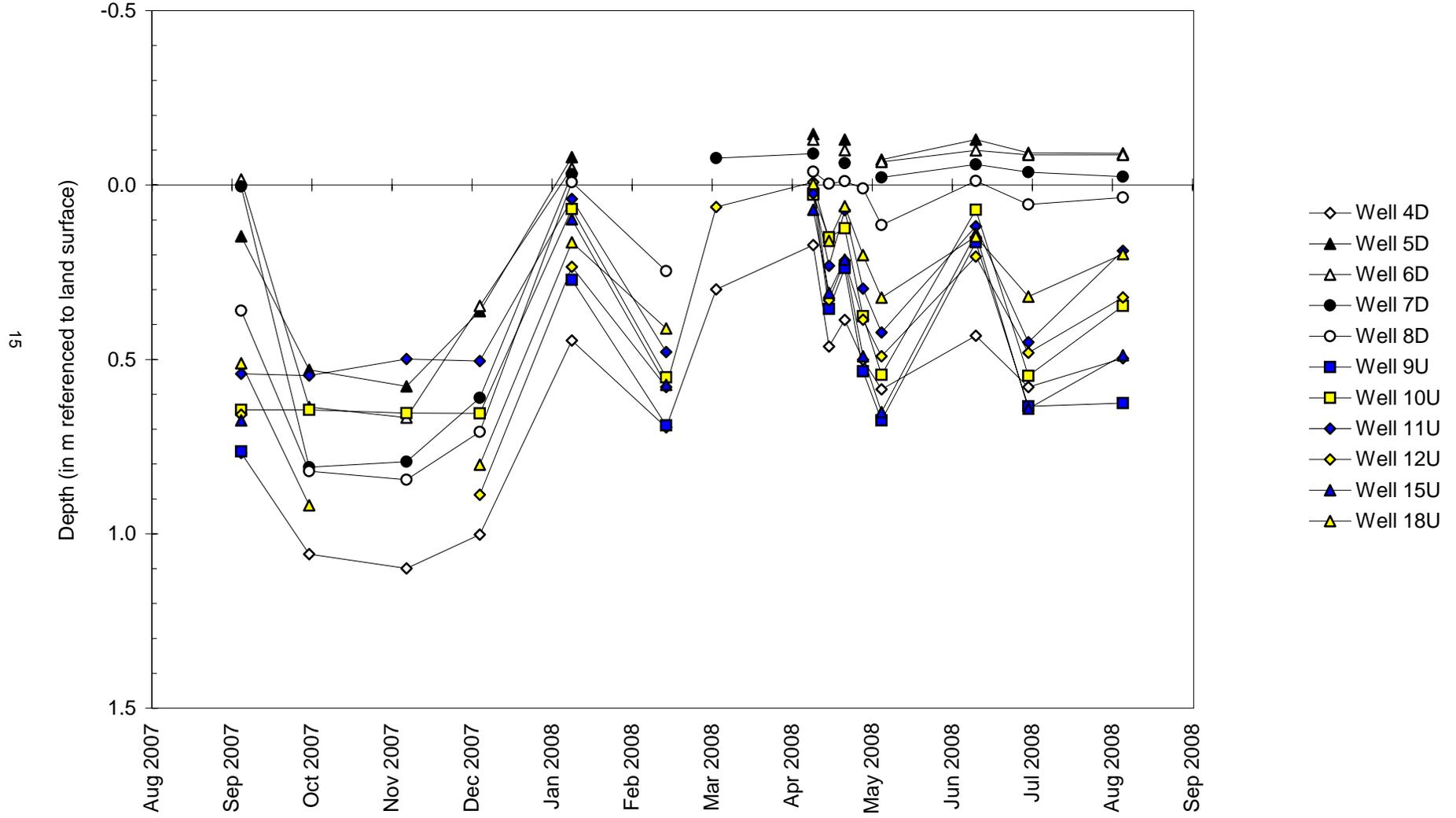
## Water-Level Elevations in Deeper Monitoring Wells



# Milan Beltway, Airport Road Wetland Compensation Site

September 1, 2007 to September 1, 2008

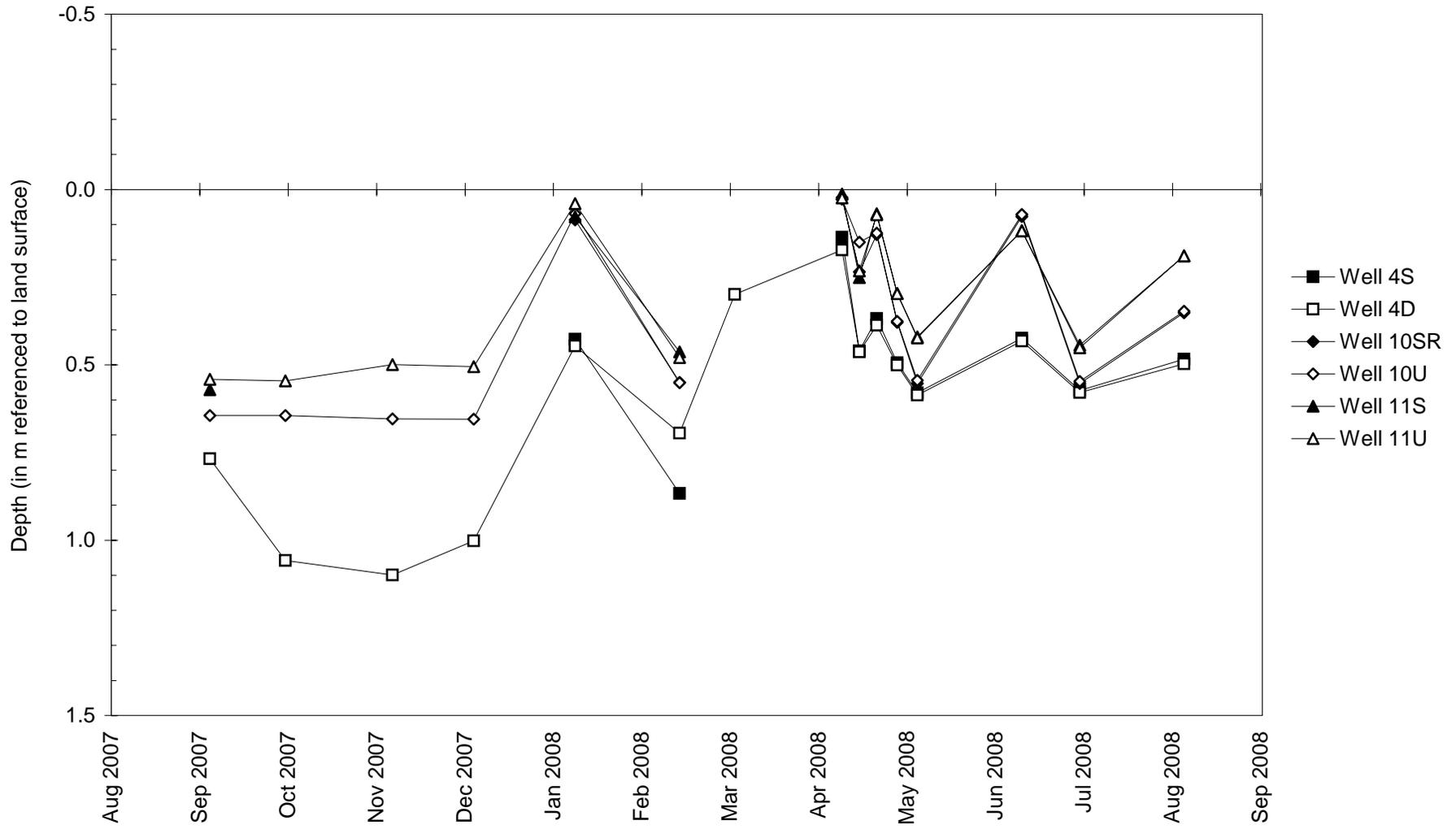
## Depths to Water in Deeper Monitoring Wells





Milan Beltway, Airport Road Wetland Compensation Site  
September 1, 2007 to September 1, 2008

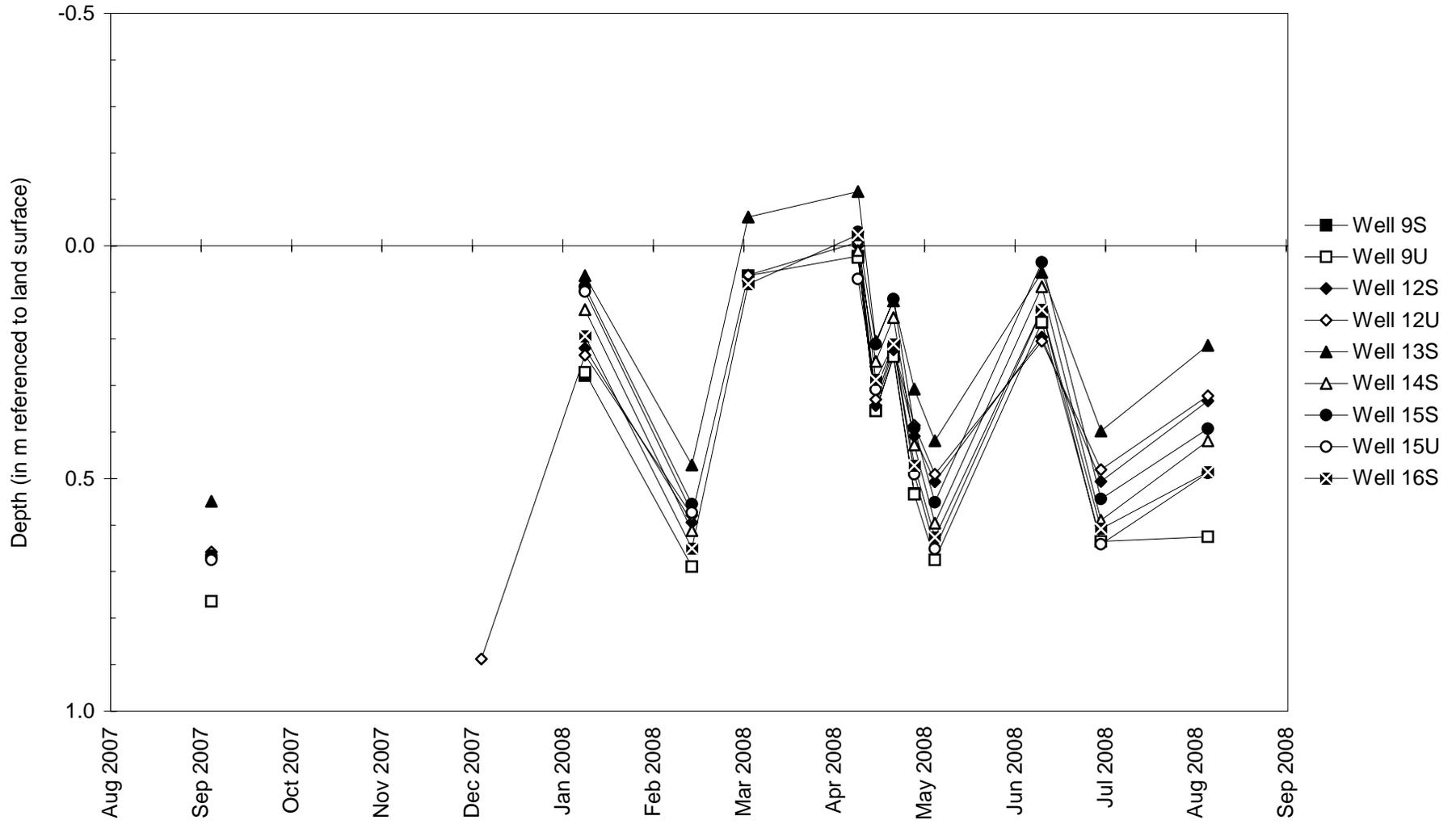
Depths to Water in Selected Monitoring Wells



# Milan Beltway, Airport Road Wetland Compensation Site

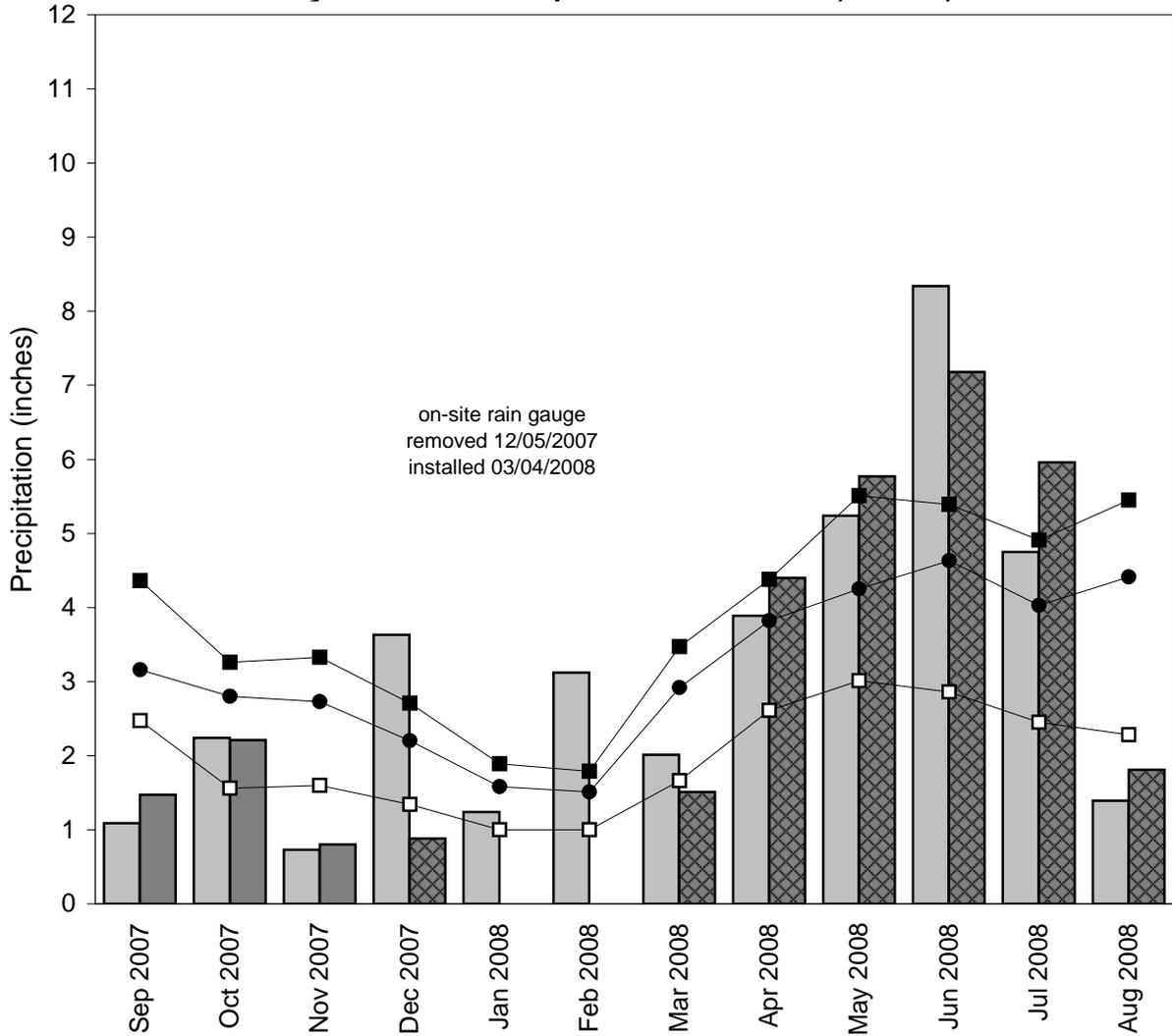
September 1, 2007 to September 1, 2008

## Depths to Water in Selected Monitoring Wells



## Milan Beltway, Airport Road Wetland Compensation Site September 2007 through August 2008

**Total Monthly Precipitation Recorded On Site and at the  
Quad City International Airport Weather Station, Moline, IL**



- monthly precipitation recorded at weather station (Midwestern Regional Climate Center)
- monthly precipitation recorded on site by ISGS
- 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)
- data incomplete

Graph last updated October 7, 2008