



**GULFPORT
WETLAND COMPENSATION SITE**

ISGS #29

FAP 313

Henderson County, near Gulfport, Illinois

Primary Project Manager: Kelli D. Weaver

Secondary Project Manager: Keith W. Carr

SITE HISTORY

- September 1994: ISGS submitted an Initial Site Evaluation Report to IDOT.
- Fall 1997: IDOT completed excavation of the wetland basin.
- January 1998: ISGS began surface-water elevation monitoring at the site.
- April 1999: ISGS installed soil-zone wells for ground-water elevation monitoring at the site.
- April 2001: ISGS installed additional soil-zone wells for further definition of the extent of wetland hydrology.

WETLAND HYDROLOGY CALCULATION FOR 2004

We estimate that the total area that satisfied wetland hydrology criteria (U.S. Army Corps of Engineers 1987) for greater than 5% of the 2004 growing season was 4.68 ac (1.89 ha). In addition, the area that satisfied wetland hydrology criteria for greater than 12.5% of the growing season in 2004 was 3.30 ac (1.34 ha). The site, as defined by construction limits on an IDOT site plan, is 10.54 ac (4.27 ha) in size. These estimates are based on the following factors.

- According to the Midwestern Climate Center, the median date that the growing season begins in Burlington, Iowa, is April 7 and the season lasts 206 days; 5% of the growing season is 10 days, and 12.5% of the growing season is 26 days.
- Total precipitation for the monitoring period from September 2003 to August 2004 was 103% of normal. Although spring and summer precipitation totals for the months of March, May, July, and August 2004, were normal to slightly above normal, precipitation totals for April, and June 2004 were much below normal, leading to a drier than normal growing season. Additionally, precipitation levels outside of the growing season were above normal for September, November and December 2003, and below normal for October 2003, and January and February 2004.
- In 2004, water levels in wells 5S, 6VS, 9VS, 10VS, 11VS, and 12VS satisfied wetland hydrology criteria for greater than 5% of the growing season. Only well 10VS had water levels that satisfied wetland hydrology criteria for a period greater than 12.5% of the growing season.
- Surface-water levels measured by the RDS 1 data logger indicated that inundation occurred to an elevation of 157.29 m (516.04 ft) for a duration longer than 5% of the growing season, and to an elevation of 157.26 m (515.94 ft) for a period that exceeded 12.5% of the growing season.

- Limitations of the wetland hydrology determination are as follows:
 - The base map used to determine the acreage of the wetland hydrology is an IDOT construction plan of the proposed wetland basin prior to construction. No as-built topographic survey of the site was provided by IDOT.
 - The area of wetland hydrology was measured planimetrically using the topographic contours at 0.2-m (0.66 -ft) intervals shown on the construction plan. The construction plan was overlain and adjusted to match the digital orthophotography to produce the figure shown in this report.

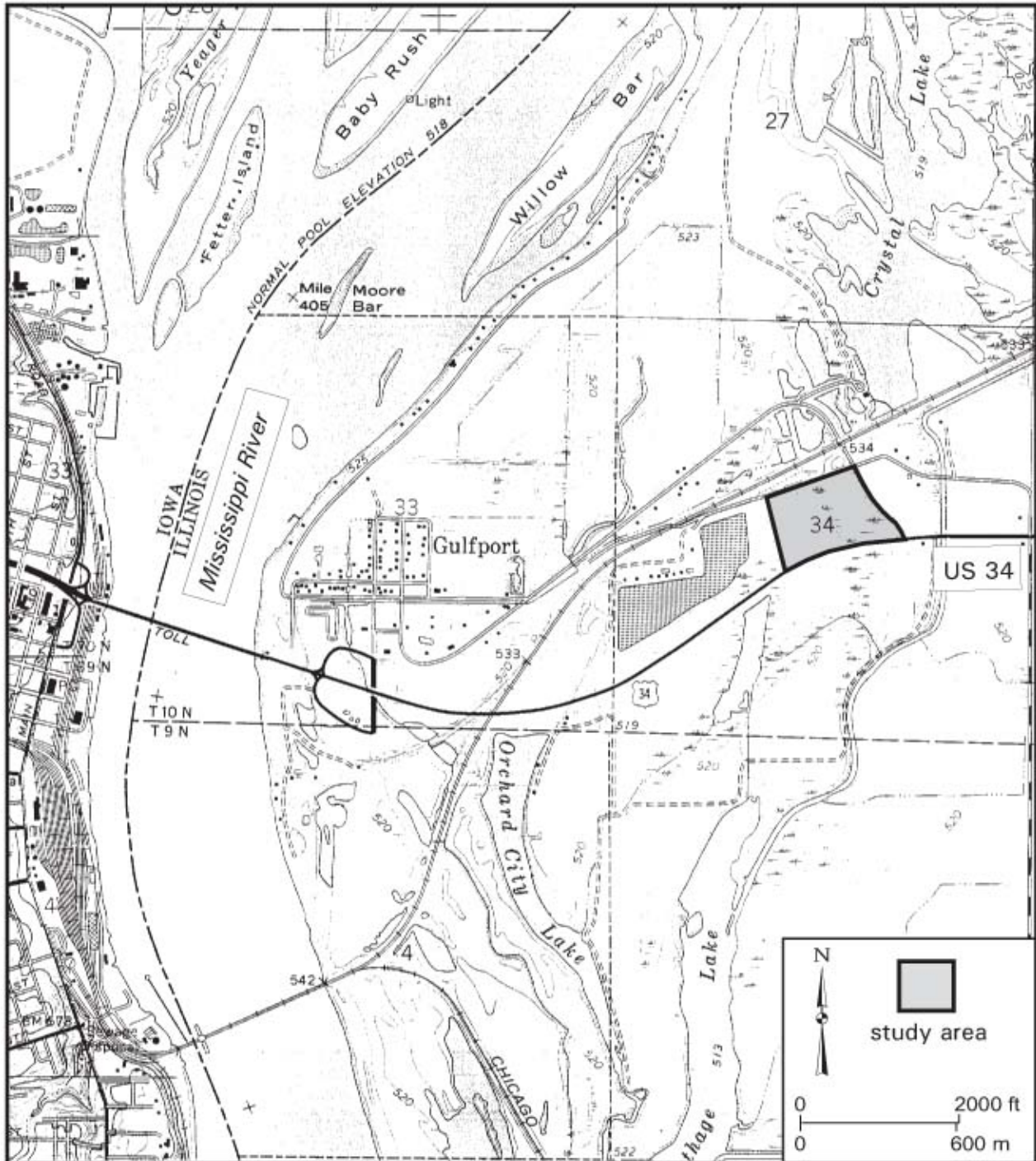
PLANNED FUTURE ACTIVITIES

- Post-construction monitoring has been performed for a total of seven years at this site. Monitoring will continue through 2004 or until no longer required by IDOT.

Gulfport Wetland Compensation Site (FAP 313)

General Study Area and Vicinity

from the USGS Topographic Series, Burlington, IA-IL 7.5-minute Quadrangle
(USGS 1964, photorevised 1976)
contour interval is 10 feet



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Estimated Areal Extent of 2004 Wetland Hydrology

based on data collected between September 1, 2003 and September 1, 2004
map based on USGS digital orthophotograph, Burlington NW Quadrangle
produced from aerial photography (ISGS 1999)



○ ISGS monitoring well

◇ ISGS benchmark

✱ rain gauge

□ RDS data logger

⋯ estimated areal extent of IDOT excavation

0 ————— 100 m
0 ————— 300 ft



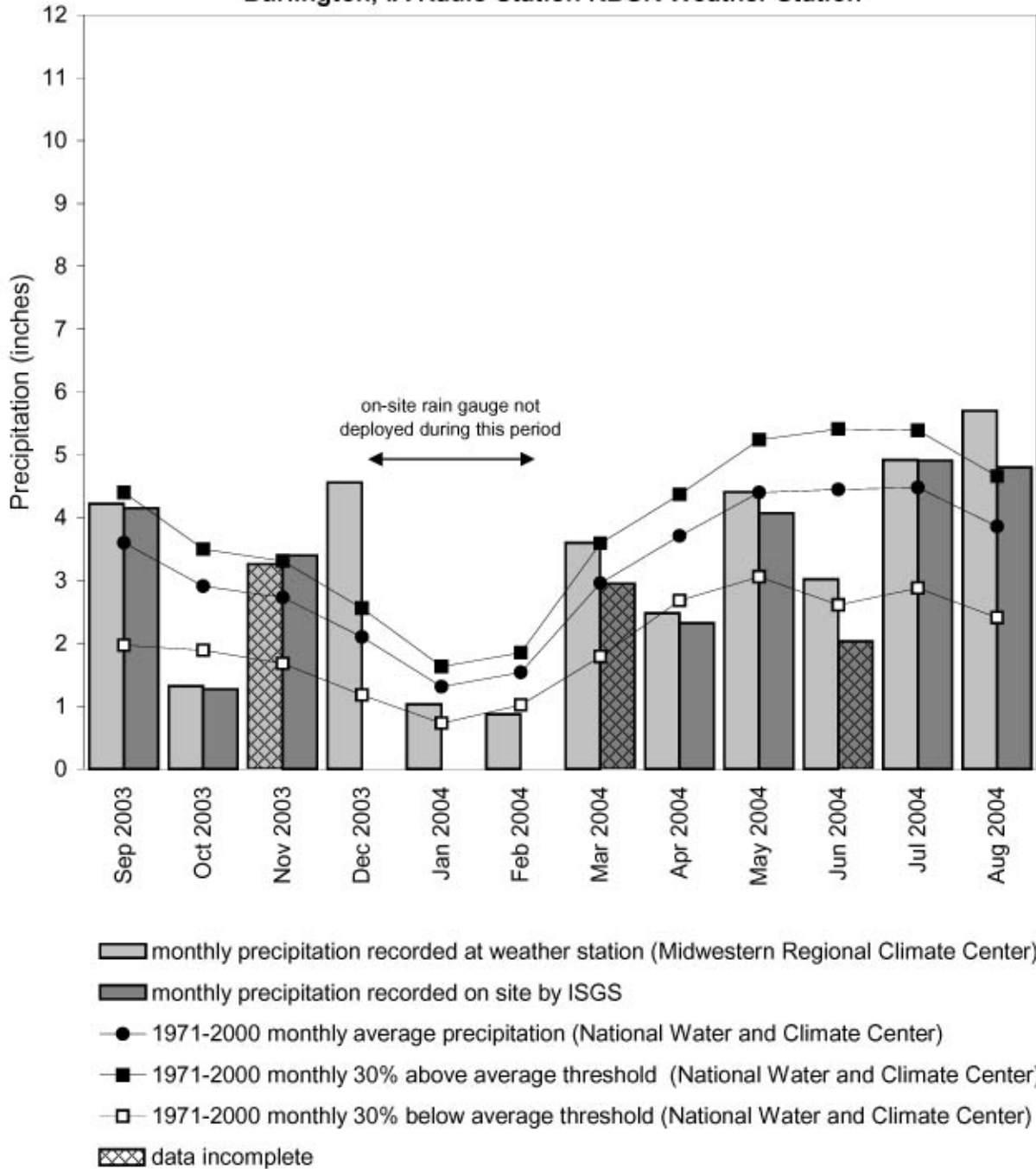
2004 Wetland Hydrology

> 12.5% of the growing season

> 5% of the growing season

Gulfport Wetland Compensation Site September 2003 through August 2004

**Total Monthly Precipitation Recorded On Site and at the
Burlington, IA Radio Station KBUR Weather Station**



Graph last updated October 1, 2004