FORMER TIERNAN PROPERTY, NEW RIVER CROSSING **ISGS #57**
POTENTIAL WETLAND MITIGATION SITE
FAP 999
Sequence #33G
Saint Clair County, near Cahokia, Illinois
Primary Project Manager: Steven E. Benton
Secondary Project Manager: Adrianne K. M. Knight

SITE HISTORY

- July 2000: The ISGS was tasked to perform a Level II hydrogeologic assessment of the site.

- July 2005: A Level II hydrogeologic characterization report was submitted to IDOT (ISGS Open-File Series 2005–11).

WETLAND HYDROLOGY CALCULATION FOR 2010

The area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in 2010 for greater than 5% of the growing season was estimated to be 20.7 ha (51.2 ac) out of a total site area of 26.4 ha (65.3 ac). The area that satisfied wetland hydrology criteria for greater than 12.5% of the growing season was estimated to be 20.7 ha (51.2 ac). Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that 20.7 ha (51.2 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 nearby Cahokia, Illinois, is April 2 and the season lasts 214 days; 5% of the growing season is 11 days and 12.5% of the growing season is 27 days. According to methods outlined in the 2010 Midwest Region supplement, we estimate that March 9 was the starting date of the 2010 growing season based on both vegetation growth and development and soil temperatures measured at the wetland mitigation site.

- Total precipitation recorded at the Belleville, Illinois weather station during the monitoring period was 130% of normal, and total precipitation in spring 2010 (March through May) was 93% of normal.

- In 2010, water levels measured in all of the soil-zone monitoring wells, except 6S, 7S, 23VS, and 23S, satisfied wetland hydrology criteria for more than 5% of the growing season and for more than 12.5% of the growing season. According to the 2010 Midwest Region supplement, water levels measured in all of the soil-zone monitoring wells except 6S, 7S, 23VS, and 23S satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season.

- Surface water at gauge D was at or above 121.20 m (397.66 ft) for a period long enough during the growing season to satisfy jurisdictional wetland hydrology criteria for more than 5% of the growing season and for more than 12.5% of the growing season. Surface water at gauge D was also at or above 121.20 m (397.66 ft) for 14 or more consecutive days during the growing season per the 2010 Midwest Region supplement.

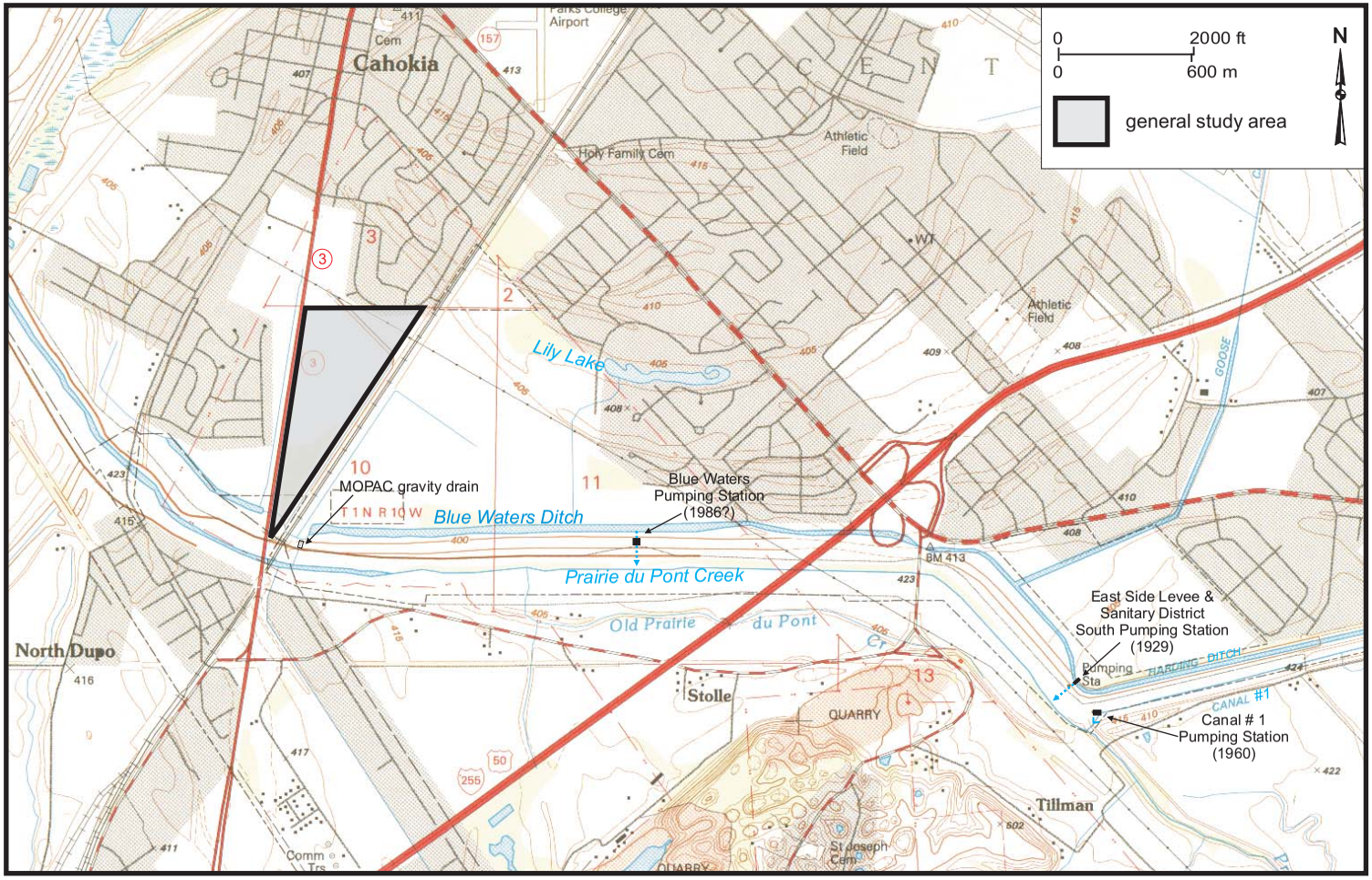
PLANNED FUTURE ACTIVITIES

- Monitoring will continue until no longer required by IDOT.

Former Tiernan Property, New River Crossing Potential Wetland Mitigation Site (FAP 999)

General Study Area and Vicinity

from the USGS Topographic Series, Cahokia, IL, 7.5-minute Quadrangle (USGS 1993)
contour interval is 3 m (10 ft)



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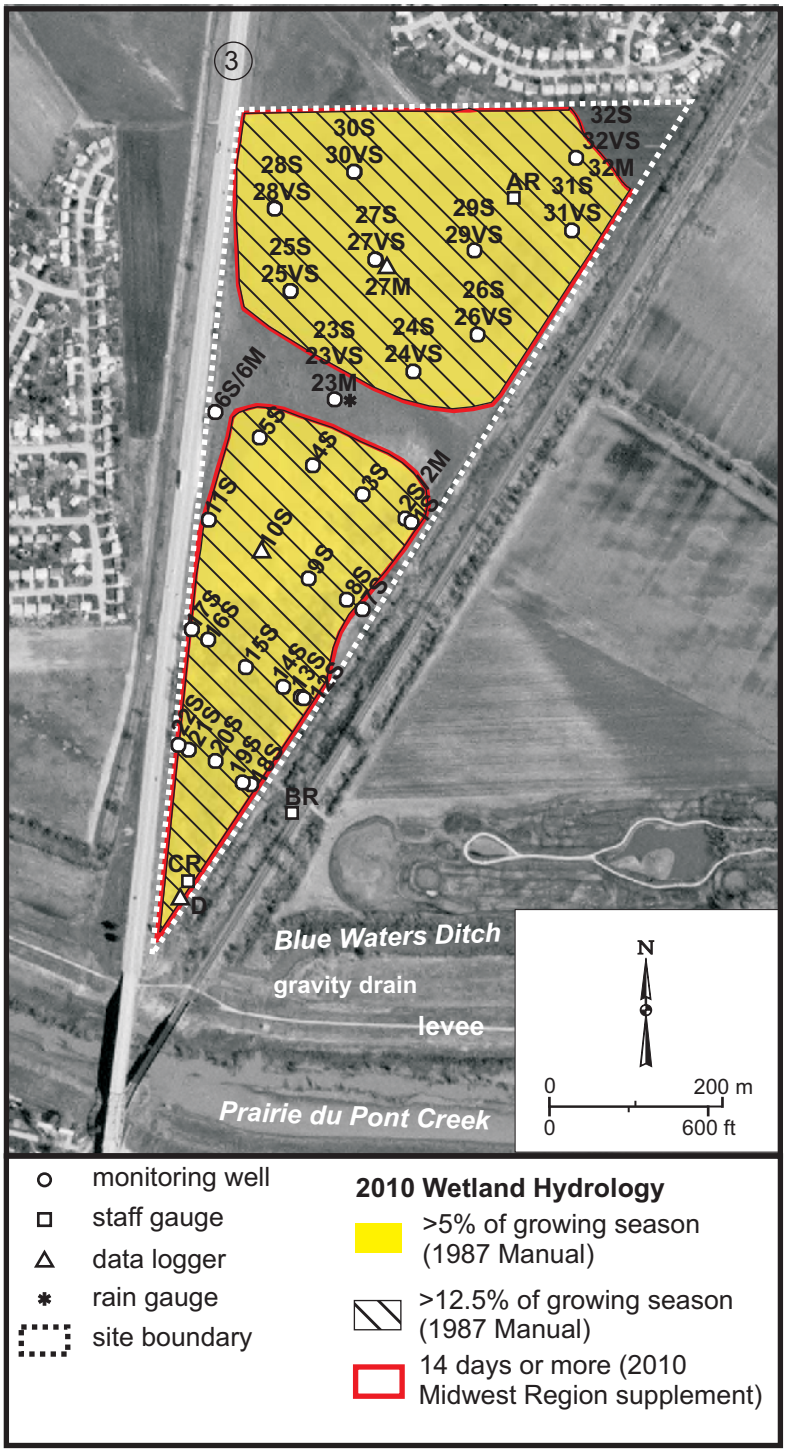
(FAP 999)

Estimated Areal Extent of 2010 Wetland Hydrology

September 1, 2009 through August 31, 2010

Map based on USGS digital orthophotograph, Cahokia SW quarter quadrangle
produced from 04/02/98 aerial photography (ISGS 2000)



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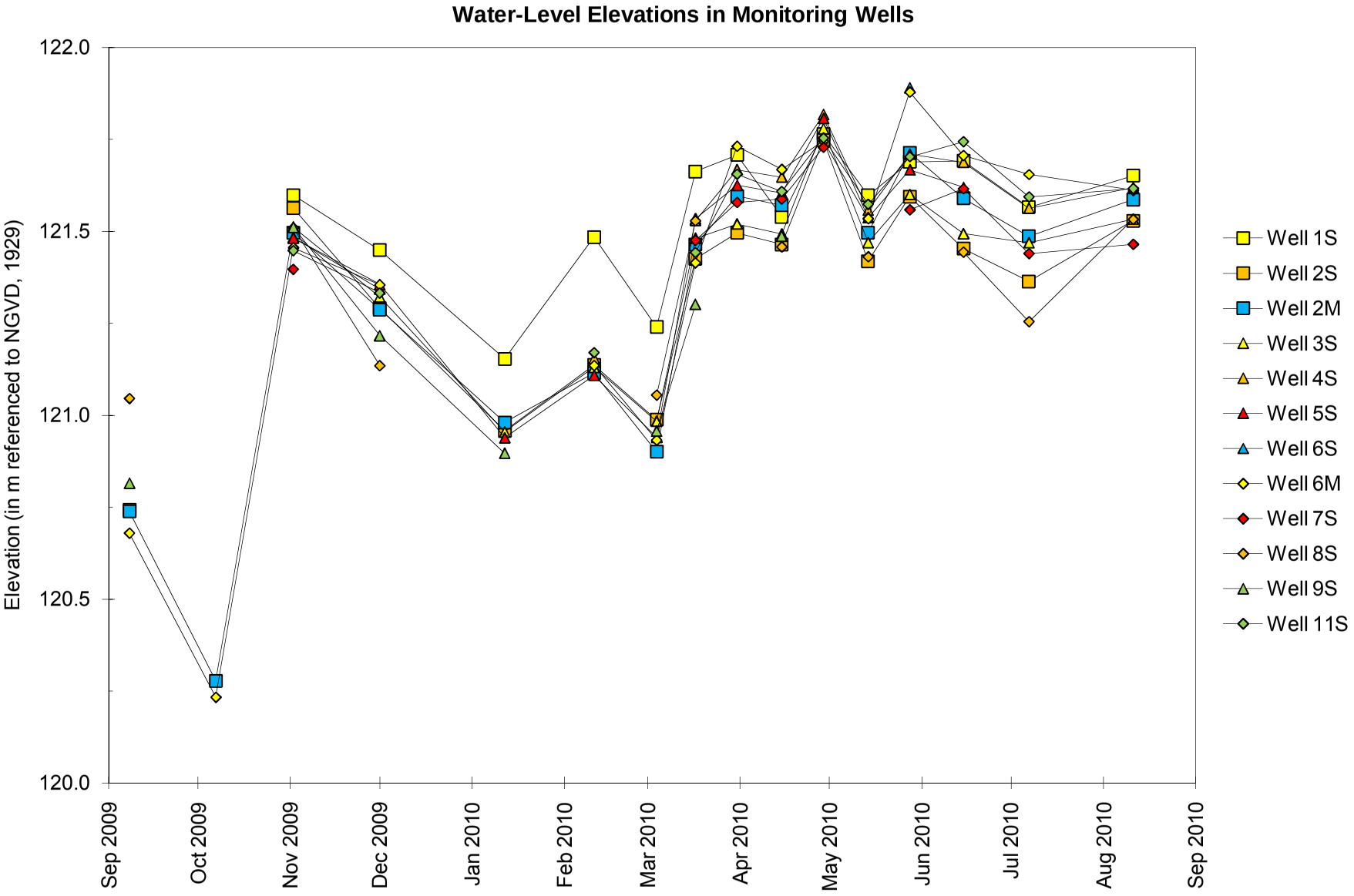

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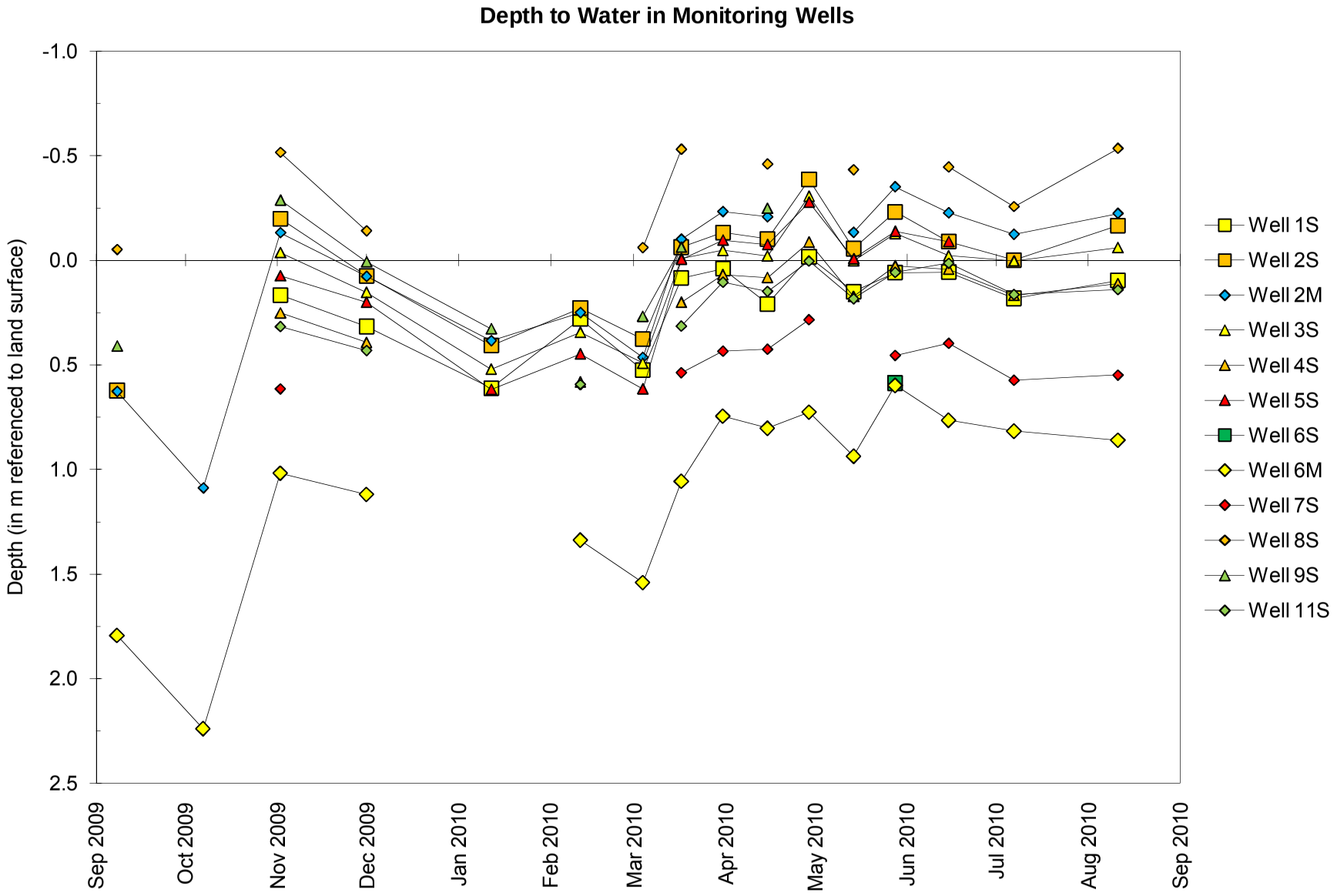

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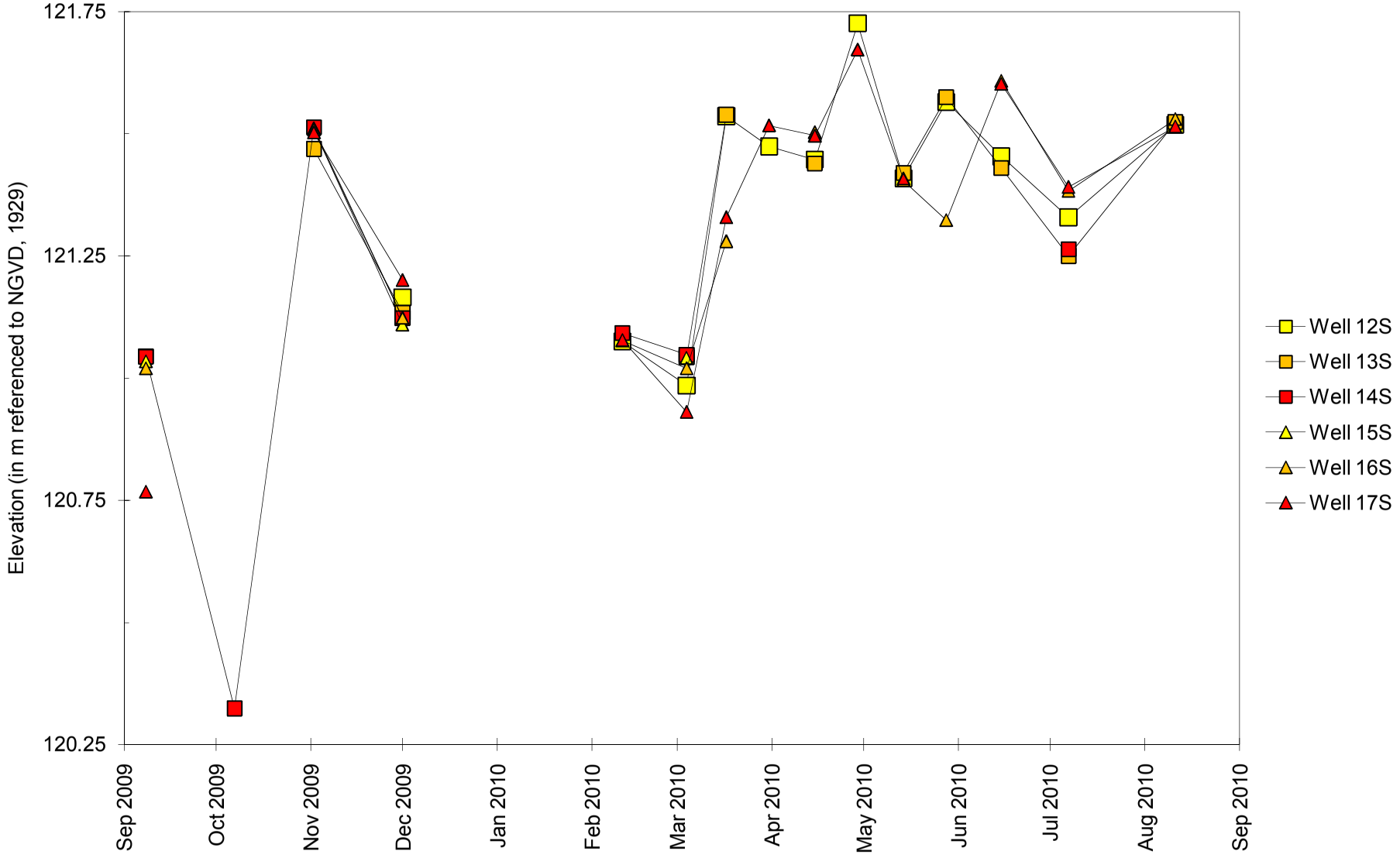
Water-Level Elevations in Monitoring Wells



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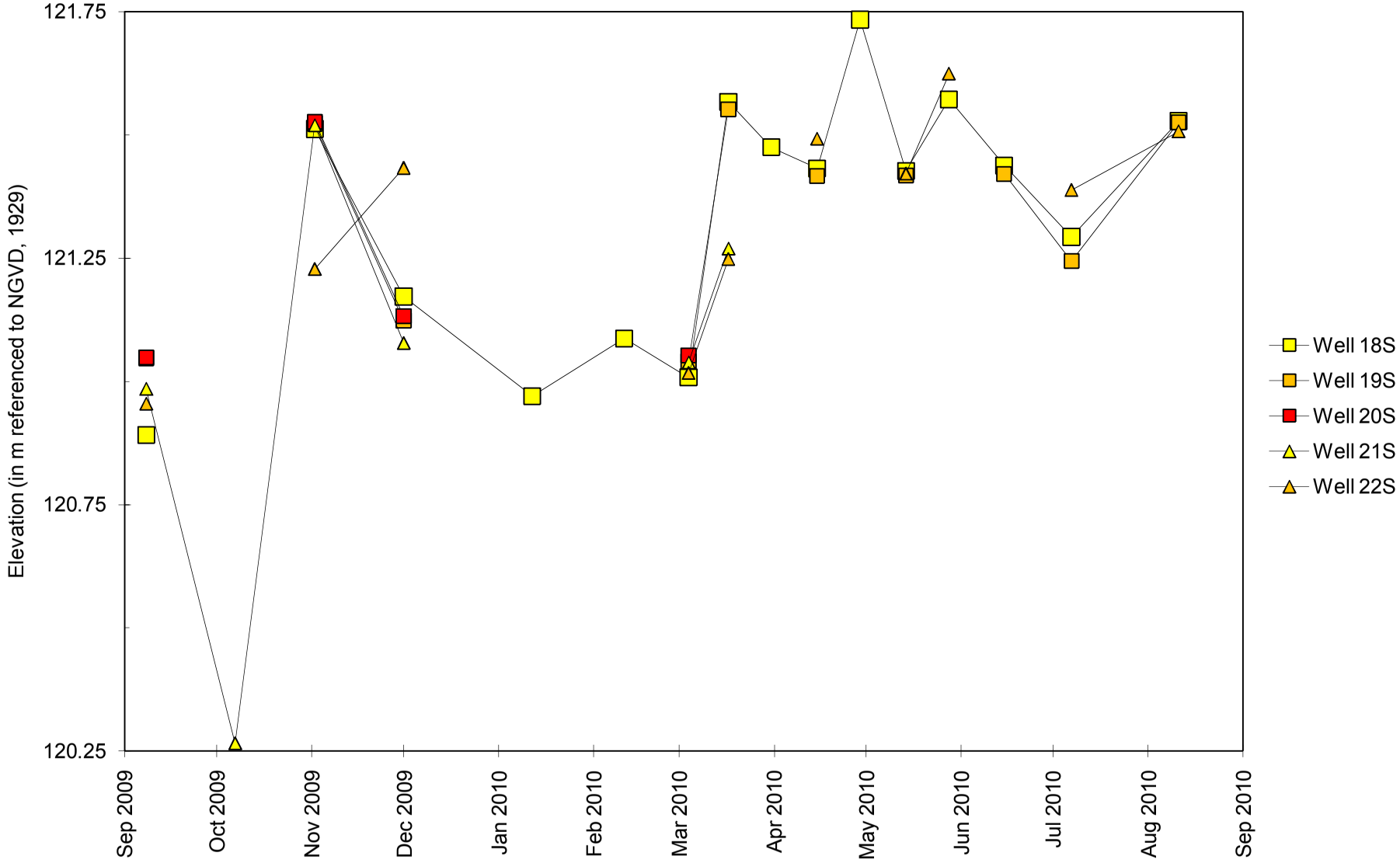

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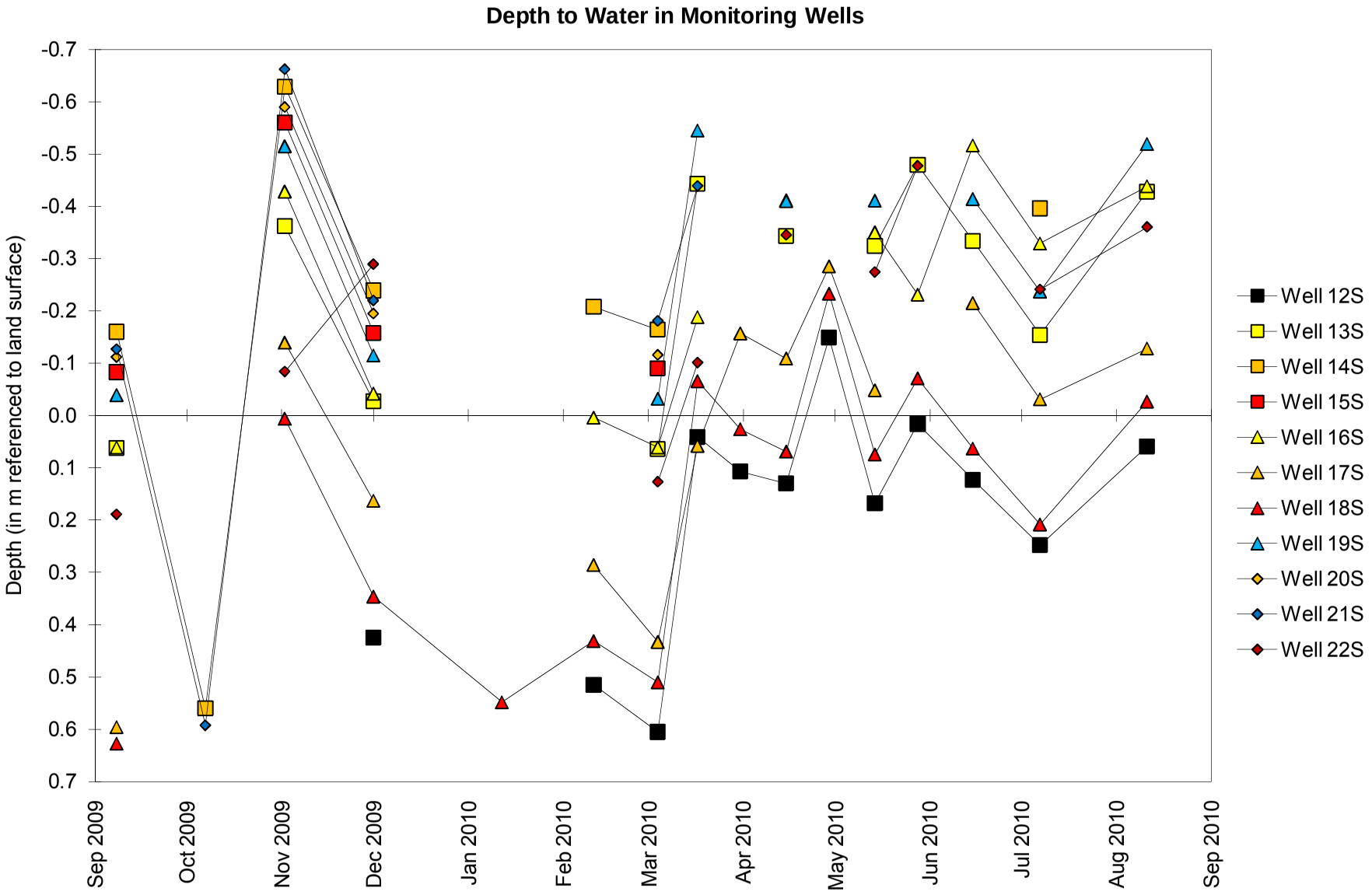

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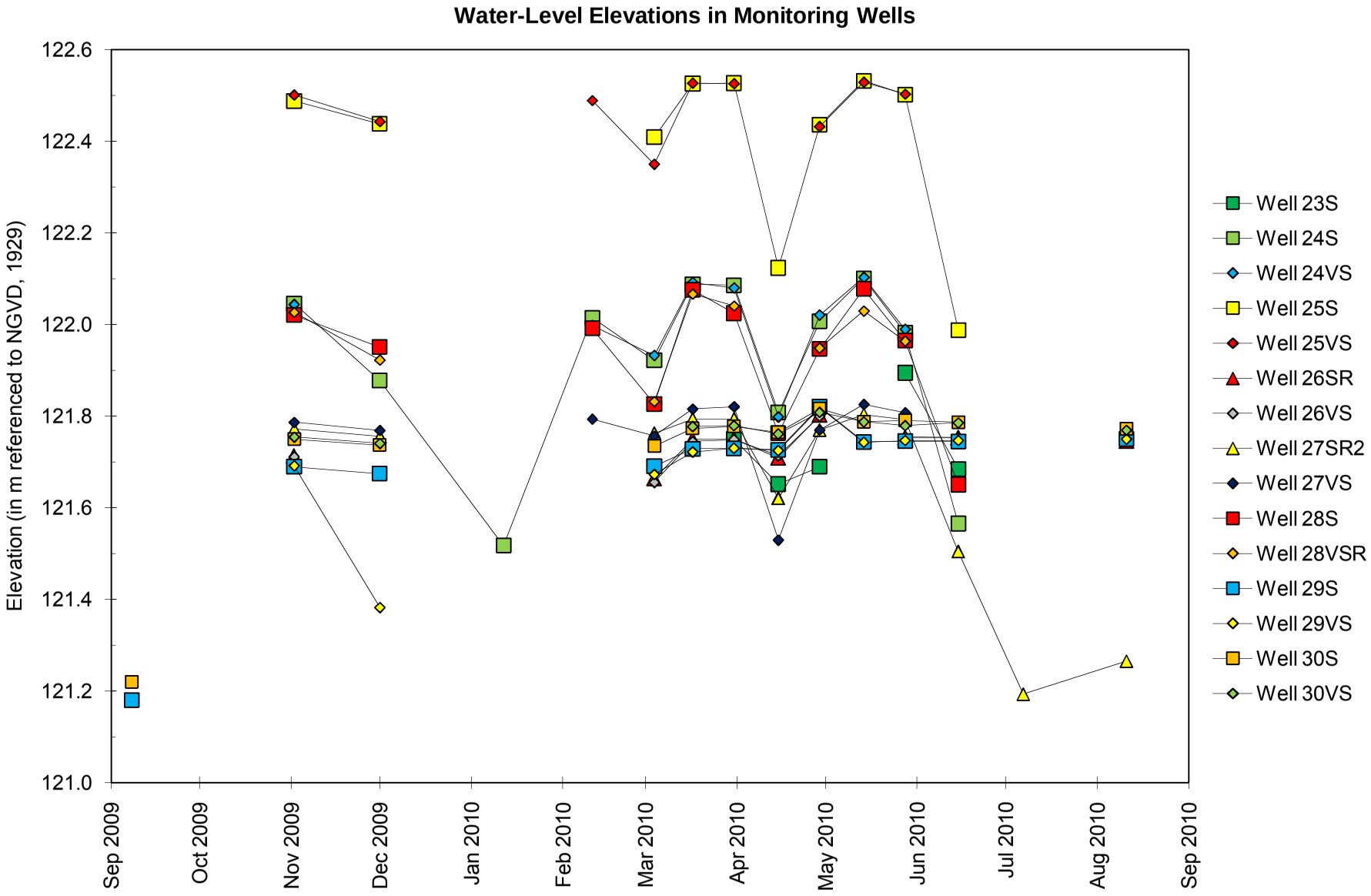

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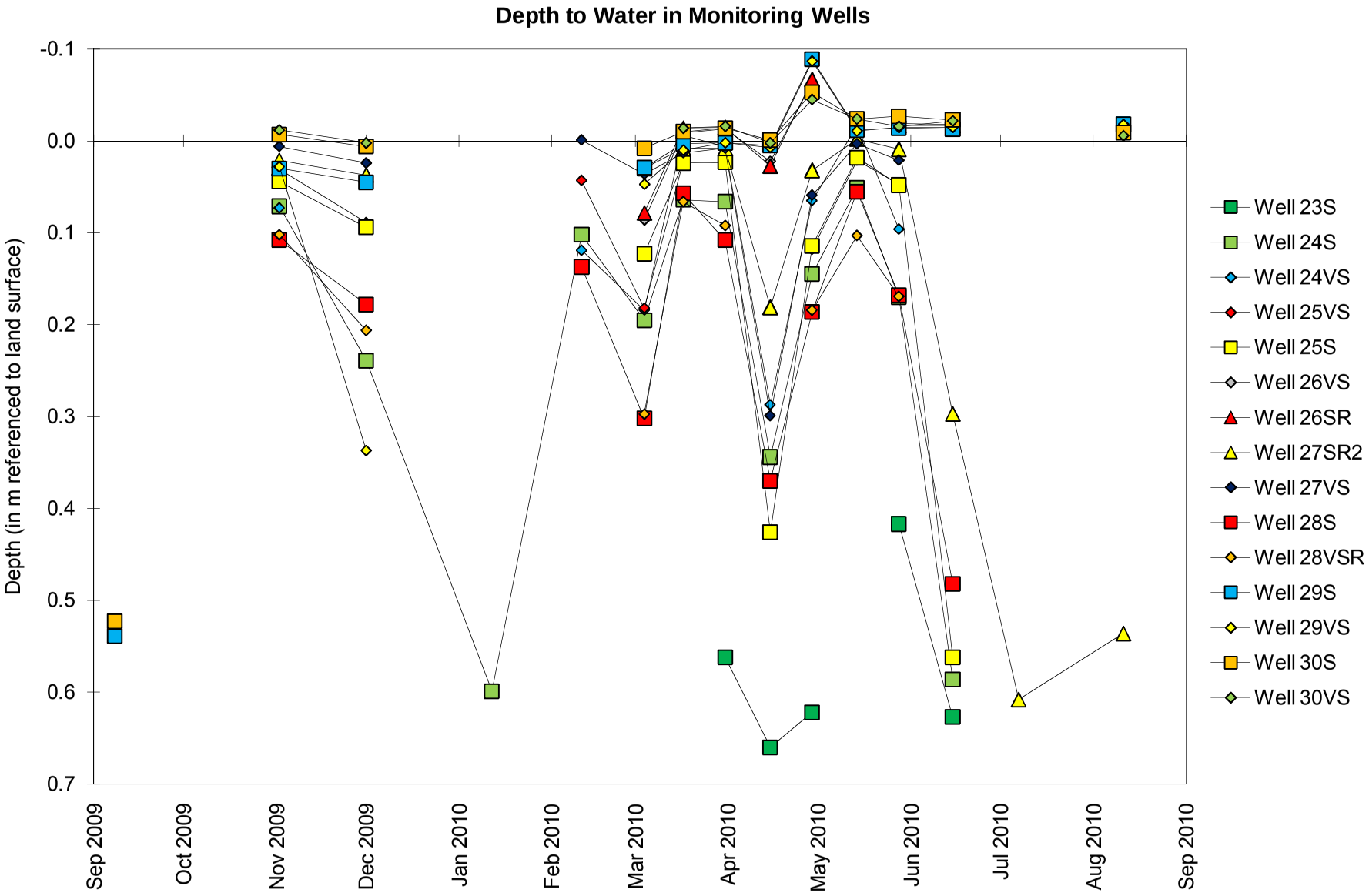

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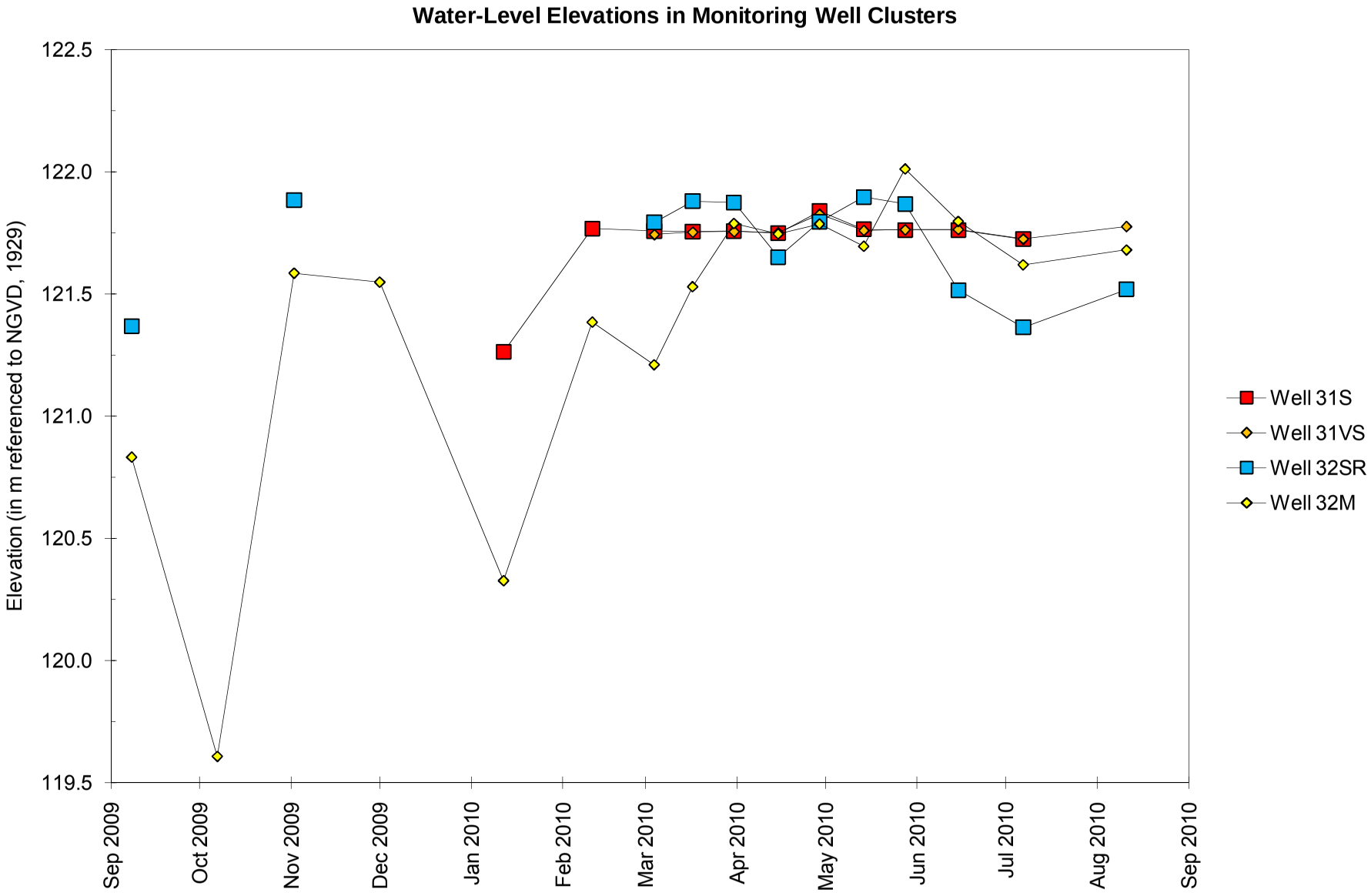

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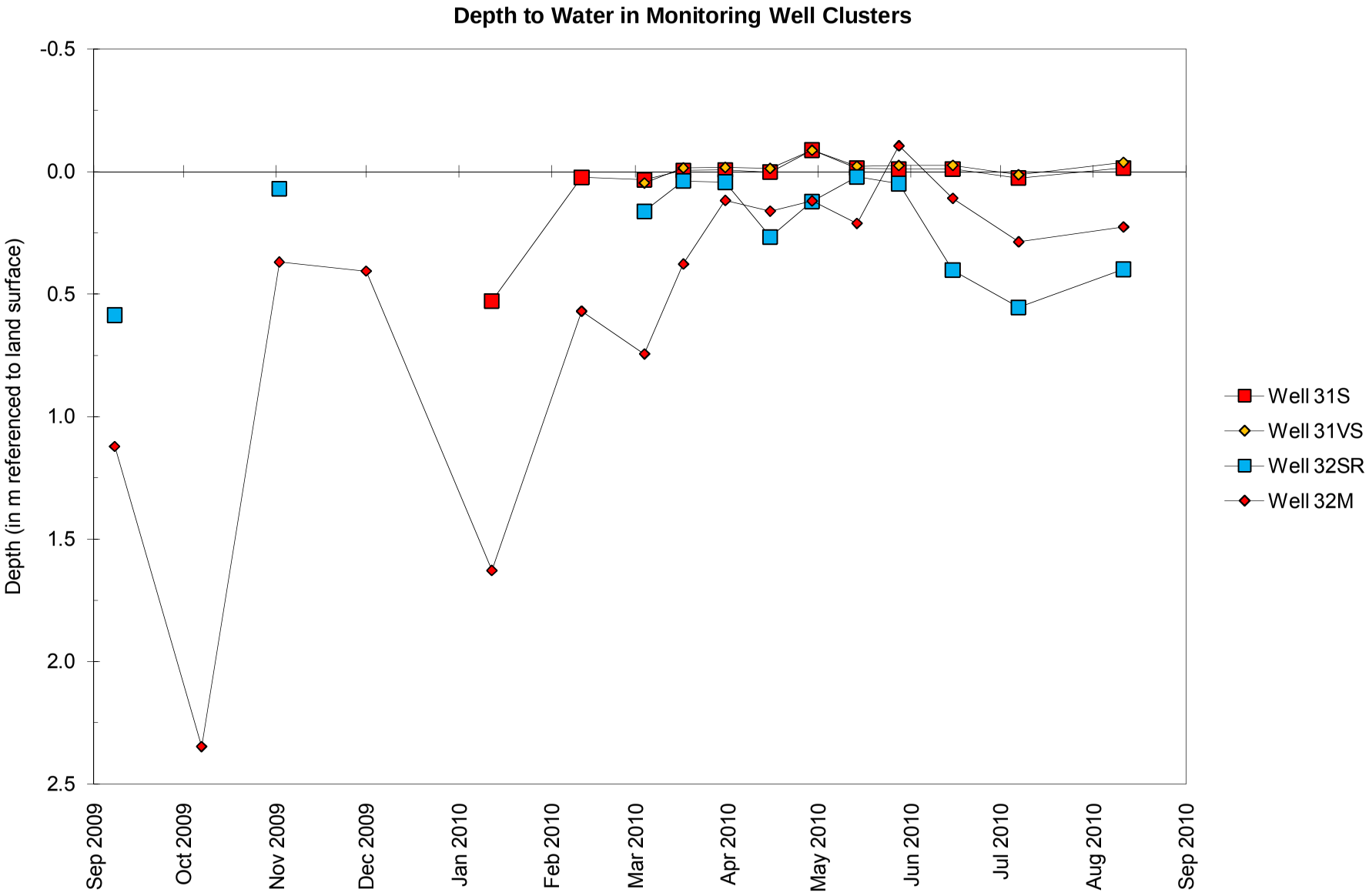

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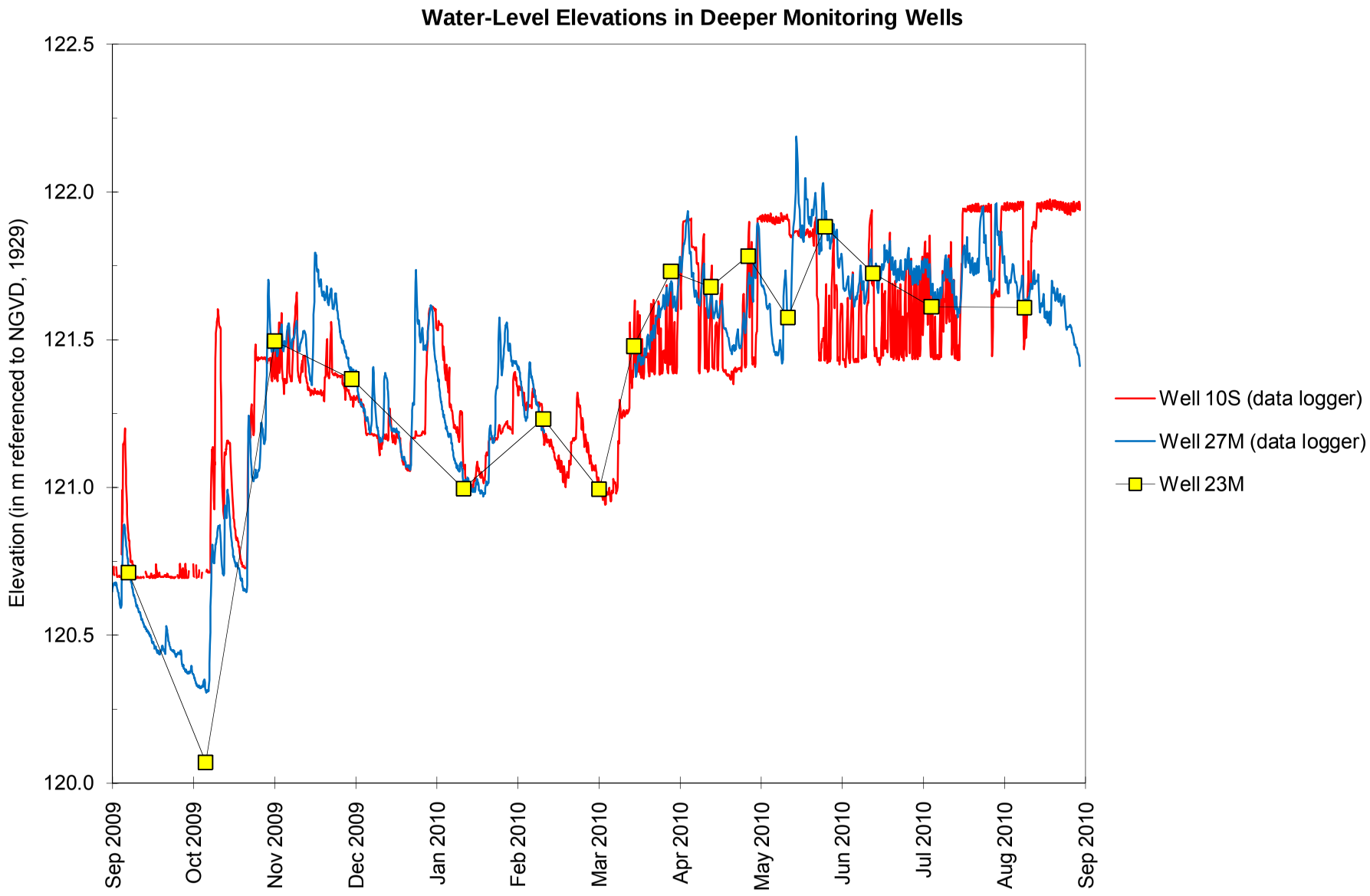

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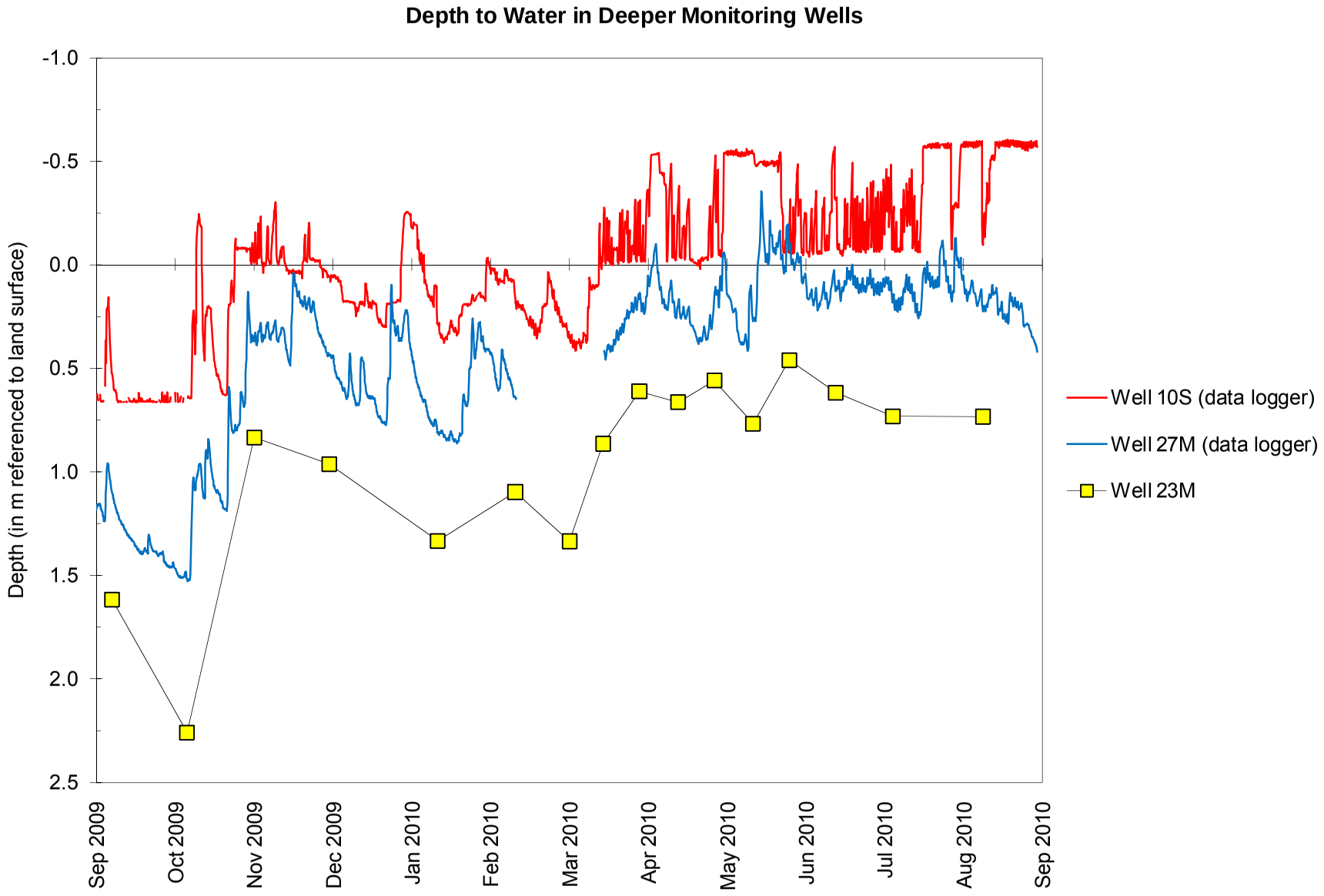

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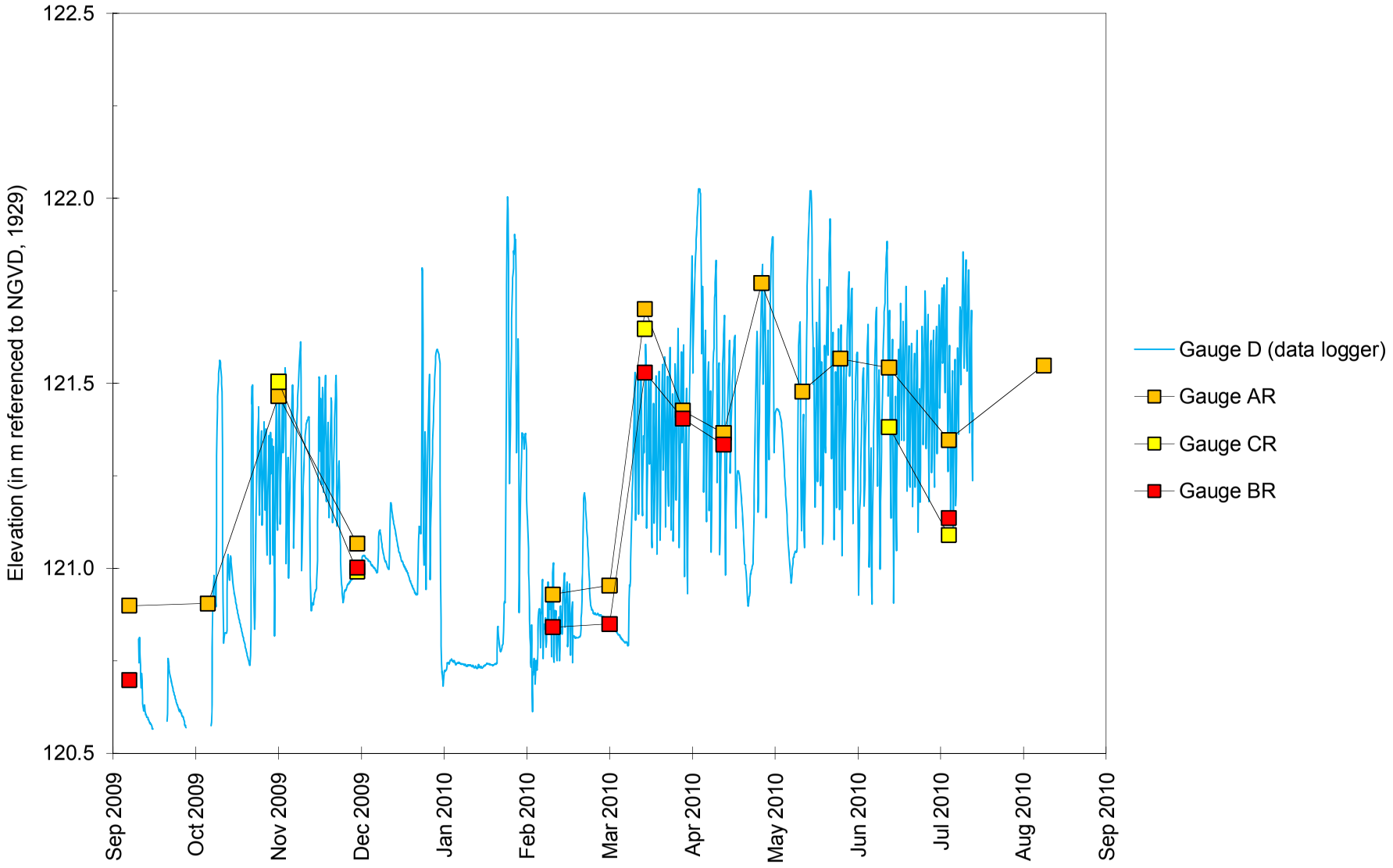
Surface-Water Elevations at Gauges



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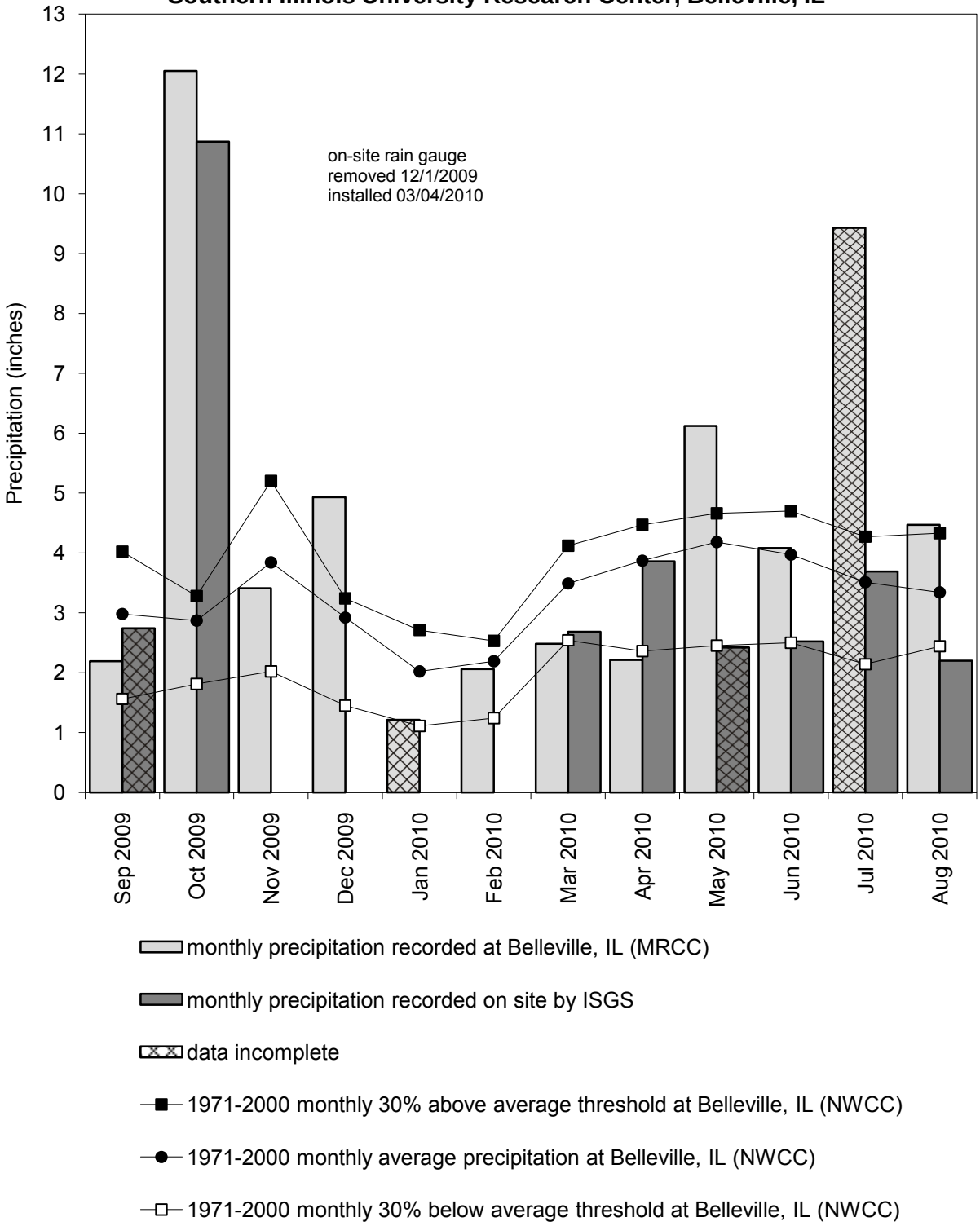
Total Monthly Precipitation Recorded on Site and at the Southern Illinois University Research Center, Belleville, IL



Graph last updated September 29, 2010