NORTH CHICAGO **ISGS #84**
WETLAND MITIGATION SITE
IL 56/IL 47
FAP 326
Lake County, North Chicago, Illinois
Primary Project Manager: Keith W. Carr
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 (where field tiles have been found) to document restoration potential associated with tile removal.

- Spring and Summer 2010: Removal and burning of buckthorn and other undesirable species was undertaken, as was drainage tile removal. ISGS also conducted an on-site elevation survey to determine potential inundation depths in the north portion of the site, depending upon restoration options.

WETLAND HYDROLOGY CALCULATION FOR 2010

In 2010, the northernmost part of the site was monitored by eight ISGS soil-zone monitoring wells previously installed to document hydrologic changes from tile removal. Given these limitations, we estimate that the total area monitored that satisfied wetland hydrology criteria (Environmental Laboratory 1987) in this area for greater than 5% of the growing season in 2010 was 0.2 ha (0.5 ac). Further, the same 0.2 ha (0.5 ac) also satisfied wetland hydrology criteria for greater than 12.5% of the growing season. Using the 2010 Midwest Region supplement (U.S. Army Corps of Engineers 2010) to the 1987 Manual, we estimate that the same 0.2 ha (0.5 ac) also 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 Waukegan, Illinois, is April 14, and it lasts 195 days; 5% of the growing season is 9 days, and 12.5% of the growing season is 24 days. According to methods outlined in the 2010 Midwest Region supplement, we estimate that March 16 was the starting date of the 2010 growing season based upon soil temperature readings as well as vegetation growth and development observed at the wetland banking site.

- Total precipitation for the monitoring period at the Chicago O'Hare International Airport weather station, Chicago, IL, was 111% of normal. During the March through May period of 2010, precipitation was 97% of normal, but was 210% of normal in June and July.

- In 2010, wells 09-6 and 09-8 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 2010 Midwest Region supplement, wells 09-6 and 09-8 also satisfied wetland hydrology criteria for 14 or more consecutive days during the growing season.

- Only selected wetlands were monitored because the scope of the study was limited to the northern portion of the site.

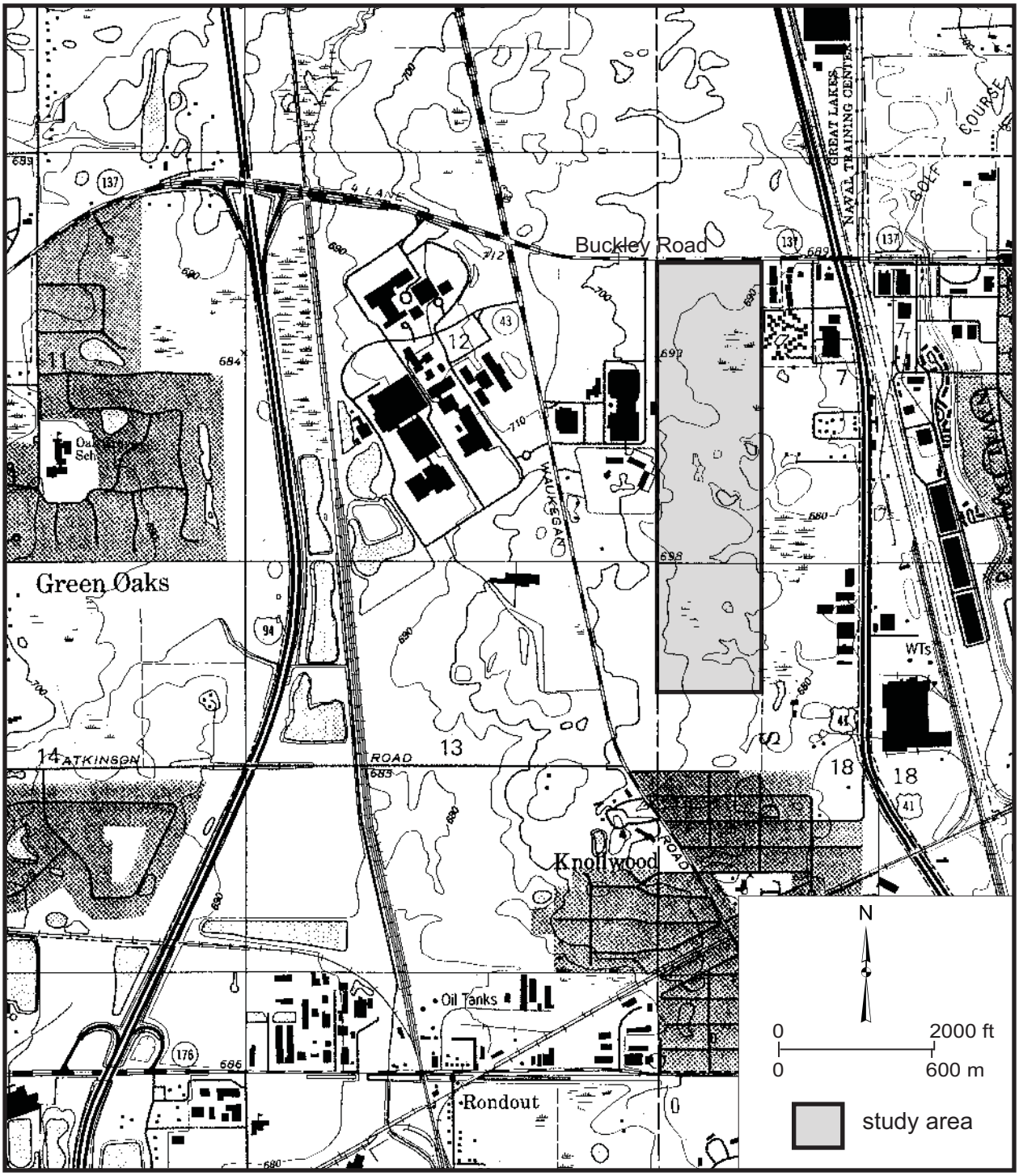
PLANNED FUTURE ACTIVITIES

- Two surface-water data loggers, two groundwater data loggers, and an on-site rain gauge will be added to the site in spring 2011. This will be in addition to planned wells required to monitor wetlands site-wide as recently directed by IDOT

- Monitoring of hydrology will continue until no longer required by IDOT.

North Chicago Wetland Mitigation Site
(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



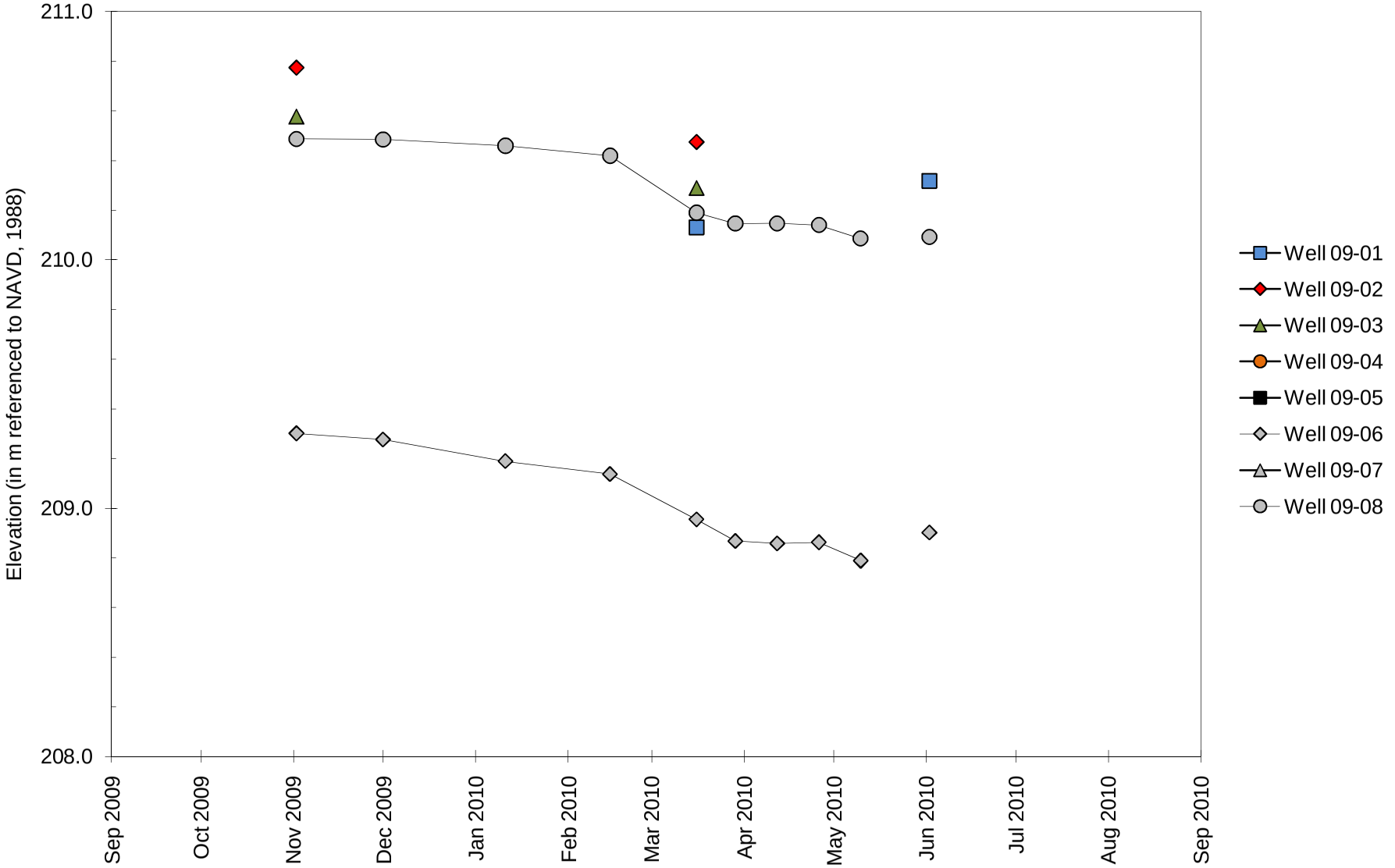
North Chicago Wetland Mitigation Site
(FAP 326)
Estimated Areal Extent of 2010 Wetland Hydrology
September 1, 2009 through August 31, 2010

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

North Chicago Wetland Mitigation Site

September 1, 2009 through August 31, 2010

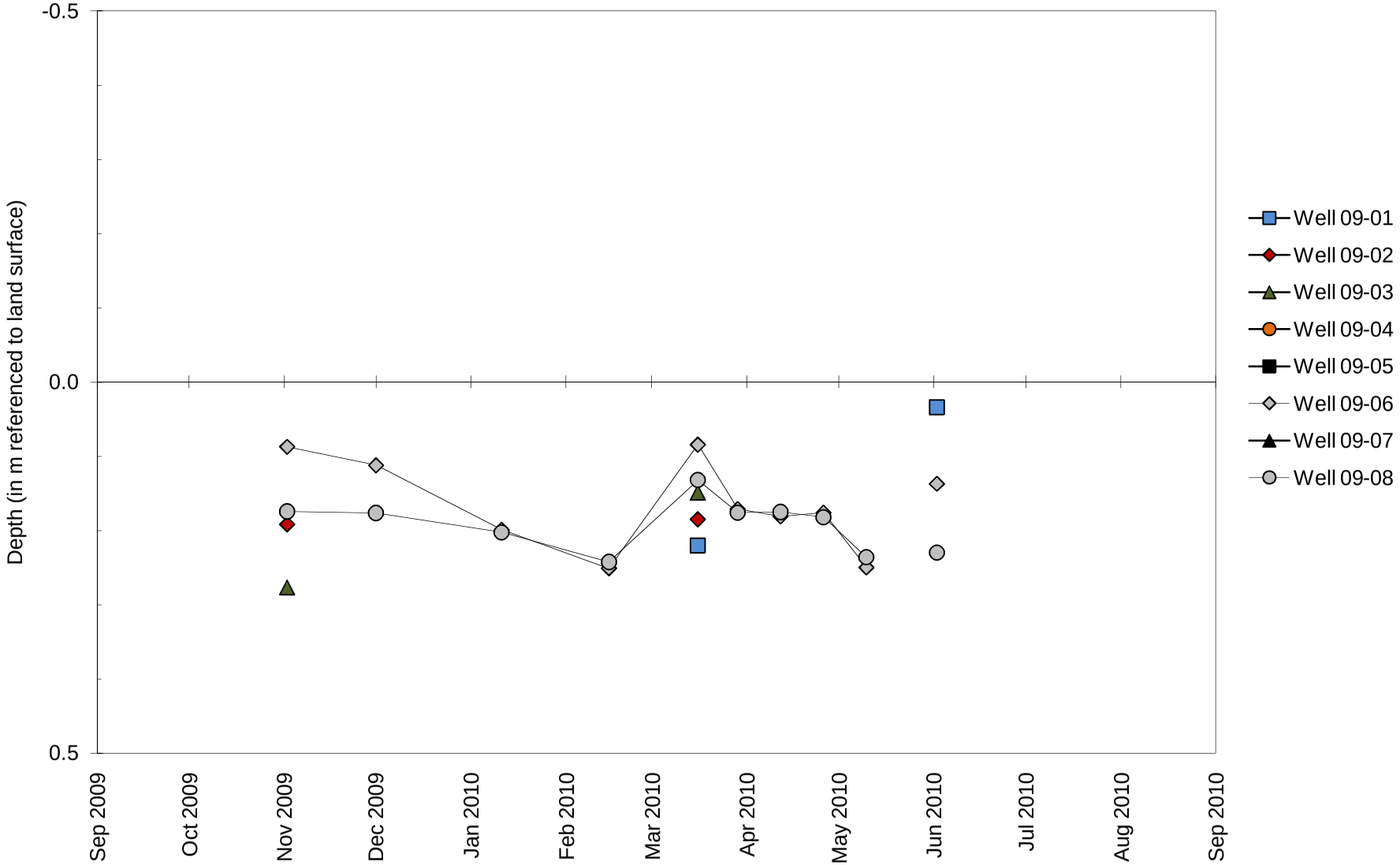
Water-Level Elevations in Monitoring Wells



North Chicago Wetland Mitigation Site

September 1, 2009 through August 31, 2010

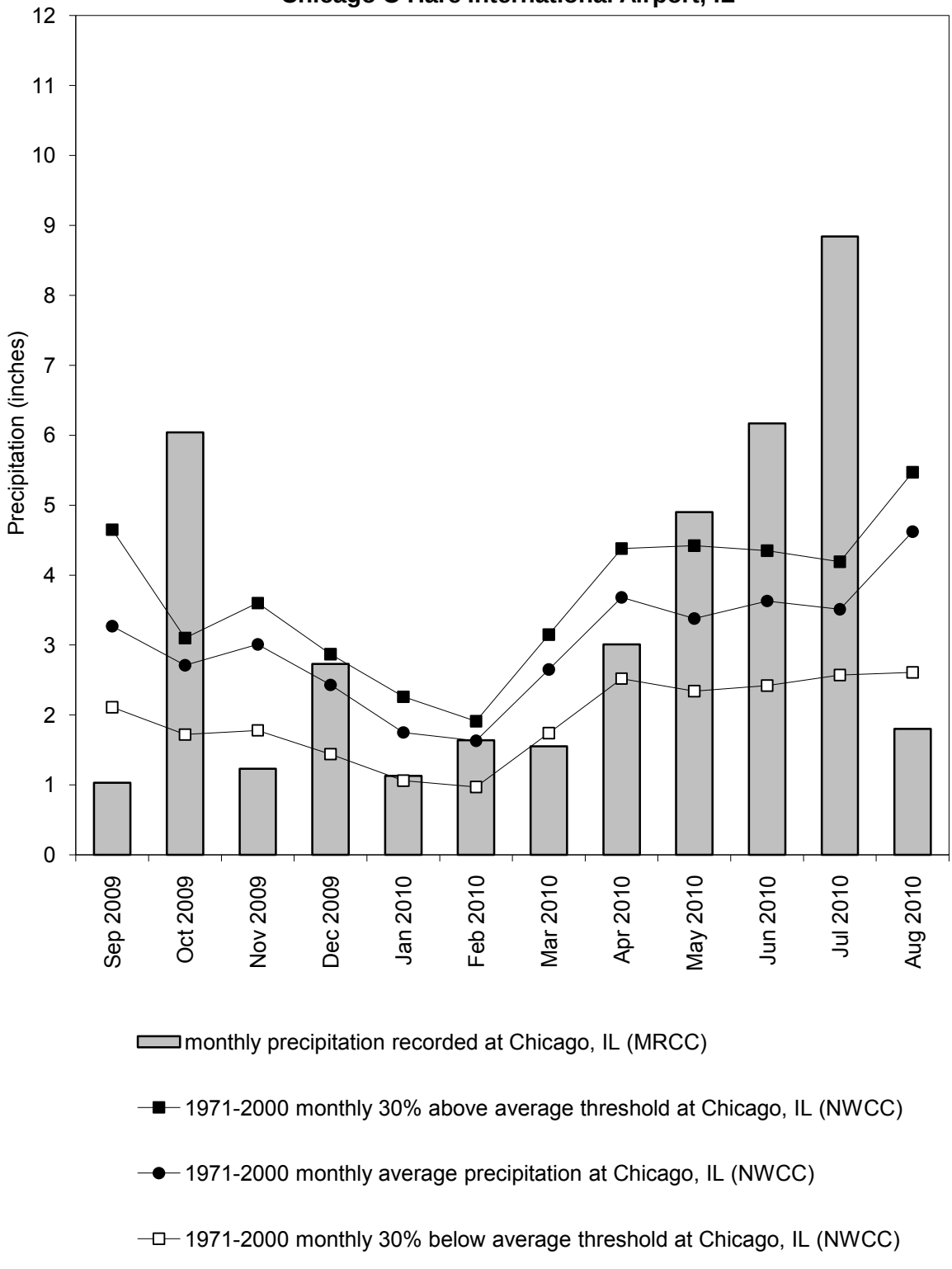
Depth to Water in Monitoring Wells



North Chicago Wetland Mitigation Site

September 2009 through August 2010

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



Graph last updated September 29, 2010