
JO DAVIESS
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HENDERSON
MC LEAN
FULTON
FORD
HANCOCK
MC DONOUGH
TAZEWELL
VERMILION
MASON
CHAMPAIGN
SCHUYLER
LOGAN
DEWITT
ADAMS
BROWN
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MENARD
PIATT
MACON
PIKE
MORGAN
DOUGLAS
EDGAR
SCOTT
MOULTRIE
CHRISTIAN
SHELBY
COLES
SANGAMON
GREENE
MACOUPIN
CLARK
CUMBERLAND
MONTGOMERY
CALHOUN
JERSEY
FAYETTE
EFFINGHAM
JASPER
CRAWFORD
MADISON
BOND
RICHLAND
LAWRENCE
MARION
CLINTON
CLAY
WAYNE
EDWARDS
WABASH
JEFFERSON
WASHINGTON
MONROE
ST. CLAIR
HAMILTON
WHITE
RANDOLPH
PERRY
FRANKLIN
JACKSON
SALINE
GALLATIN
WILLIAMSON
UNION
JOHNSON
POPE
HARDIN
ALEXANDER
PULASKI
MASSAC

MILAN BELTWAY, AIRPORT ROAD **ISGS #17**
WETLAND COMPENSATION SITE
FAU 5822
Sequence #67
Rock Island County, near Milan, Illinois
Primary Project Manager: Steven E. Benton
Secondary Project Manager: Keith W. Carr

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 five-year performance monitoring.

WETLAND HYDROLOGY CALCULATION FOR 2007

The area of the site that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for more than 5% of the 2007 growing season was estimated to be 4.8 ha (11.8 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 4.3 ha (10.7 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 113% of normal. Precipitation was at or above normal in December 2006, and in March, June, July, and August 2007. Total precipitation in the spring (April, May, and June) was 81% of normal.

- In 2007, wetland hydrology occurred for more than 5% of the growing season at wells 1SR, 2SR, 5S, 6S, 7S, 8S, 17S, and 18S. Wetland hydrology also occurred for more than 12.5% of the growing season at wells 1SR, 2SR, 5S, 6S, 7S, and 17S.

- Surface-water gauges showed that inundation occurred at gauge H, gauge I, and RDS 4 during the growing season. At gauge H, gauge I, and RDS 4, inundation occurred at an elevation greater than 171.80 m (563.68 ft) for more than 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

- The area of the site that satisfied the wetland hydrology criteria at both 5% and 12.5% of the growing season was confined entirely to the northern portion of the site designated aquatic emergent wetland on the as-built plan.

- The excavated southern portion of the site, designated forested wetland on the as-built plan, did not satisfy wetland hydrology criteria at either 5% or 12.5% of the growing season. Ground-water levels recorded by the data logger in monitoring well 12S reveal that saturation occurred several times during the growing season, but the longest periods of saturation were only about 5 days, or 2.5% of the growing season.

- The absence of jurisdictional wetland hydrology in the forested wetland is due to insufficient excavation. Analysis of depth to ground-water data recorded by the logger in well 12S reveals that land surface would have to be lowered by at least 25 cm (10 in), and as much as 40 cm (16 in), in order to achieve jurisdictional wetland hydrology.

- The conceptual wetland design plan called for 15 cm (6 in) to 30 cm (12 in) of excavation. However, it appears, based on the change in ground-surface elevation at well 9S, that only about 7 cm (3 in) of soil was excavated at that location.

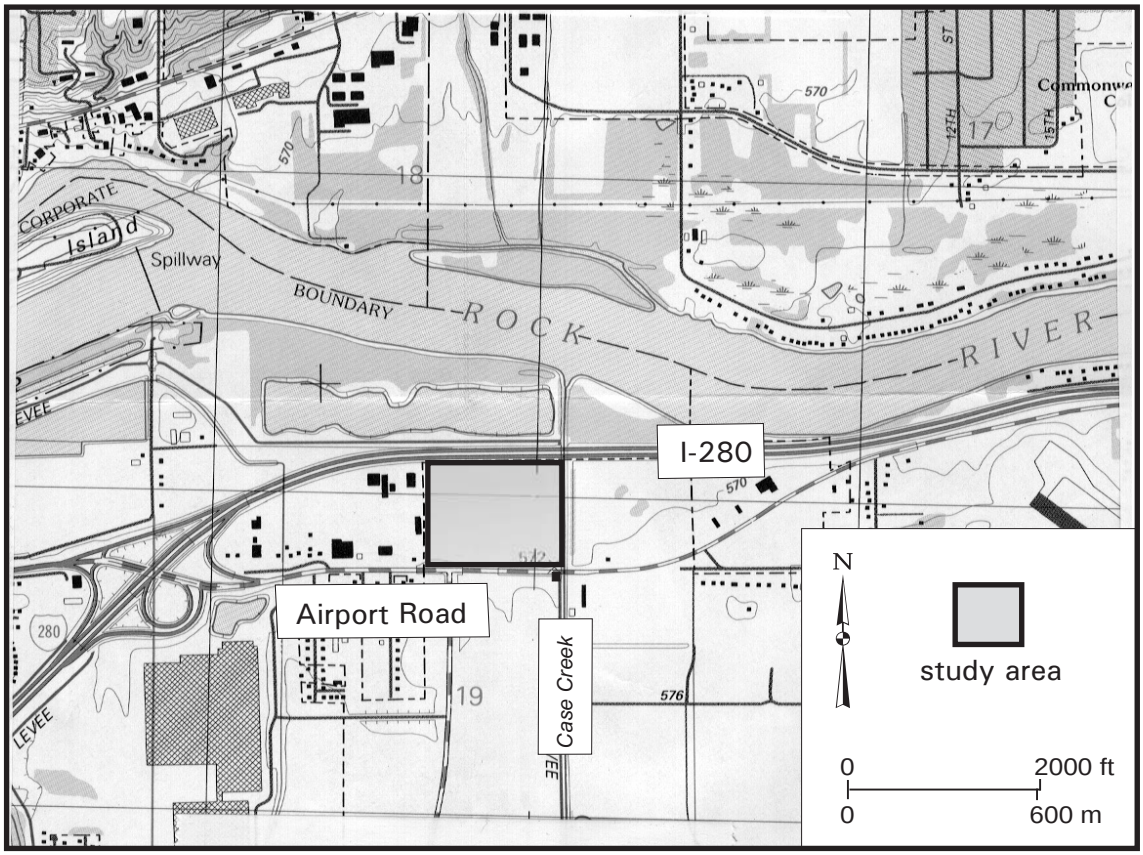
PLANNED FUTURE ACTIVITIES

- 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

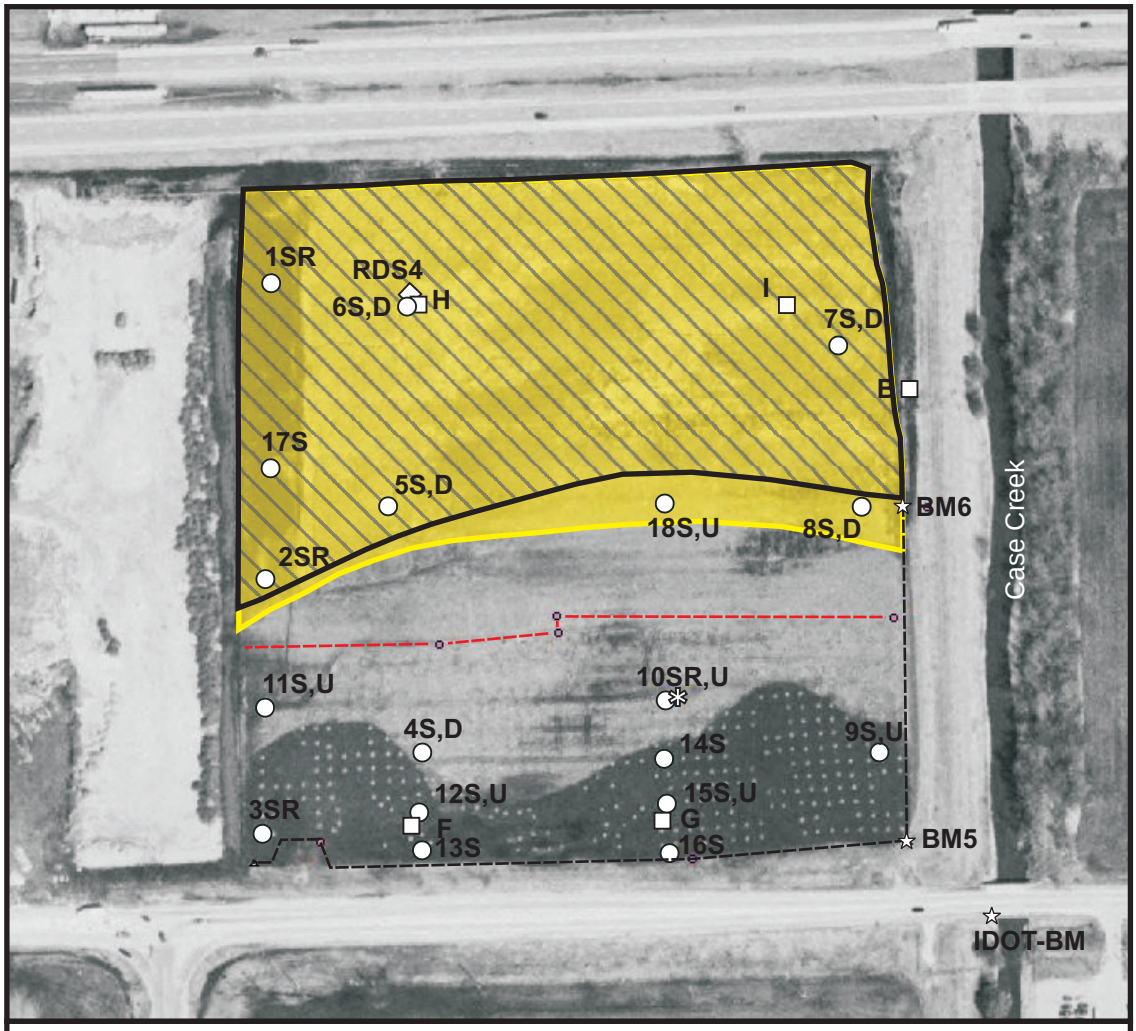


Milan Beltway, Airport Road Wetland Compensation Site (FAU 5822)

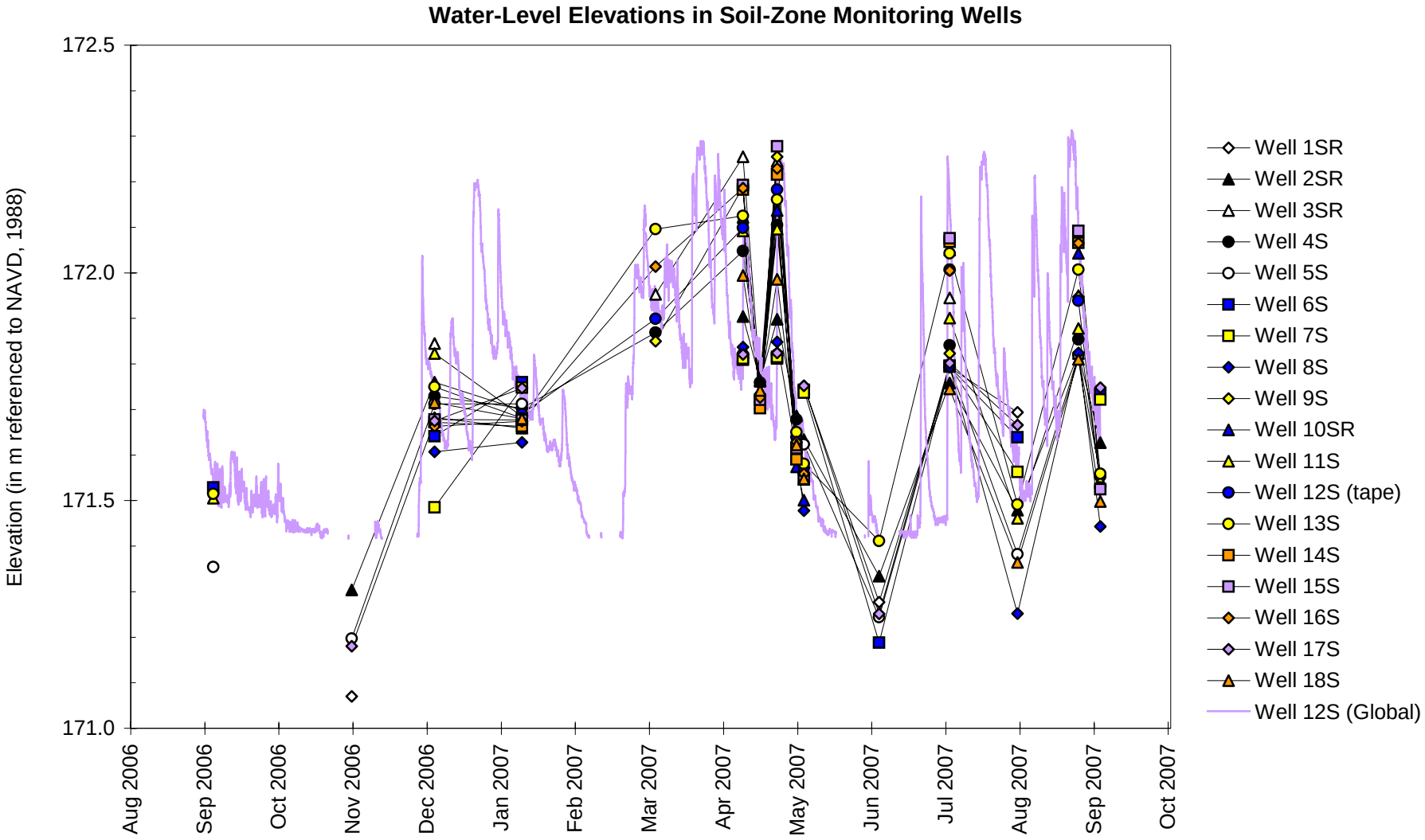
Estimated Areal Extent of 2007 Wetland Hydrology

based on data collected between September 1, 2006 and September 5, 2007

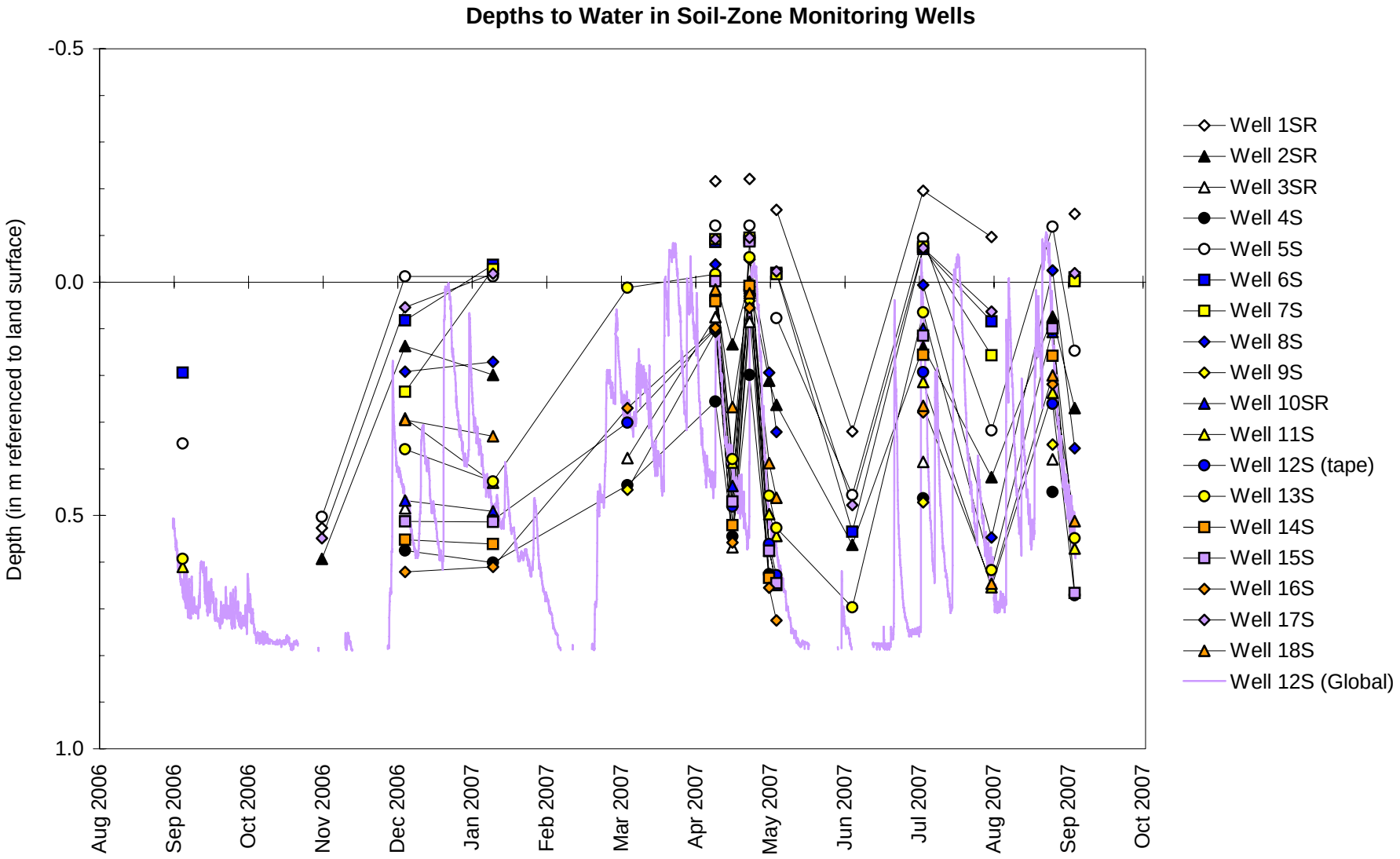
Map based on USGS digital orthophotograph, Milan SW quarter quadrangle
from 03/30/2000 aerial photography (ISGS 2005)



Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007



Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007



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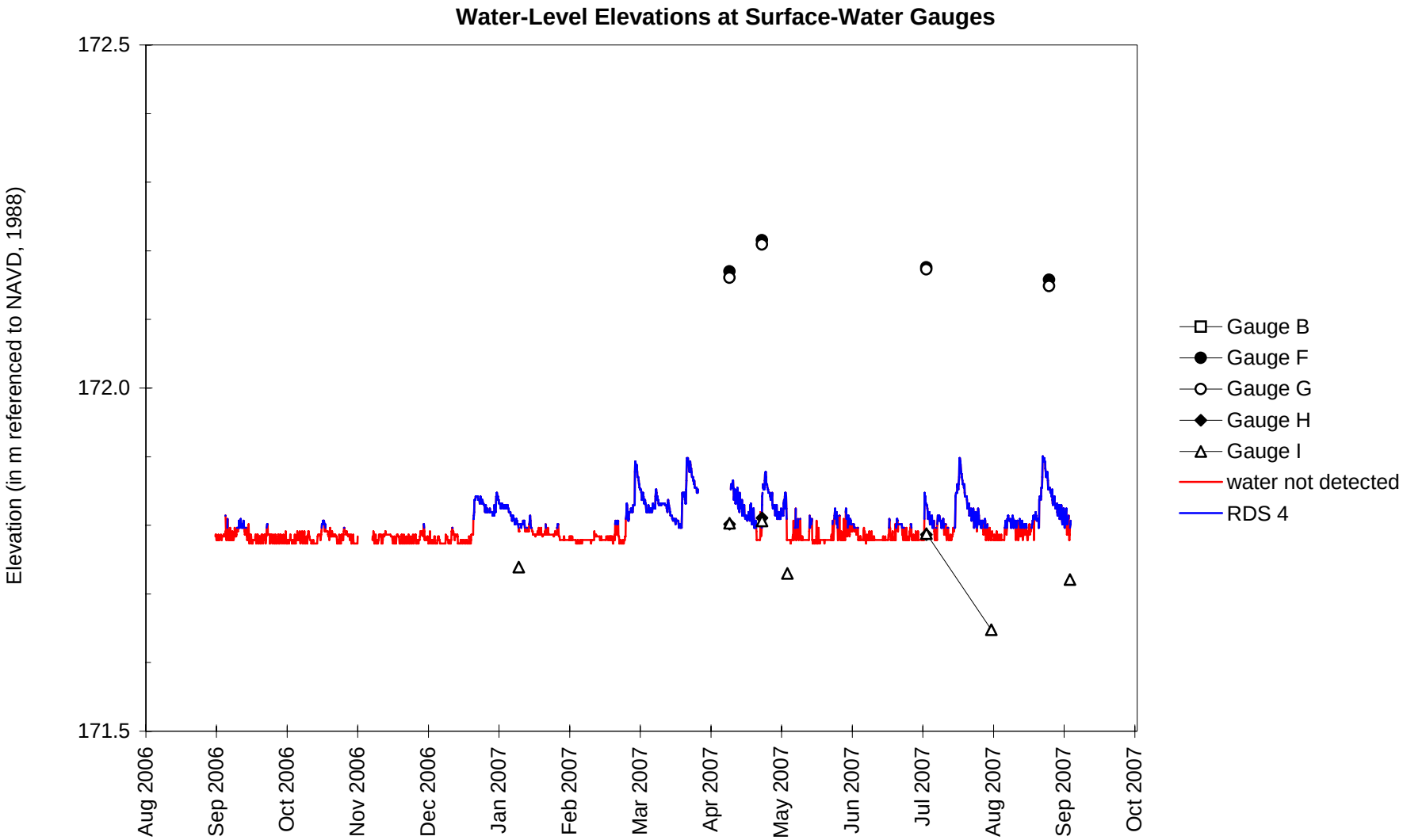

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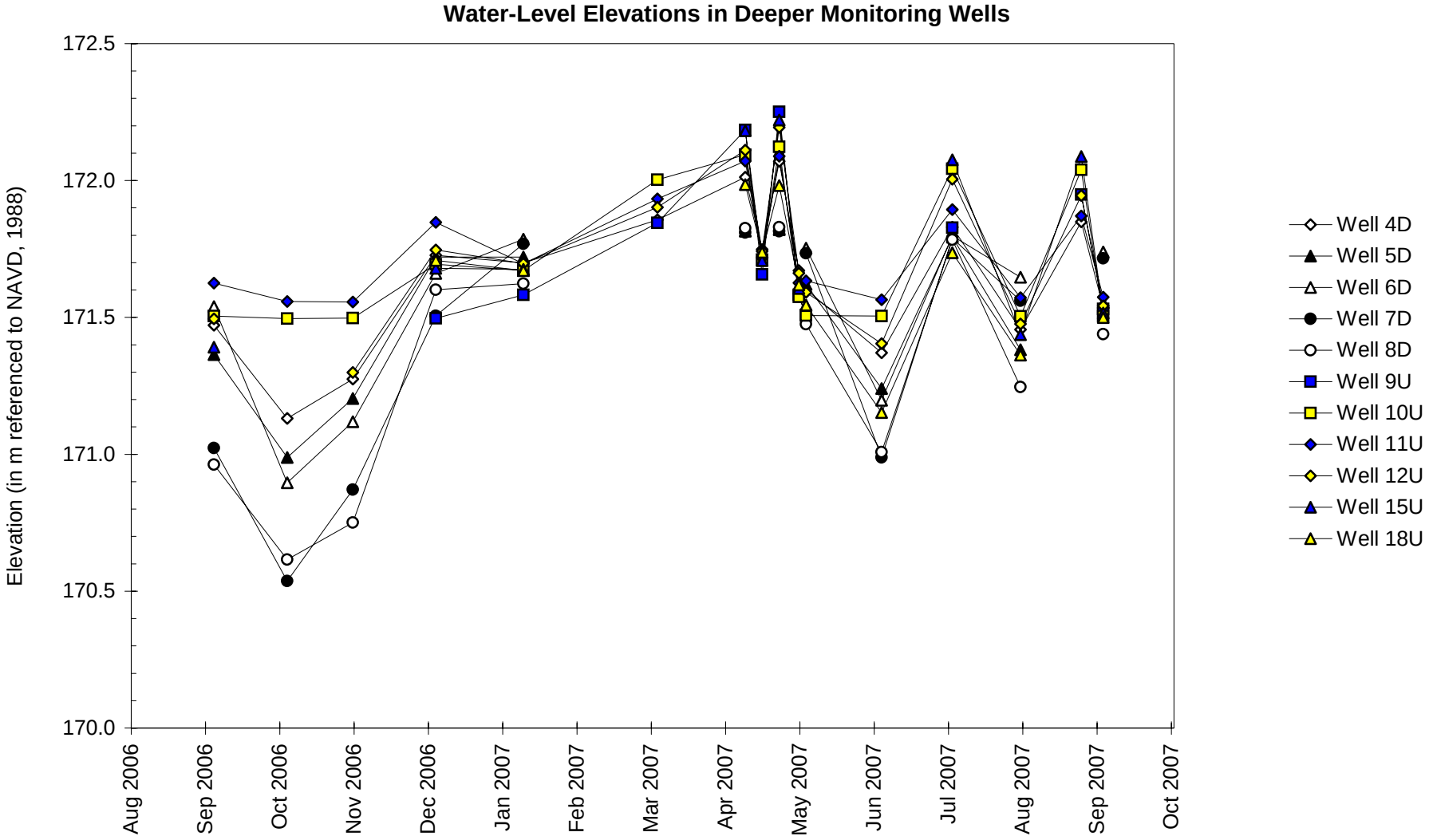
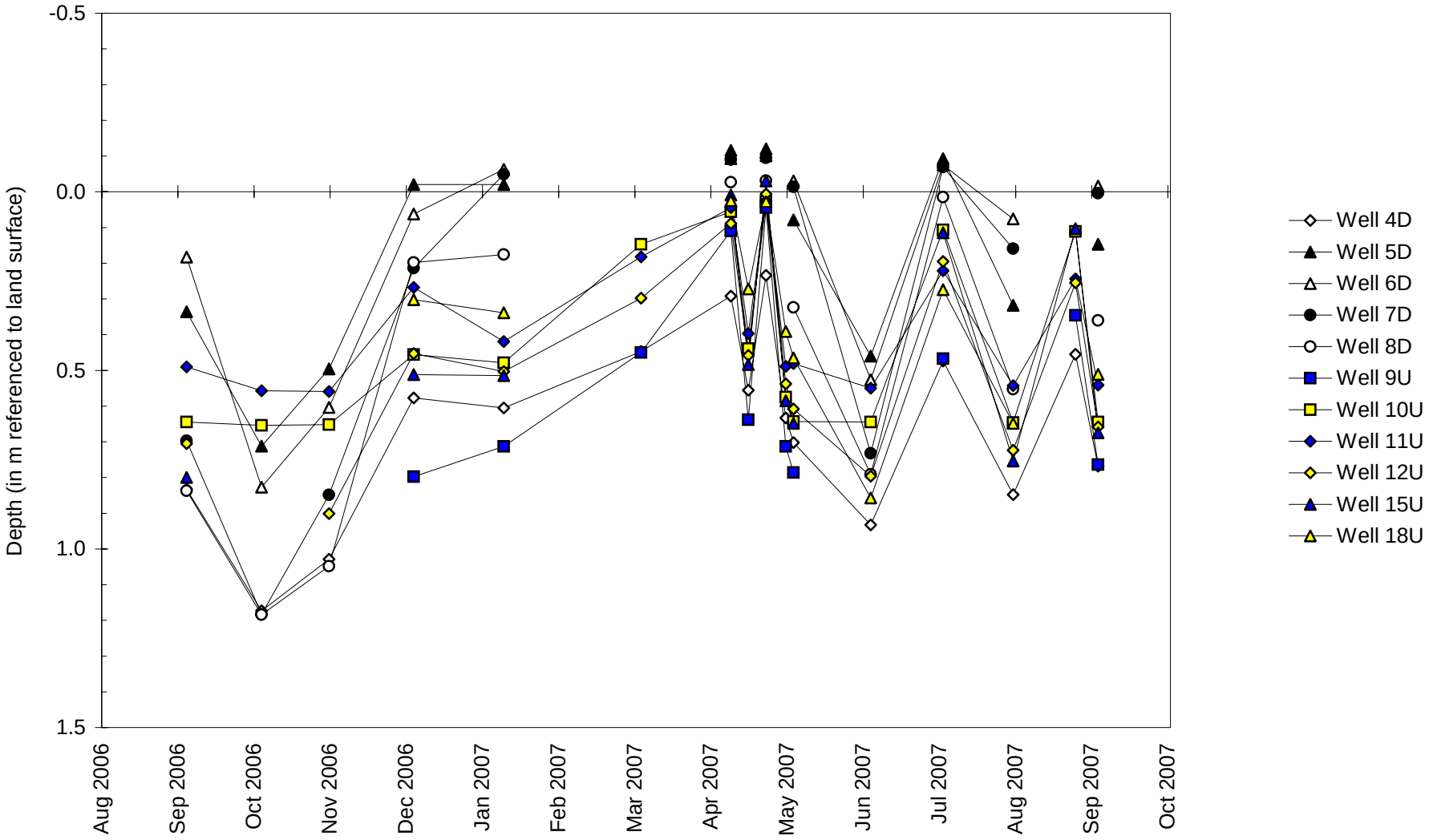
September 1, 2006 to September 5, 2007

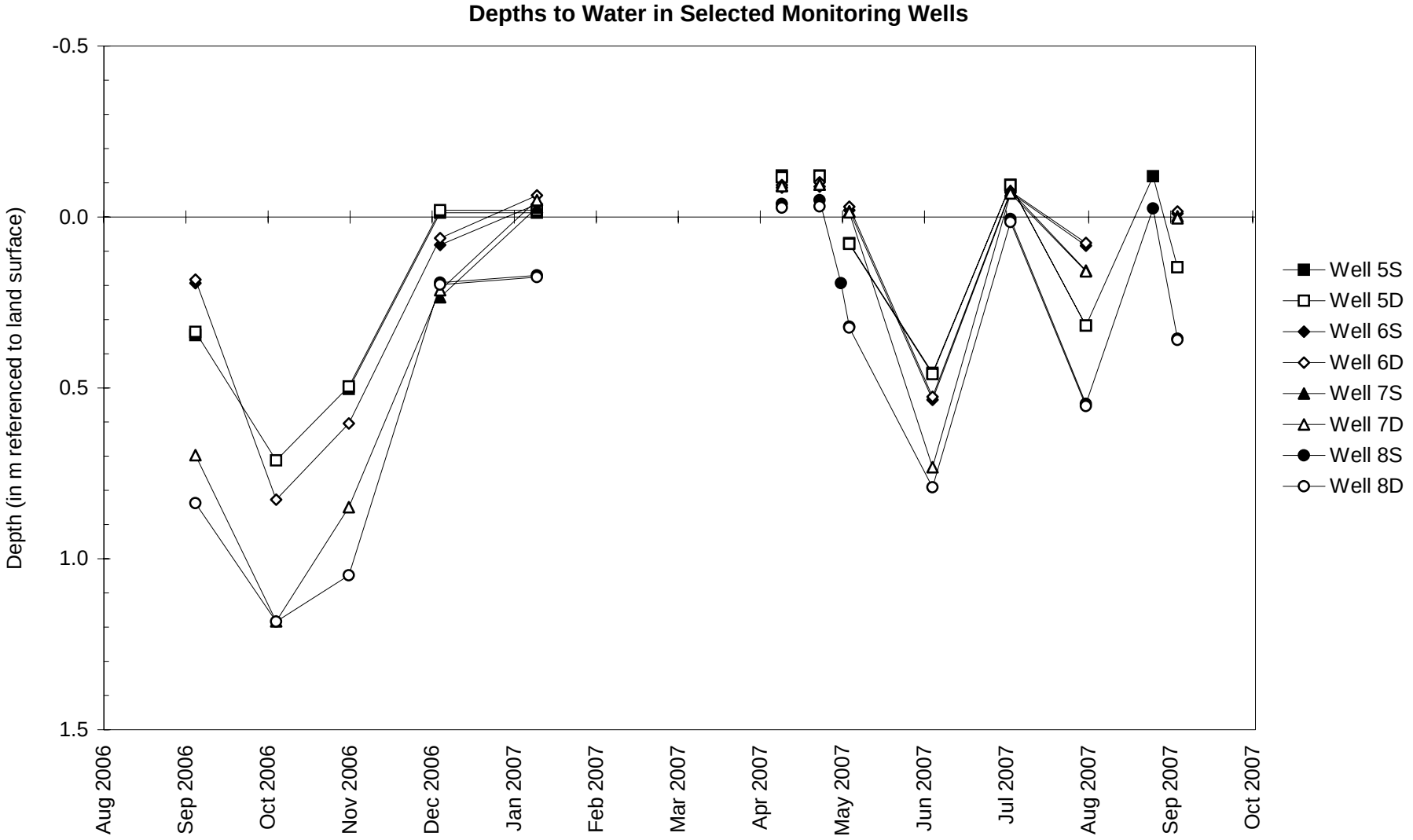


Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007

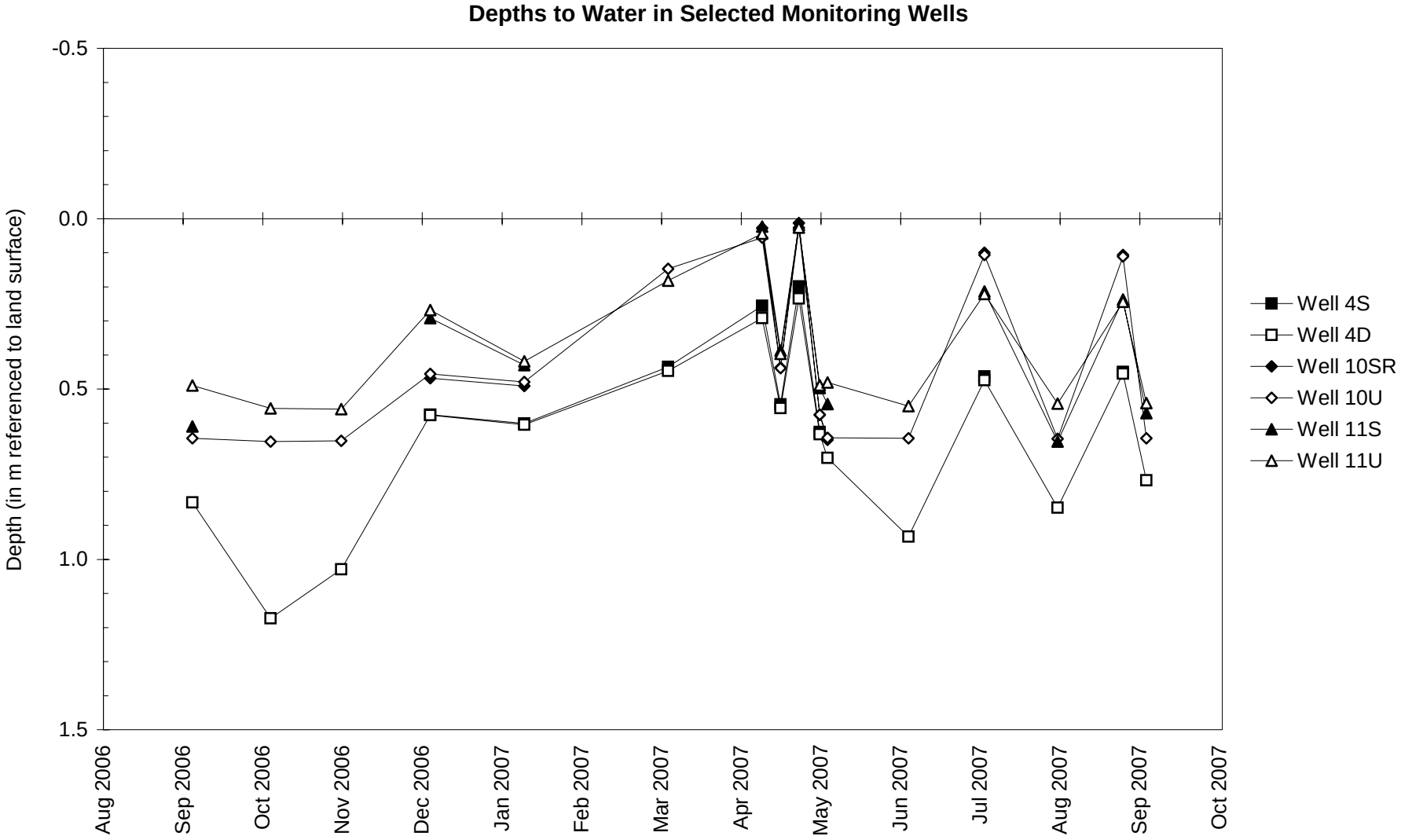
Depths to Water in Deeper Monitoring Wells



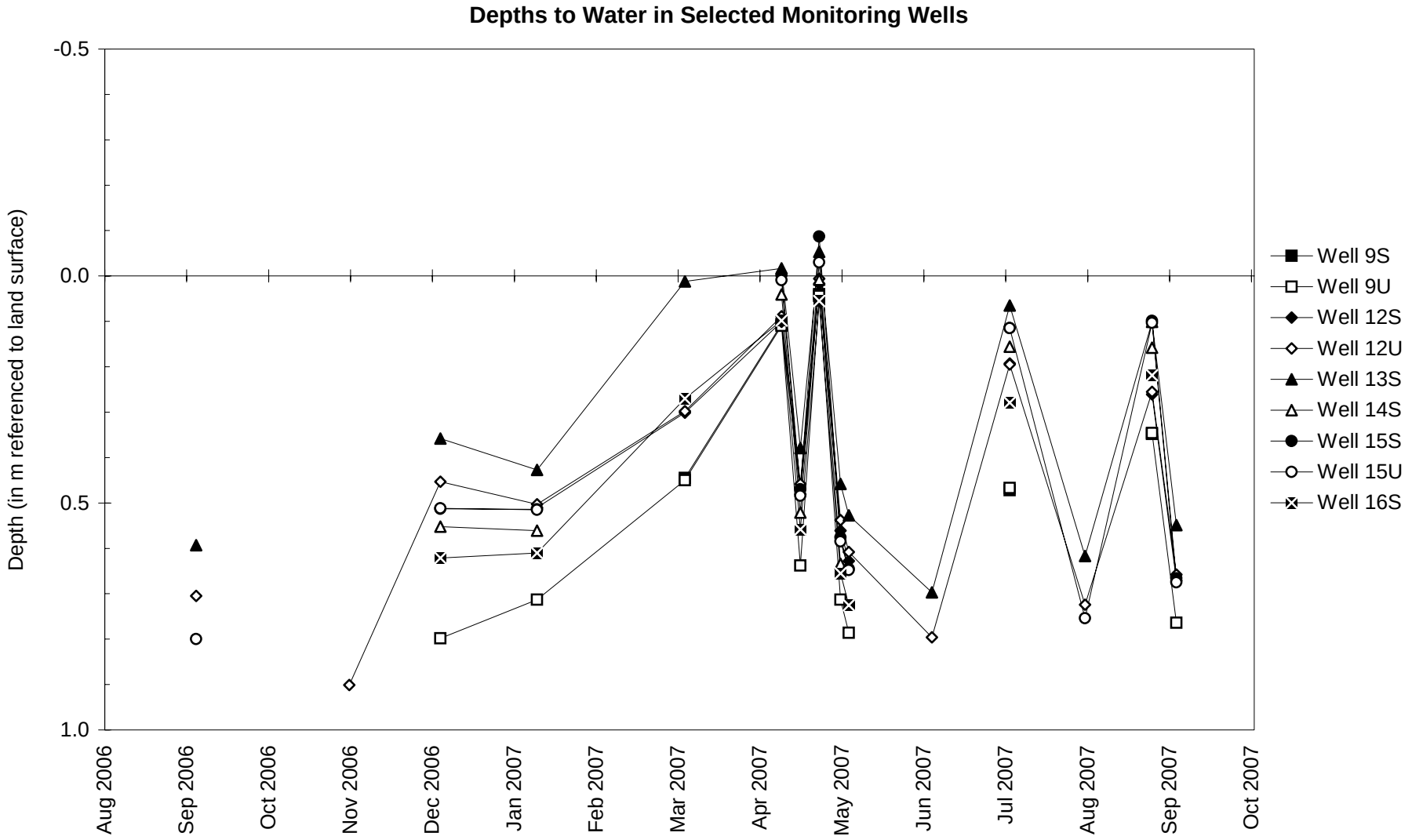
Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007



Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007

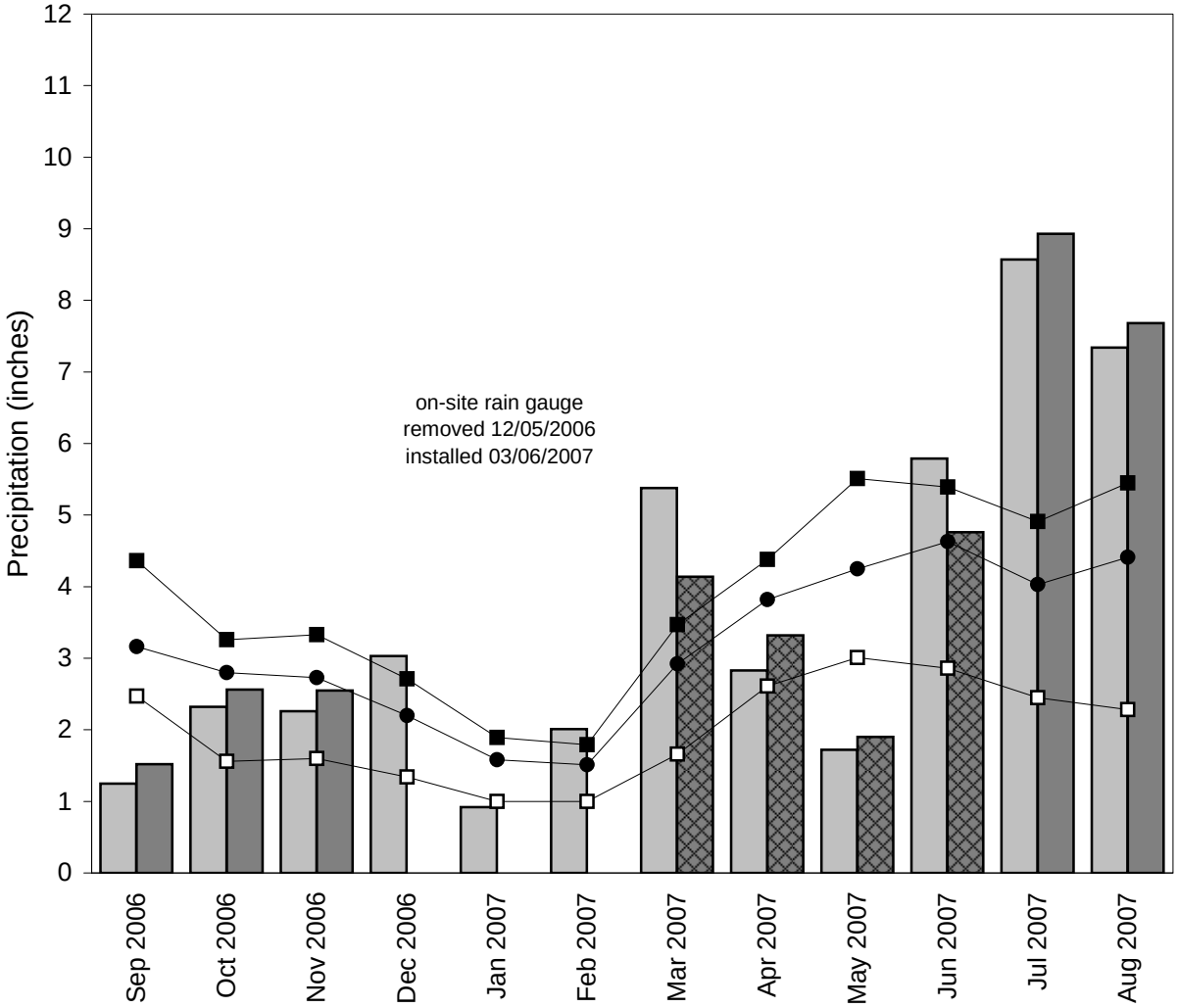


Milan Beltway, Airport Road Wetland Compensation Site
September 1, 2006 to September 5, 2007



Milan Beltway, Airport Road
Wetland Compensation Site
September 2006 through August 2007

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 9, 2007