

**NORTH CHICAGO  
WETLAND MITIGATION SITE**

**ISGS #84**

IL 56/IL 47

FAP 326

Sequence #13406

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; monitoring was suspended by IDOT in Spring 2002.
- Spring 2009: IDOT tasked ISGS to resume targeted monitoring. Eight monitoring wells were installed 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 soil-zone monitoring wells and one surface-water gauge to monitor various wetlands throughout the site.

**WETLAND HYDROLOGY CALCULATION FOR 2012**

Wetland acreage is not calculated for this site due to the limited scope of monitoring. In 2012, 15 locations on site were monitored to document hydrologic changes from restoration, including one surface-water gauge and 14 very-shallow (VS) wells equipped with data loggers. Only the wetland hydrology status at each of these point locations is presented.

In 2012, 11 of the 14 monitoring wells satisfied wetland hydrology criteria for greater than 5% of the growing season, and 10 of the 14 wells satisfied wetland hydrology criteria for greater than 12.5% of the growing season, according to the 1987 Manual. Using the 2010 Midwest Region Supplement (USACE 2010) to the 1987 Manual, 11 of the 14 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 13, and it lasts 196 days (MRCC 2012); 5% of the growing season is 10 days, and 12.5% of the growing season is 25 days, according to the 1987 Manual. According to the 2010 Midwest Region Supplement, March 12 was the starting date of the 2012 growing season based on soil-temperature readings recorded on site with an ISGS data logger.
- Total precipitation for the monitoring period at the Chicago O'Hare International Airport weather station, Chicago, IL, was 84% of normal. During the March through May period of 2012, precipitation was 90% of normal, leading to typical on-site water levels in the early part of the growing season. However, during June through August, precipitation was only 56% of normal, resulting in a significant dry-down of the site.

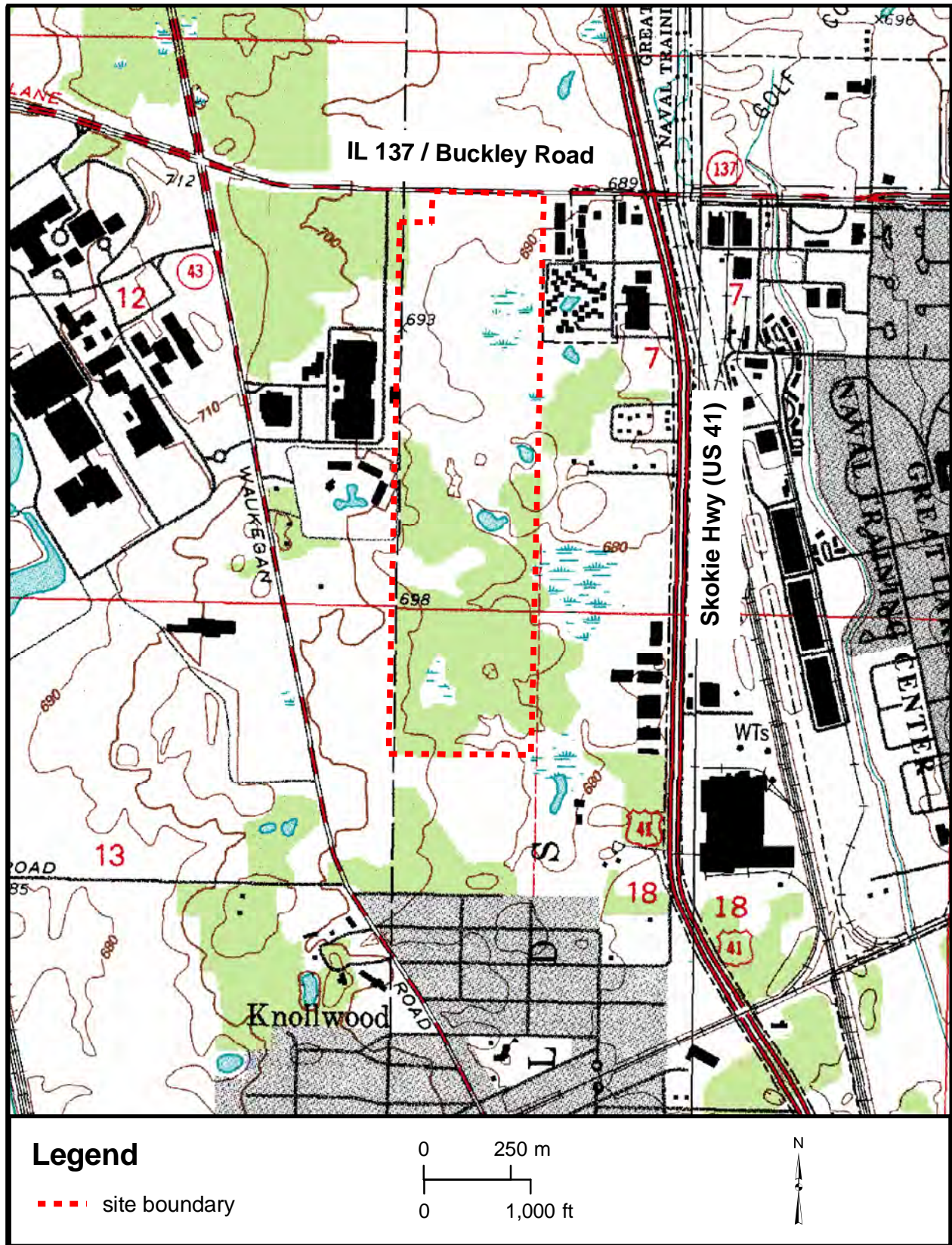
- In 2012, wells 09-01VS, 09-02VS, 09-05VS, 09-06VS, 09-07VS, 11-1VS, 11-2VS, 11-3VS, 11-4VS, 11-5VS, and 11-6VS satisfied wetland hydrology criteria for greater than 5% of the growing season, according to the 1987 Manual, and for 14 or more consecutive days during the growing season according to the 2010 Midwest Region Supplement. Further, wells 09-01VS, 09-02VS, 09-05VS, 09-06VS, 11-1VS, 11-2VS, 11-3VS, 11-4VS, 11-5VS, and 11-6VS satisfied wetland hydrology criteria for greater than 12.5% of the growing season.
- Gauge A also satisfied wetland hydrology criteria at an elevation of 209.55 m (687.50 ft) for greater than 5% as well as 12.5% of the growing season, according to the 1987 Manual, and for 14 or more consecutive days during the growing season, according to the 2010 Midwest Region Supplement.

#### PLANNED FUTURE ACTIVITIES

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

# North Chicago Wetland Mitigation Site (IL 56/IL47, FAP 326) General Study Area and Vicinity

from the USGS Topographic Series, Libertyville, IL (USGS 1998) and Waukegan, IL (USGS 1998)  
7.5-minute quadrangles

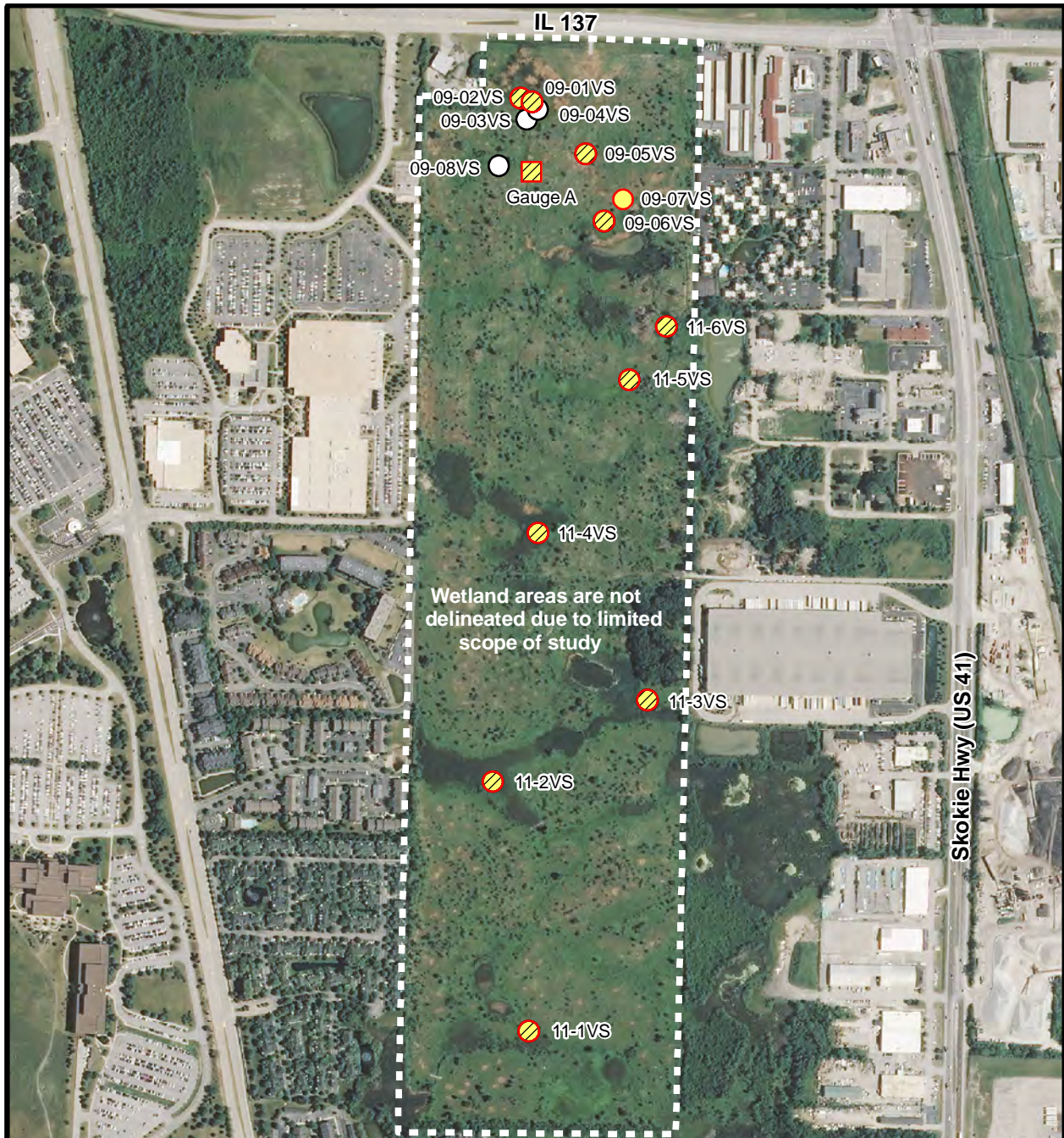


# North Chicago Wetland Mitigation Site (IL 56/IL47, FAP 326)

## Wells Meeting Wetland Hydrology Criteria

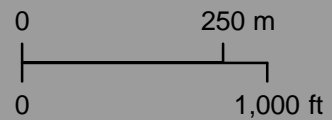
September 1, 2011 through August 31, 2012

Map based on 2012 Farm Service Agency digital orthophotography, Lake County, Illinois (USDA-FSA 2012)



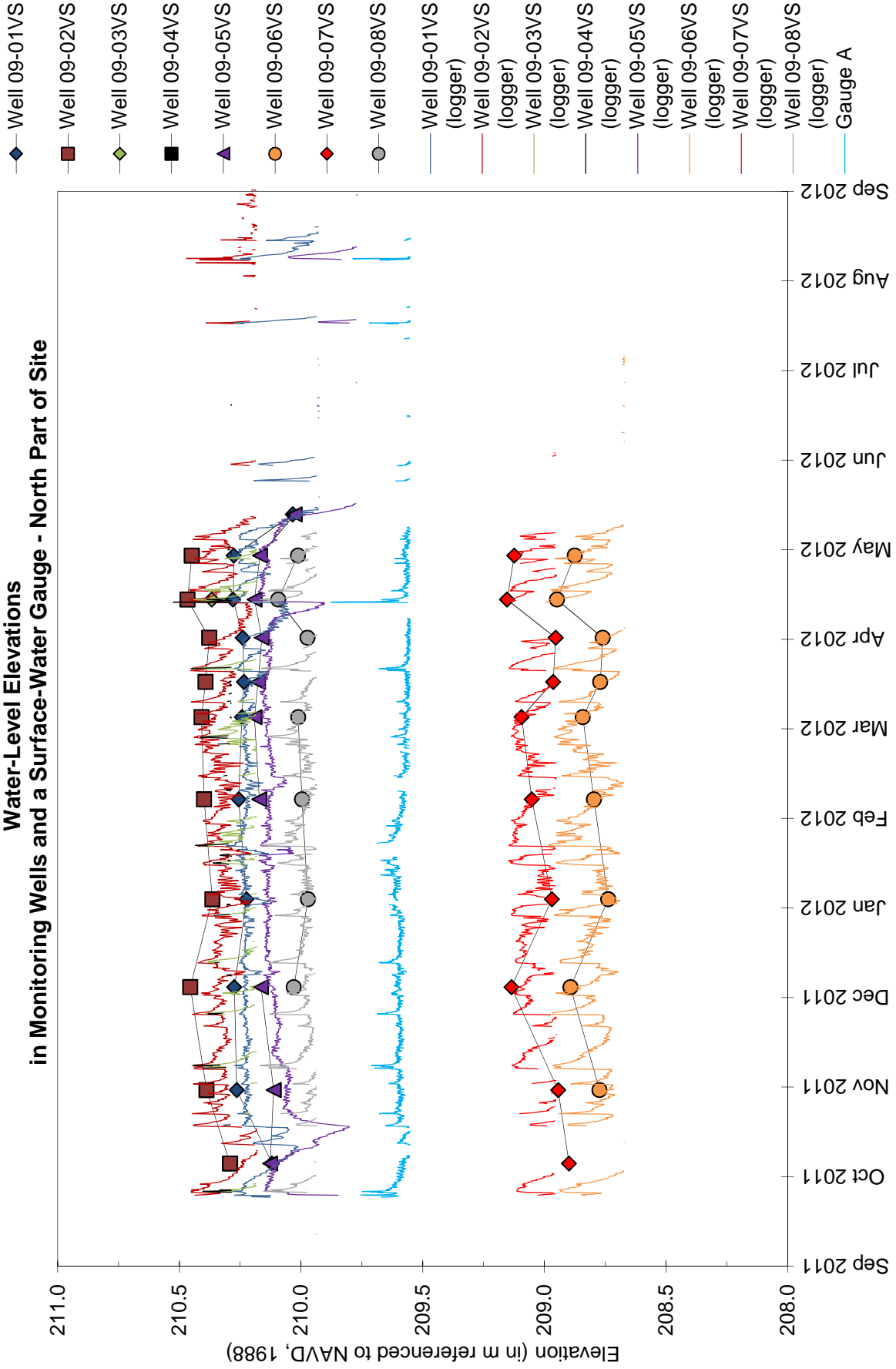
### 2012 Wetland Hydrology

- >5% of growing season (1987 Manual)
- >12.5% of growing season (1987 Manual)
- 14 days or more (2010 Midwest Region Supplement)
- site boundary
- monitoring wells
- surface-water gauge



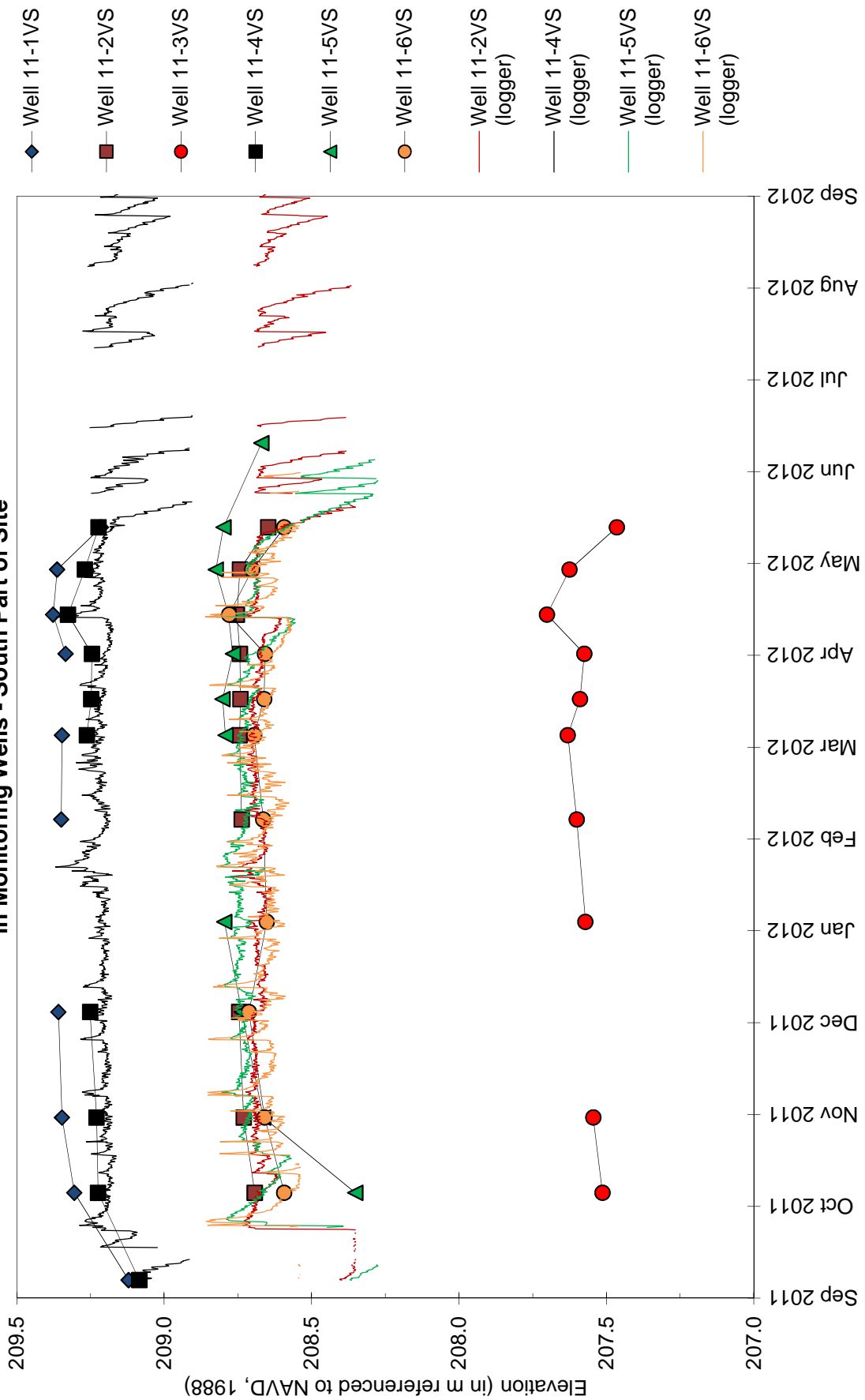
# North Chicago Wetland Mitigation Site September 1, 2011 through August 31, 2012

## Water-Level Elevations in Monitoring Wells and a Surface-Water Gauge - North Part of Site



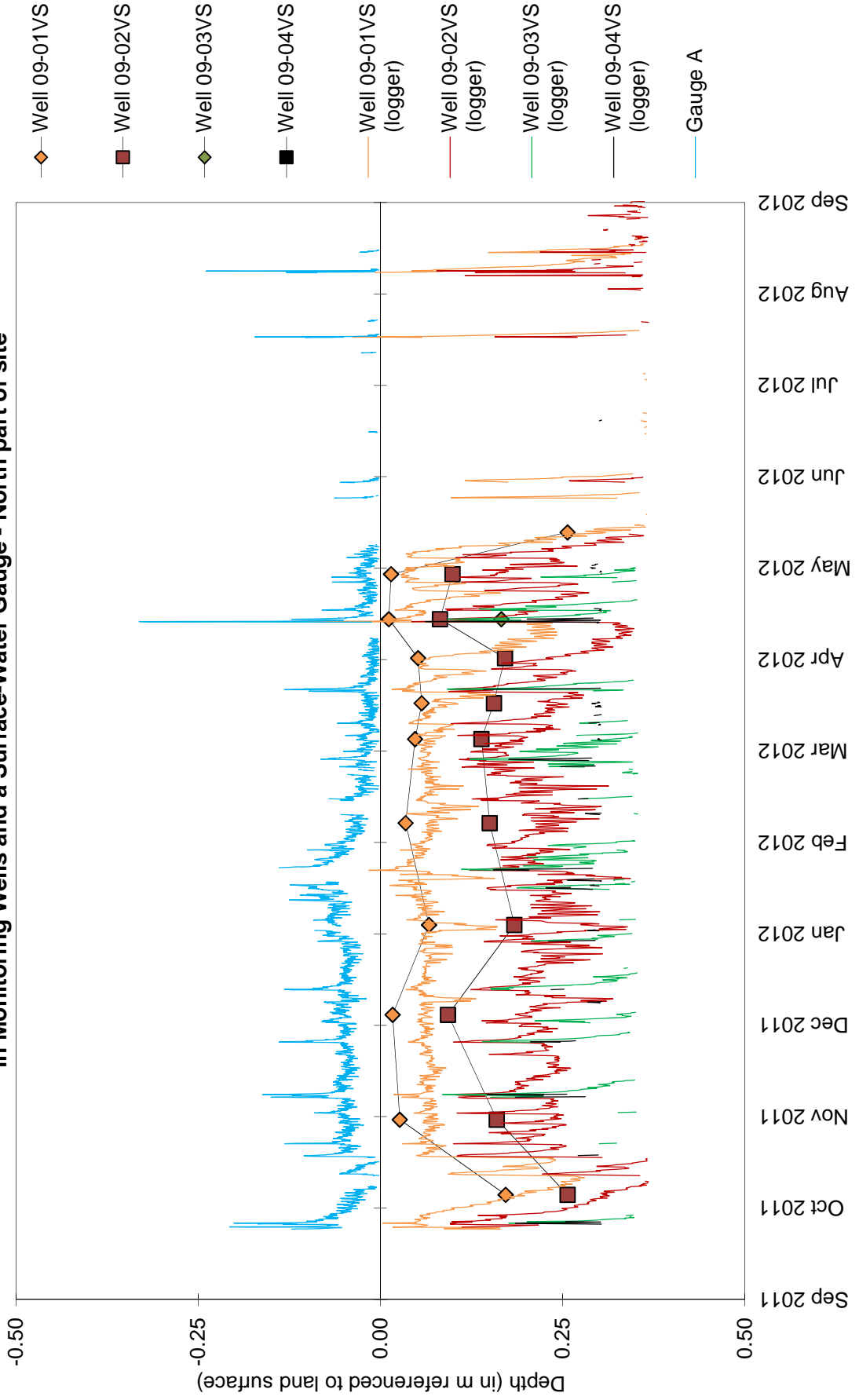
# North Chicago Wetland Mitigation Site September 1, 2011 through August 31, 2012

## Water-Level Elevations in Monitoring Wells - South Part of Site



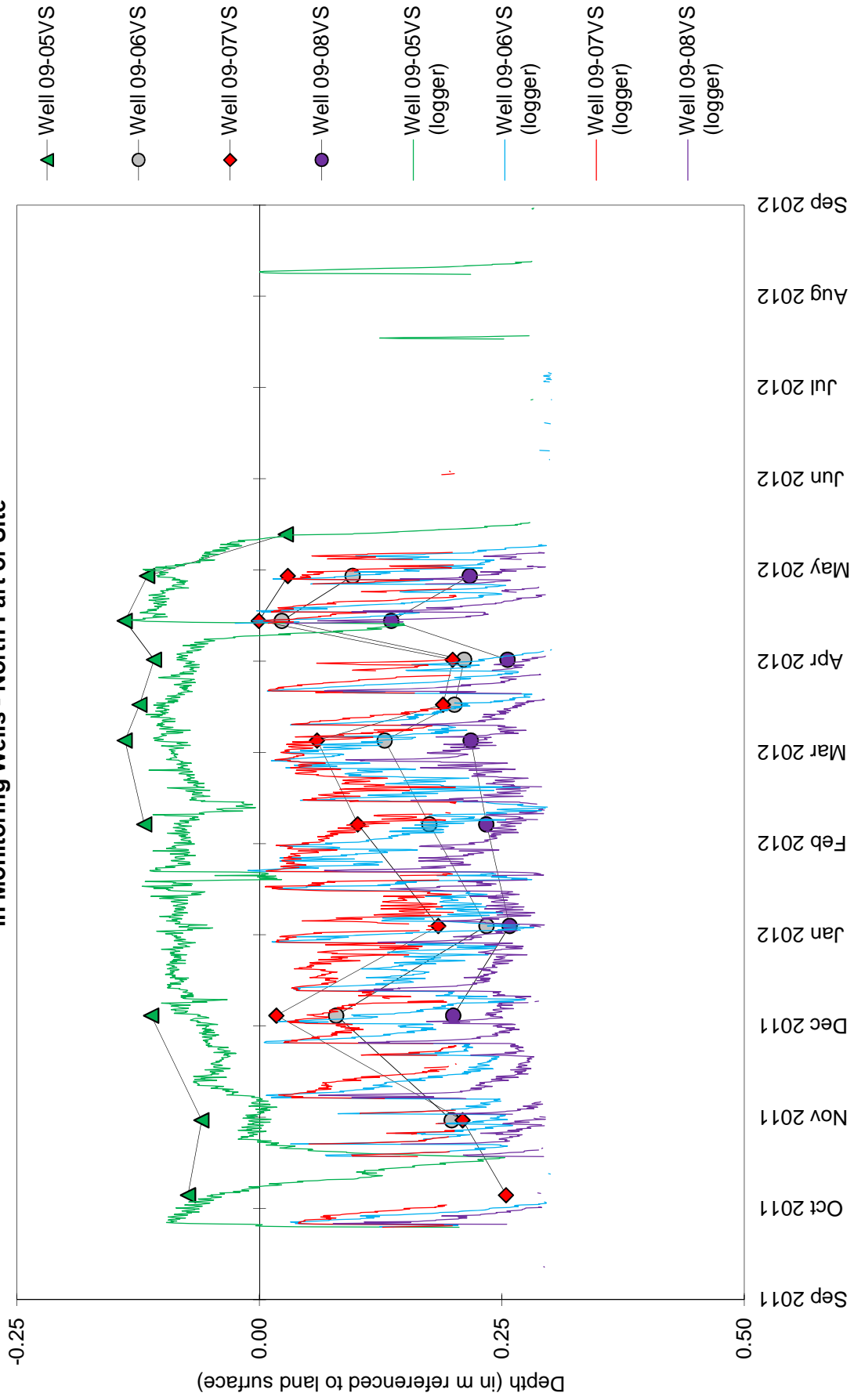
# North Chicago Wetland Mitigation Site September 1, 2011 through August 31, 2012

Depth to Water  
in Monitoring Wells and a Surface-Water Gauge - North part of site



# North Chicago Wetland Mitigation Site September 1, 2011 through August 31, 2012

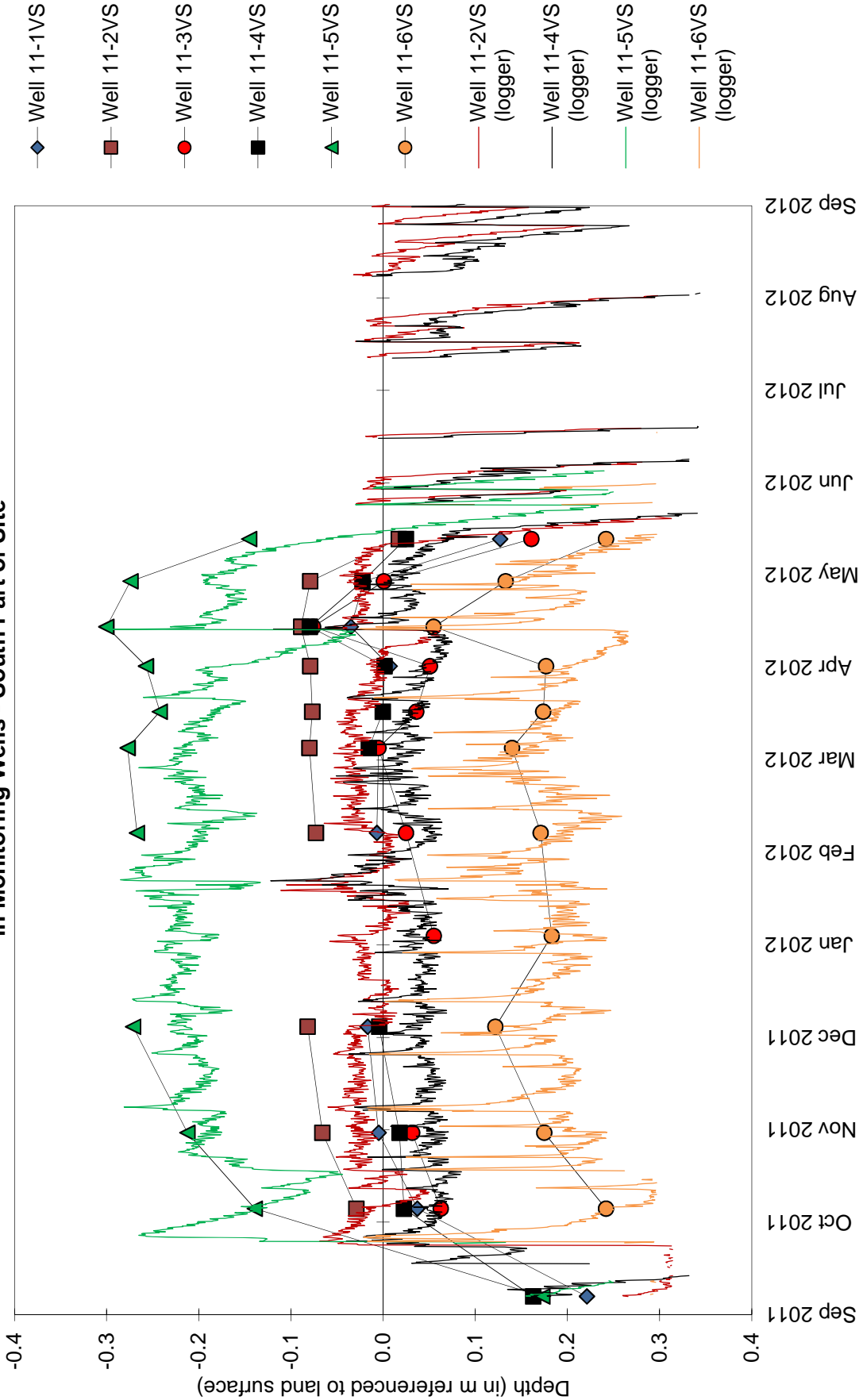
## Depth to Water in Monitoring Wells - North Part of Site





# North Chicago Wetland Mitigation Site September 1, 2011 through August 31, 2012

## Depth to Water in Monitoring Wells - South Part of Site



## North Chicago Wetland Mitigation Site September 2011 through August 2012

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

