

**NORTH CHICAGO  
WETLAND MITIGATION SITE**

**ISGS #84**

IL 56/IL 47

FAP 326

Sequence #13406

Lake County, North Chicago, Illinois

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**Secondary Project Manager: James J. Miner**

**SITE HISTORY**

- 1995-2002: Previous site studies occurred during this period, prior to monitoring being suspended by IDOT in Spring 2002.
- Spring 2009: IDOT re-started monitoring. ISGS installed monitoring wells in the northernmost part of the site to document restoration potential associated with tile removal in that area.
- Spring and Summer 2010: Drain tiles and invasive vegetation were removed.
- August 2011: ISGS added 14 shallow monitoring wells and one surface-water station (all equipped with data loggers) to monitor various wetlands on site. These will provide data for the 2011-2012 monitoring season and onwards.

**WETLAND HYDROLOGY CALCULATION FOR 2011**

Wetland acreage is not calculated for this site due to the limited scope of monitoring. In 2011, the northernmost part of the site was monitored by eight ISGS soil-zone monitoring wells previously installed to document hydrologic changes from tile removal. Only the wetland hydrology status at each of these point locations are presented.

Given the above limitation, six of the eight monitoring wells located in the north portion of the site satisfied wetland hydrology criteria for greater than 5% of the growing season and for greater than 12.5% of the growing season, according to the 1987 Manual. Using the 2010 Midwest Region Supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, the same six wells also satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. These estimates are based on the following factors:

- The median date that the growing season begins in Waukegan, Illinois, is April 14, and it lasts 195 days (MRCC 2011); 5% of the growing season is 9 days, and 12.5% of the growing season is 24 days, according to the 1987 Manual. According to methods outlined in the 2010 Midwest Region Supplement, we estimate that April 3 was the starting date of the 2011 growing season based upon on-site soil temperature readings augmented by WARM soil temperature data from the nearest Illinois Climate Network station in St.Charles, IL (ISWS 2011).
- Total precipitation for the monitoring period at the Chicago O'Hare International Airport weather station, Chicago, IL, was 129% of normal. During the March through May period of 2011, precipitation was 152% of normal, leading to wetter on-site conditions early in the growing season than are typical. Although the site became drier in June,

July precipitation was 317% of normal, maintaining high water levels on site for later in the year than is typical.

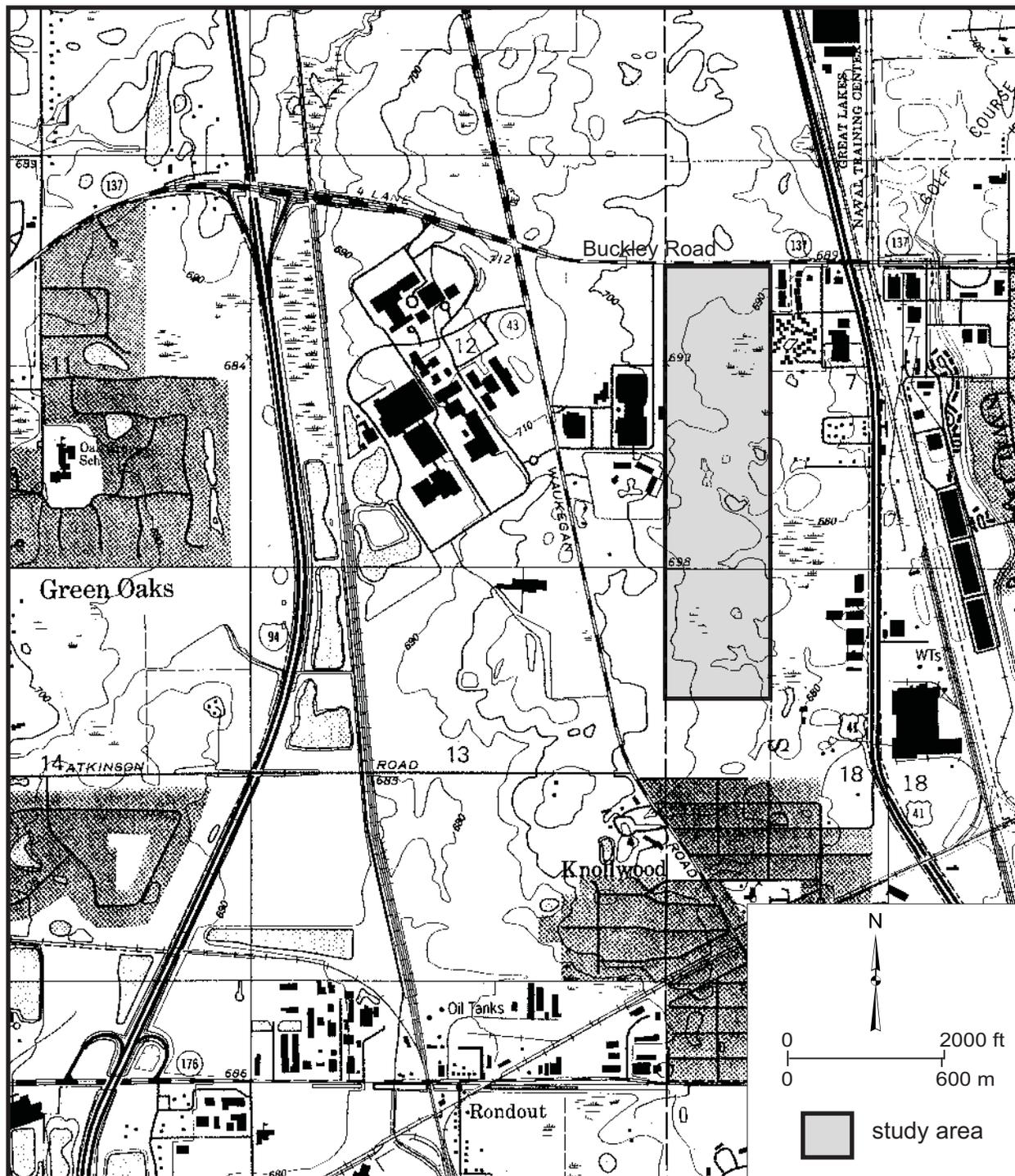
- In 2011, wells 09-01, 09-02, 09-05, 09-06, 09-07 and 09-08 satisfied wetland hydrology criteria for greater than 5% of the growing season and for greater than 12.5% of the growing season, according to the 1987 Manual. According to the 2010 Midwest Region Supplement, the same wells also satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season. Well 09-04 did not satisfy wetland hydrology criteria and well 09-03 was destroyed just prior to the growing season and was not considered in 2011.

#### PLANNED FUTURE ACTIVITIES

- ISGS will monitor additional points on site using 14 recently installed shallow monitoring wells equipped with data loggers as well as a surface water data logger, all of which were added in August 2011. An on-site rain gauge will also be added to the site.
- Monitoring of hydrology will continue until no longer required by IDOT.

**North Chicago Wetland Mitigation Site  
(IL 56/IL 47, FAP 326)  
General Study Area and Vicinity**

from the USGS Topographic Series, Libertyville, IL (W) (USGS 1993) and Waukegan, IL (E) (USGS 1993)  
7.5-minute Quadrangles

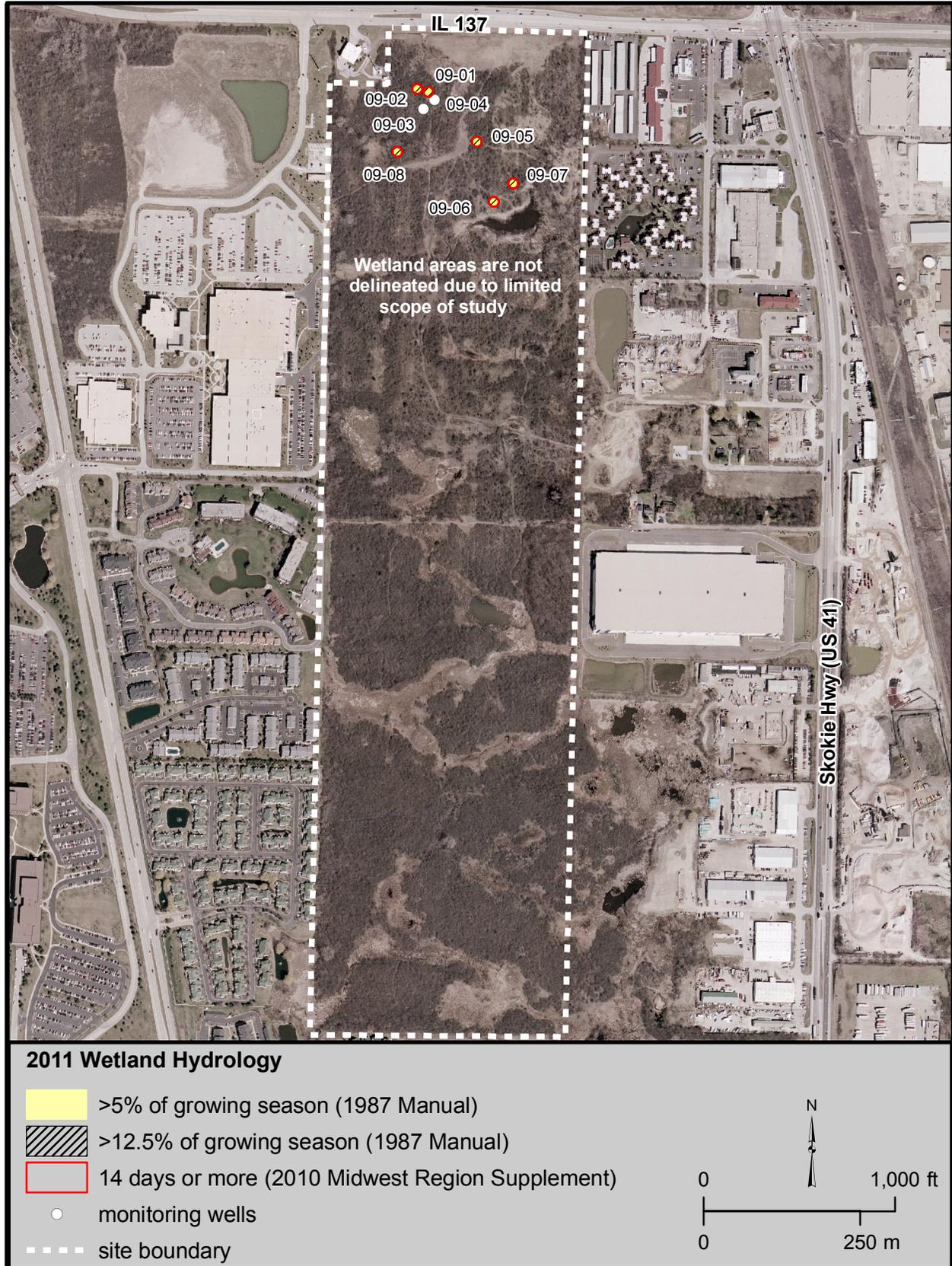


# North Chicago Wetland Mitigation Site (IL 56/IL47, FAP 326)

## Wells Meeting Wetland Hydrology Criteria

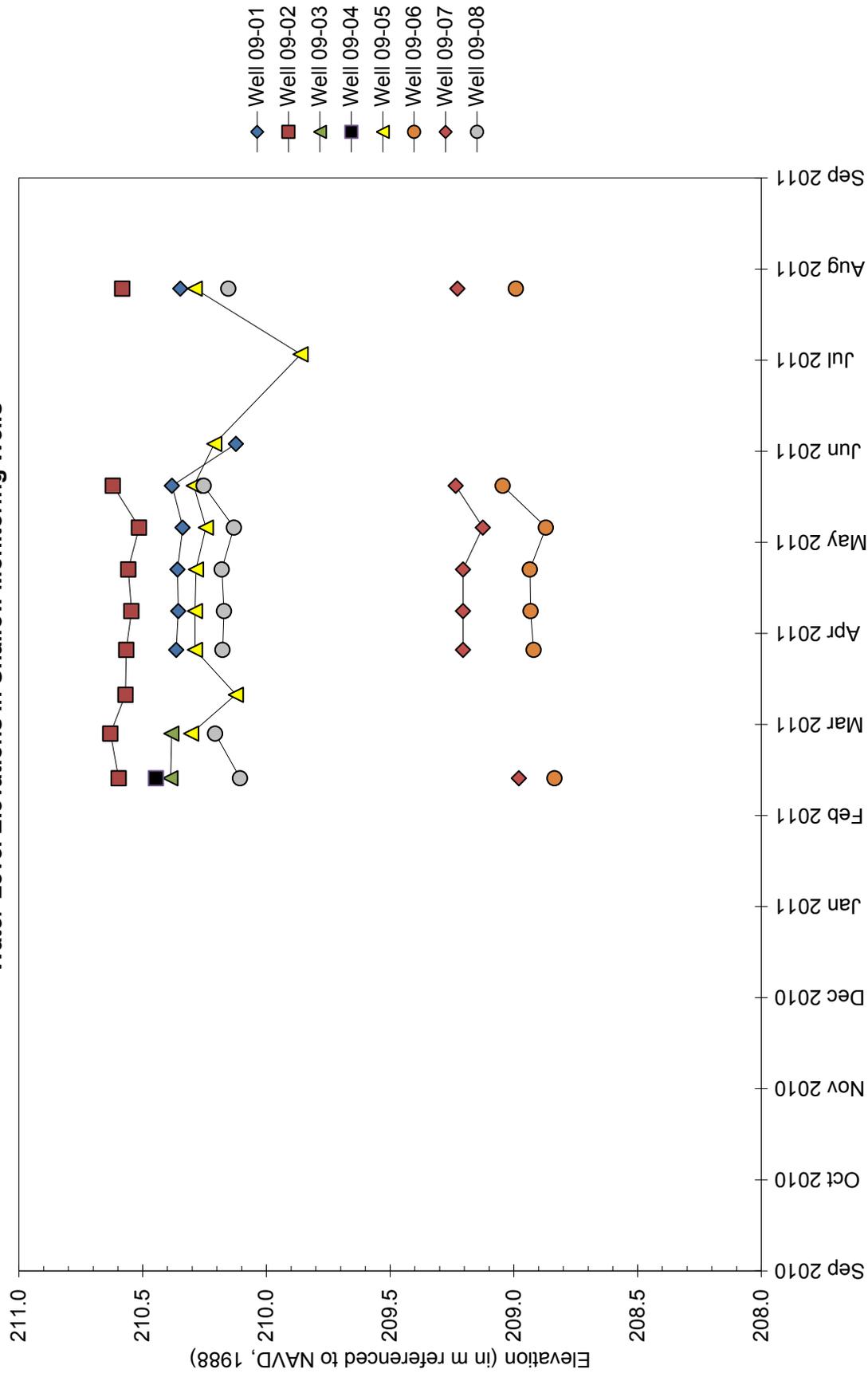
September 1, 2010 through August 31, 2011

Map based on USGS High Resolution Orthoimagery for the Chicago, IL, Urban Area (USGS 2005)



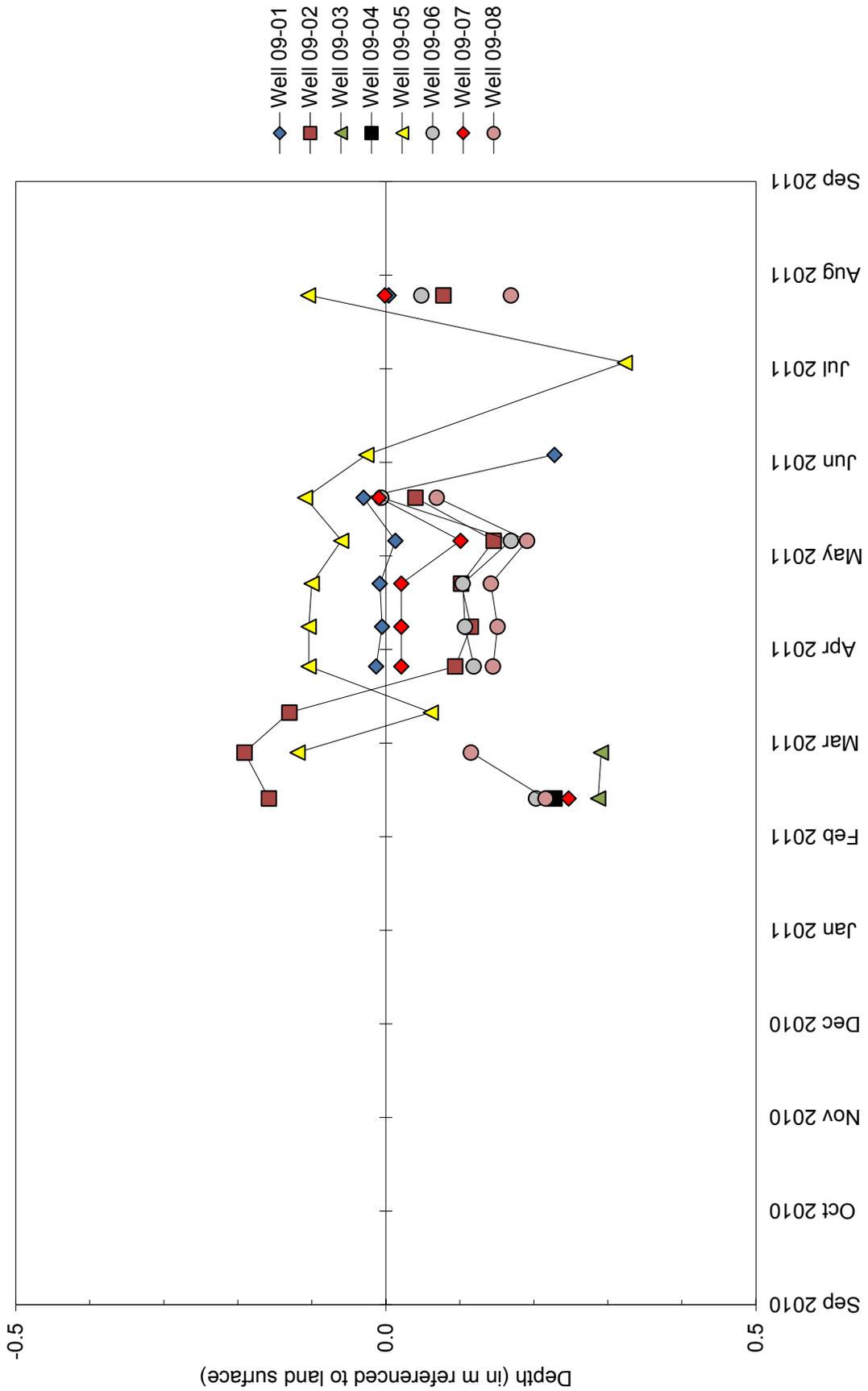
# North Chicago Wetland Mitigation Site September 1, 2010 through August 31, 2011

## Water-Level Elevations in Shallow Monitoring Wells



# North Chicago Wetland Mitigation Site September 1, 2010 through August 31, 2011

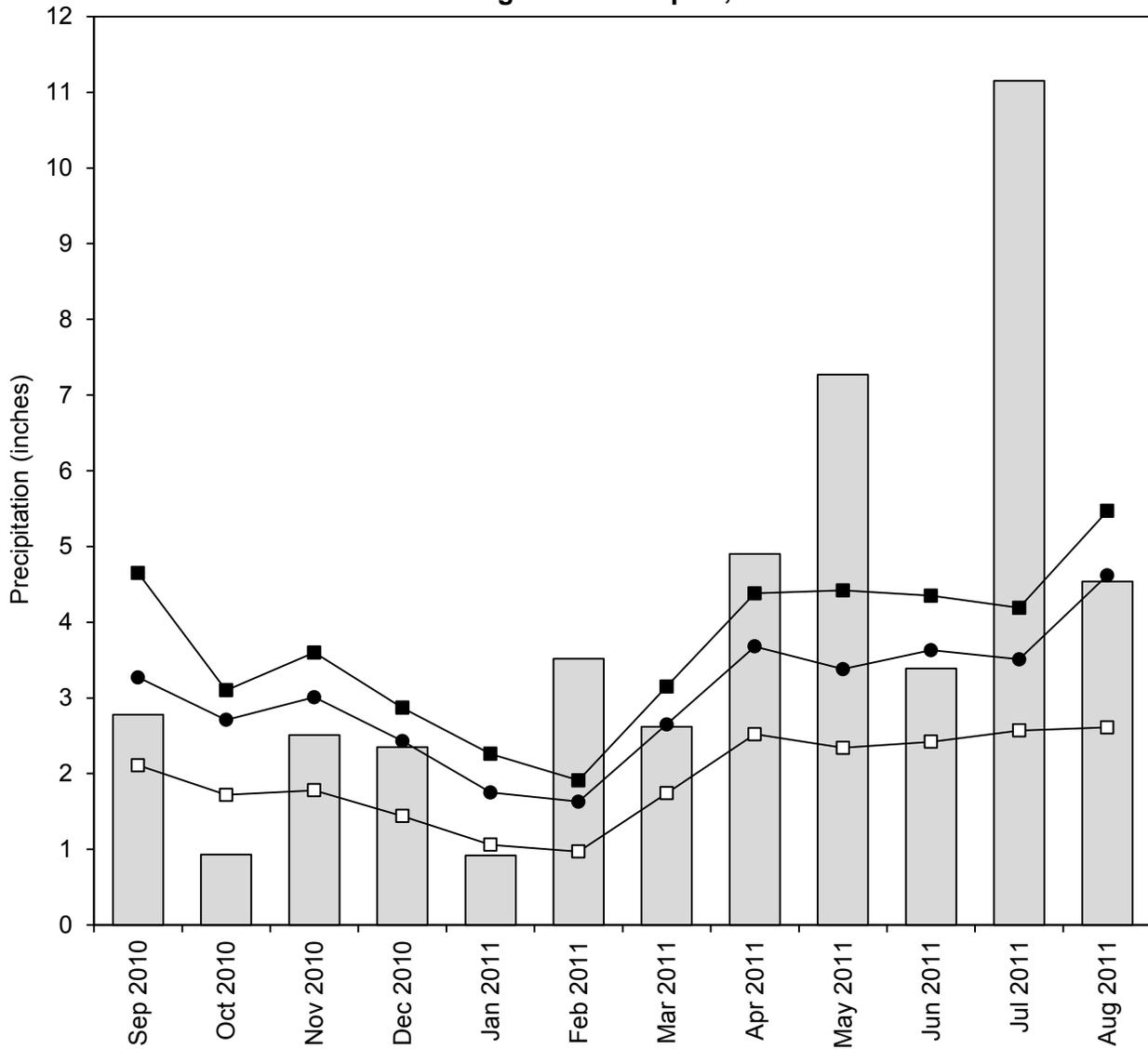
Depth to Water in Shallow Monitoring Wells



# North Chicago Wetland Mitigation Site

## September 2010 through August 2011

### Total Monthly Precipitation Recorded at the Chicago O'Hare Airport, IL



- monthly precipitation recorded at Chicago O'Hare Airport, IL (MRCC)
- data incomplete
- 1971-2000 monthly 30% above average threshold at Chicago O'Hare Airport, IL (NWCC)
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- 1971-2000 monthly 30% below average threshold at Chicago O'Hare Airport, IL (NWCC)

Graph last updated 10/31/2011