



TAMMS

ISGS #71

WETLAND COMPENSATION SITE

FAS 1907

Sequence #1026

Union County, near Tamms, Illinois

Primary Project Manager: Geoffrey E. Pociask

Secondary Project Manager: Gregory A. Shofner

SITE HISTORY

- June 2003: ISGS was tasked by IDOT to monitor wetland hydrology.
- November 2003: ISGS initiated monitoring activities at the compensation site.

WETLAND HYDROLOGY CALCULATION FOR 2005

We estimate that 0.7 ha (1.8 ac) out of 6.3 ha (15.6 ac) satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2005, whereas 0.5 ha (1.3 ac) satisfied wetland hydrology criteria for greater than 12.5% of the growing season. These estimates are based on the following factors:

- According to the Midwestern Climate Center, the median date that the growing season begins in nearby Anna, Illinois, is March 31 and the season lasts 225 days; 5% of the growing season is 11 days and 12.5% of the growing season is 28 days.
- Total precipitation for the reporting period from September 2004 through August 2005 was 95% of normal. Drier than normal conditions prevailed in September and December 2004, and in February through June and August 2005, and precipitation during April through June 2005 was particularly dry at only 57% of normal. Precipitation was at or above normal in October and November 2004 and in January and July 2005.
- In 2005, well 7S satisfied the wetland hydrology criteria for greater than 5% of the growing season. Well 7S also satisfied wetland hydrology criteria for greater than 12.5% of the growing season.
- Surface-water data loggers RDS 1 and Gauge D showed that ponding occurred in various portions of the site. Data from RDS 1 showed that the northernmost portion of the site below 102.9 m (337.6 ft) was inundated for greater than 5% of the growing season, and areas below 102.8 m (337.3 ft) were inundated for greater than 12.5% of the growing season. Data from Gauge D showed that the southernmost portion of the site below 102.3 m (335.6 ft) was inundated for greater than 5% of the growing season, and areas below 102.2 m (335.3 ft) were inundated for greater than 12.5% of the growing season.
- Limitations of the wetland hydrology determination are as follows:
 - The area of wetland hydrology was calculated using GIS methods. The wetland-hydrology polygon was drawn from an ISGS topographic map (0.1-meter contour interval) rectified to GPS positions of water-level instruments and point features identifiable from a digital orthophotograph.

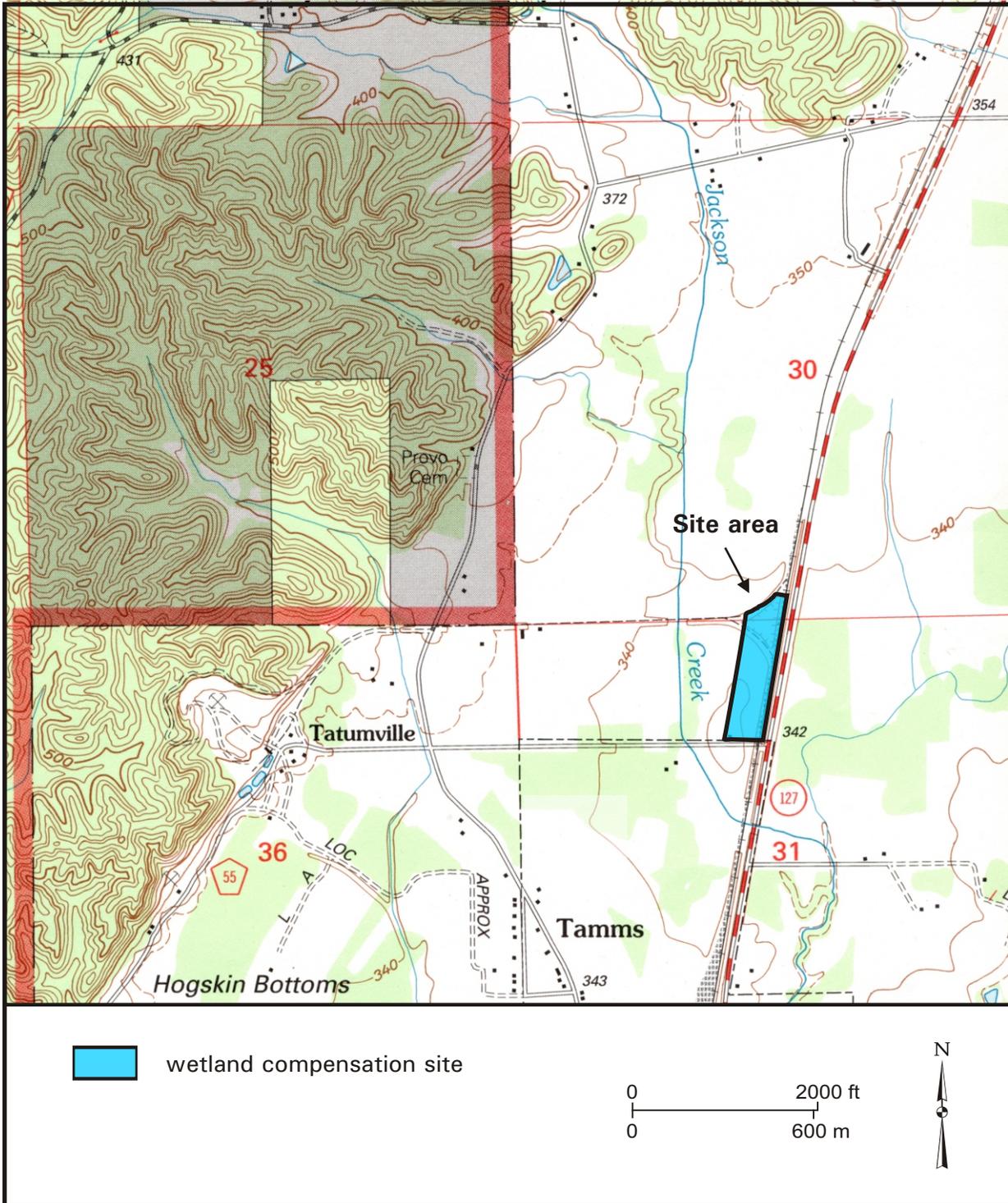
PLANNED FUTURE ACTIVITIES

- Monitoring is expected to continue through 2008 or until no longer required by IDOT.

Tamms Wetland Compensation Site (FAS 1907)

Site and Vicinity

from the USGS Topographic Series, Mill Creek, IL 7.5-minute Quadrangle (USGS 1996).
contour interval is 20 feet



Tamms Wetland Compensation Site (FAS 1907)

Estimated Areal Extent of 2005 Wetland Hydrology

based on data collected between September 1, 2004 and September 1, 2005

Map based on IDOT design plans and ISGS topography recified to USGS digital orthophotograph
Mill Creek SE quarter quadrangle from 03/28/1998 aerial photography (ISGS 2004)



2005 Wetland Hydrology

- >5% of the growing season
- >12.5% of the growing season

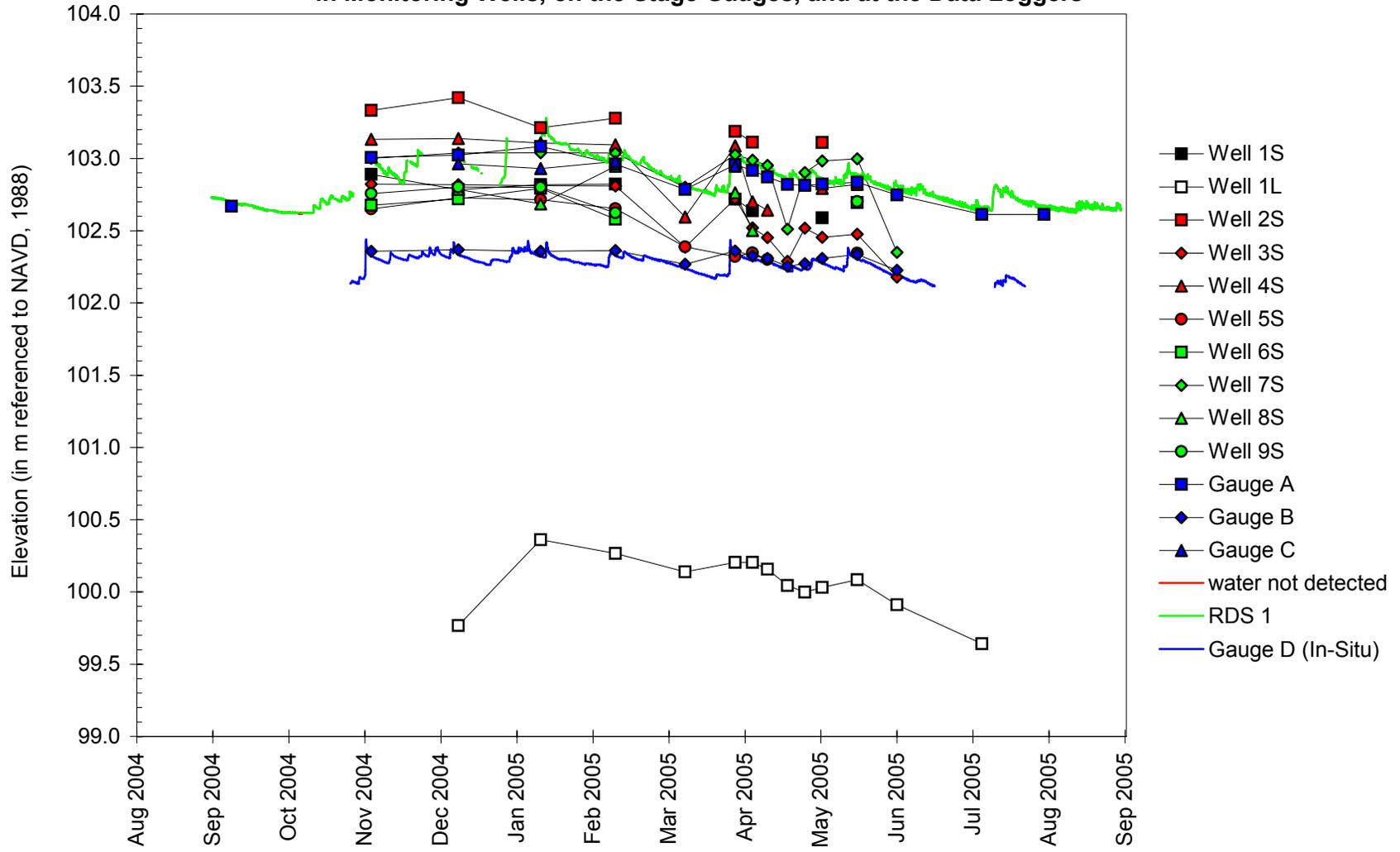
- monitoring well
- RDS datalogger
- In-situ datalogger
- staff gauge
- * rain gauge
- site boundary



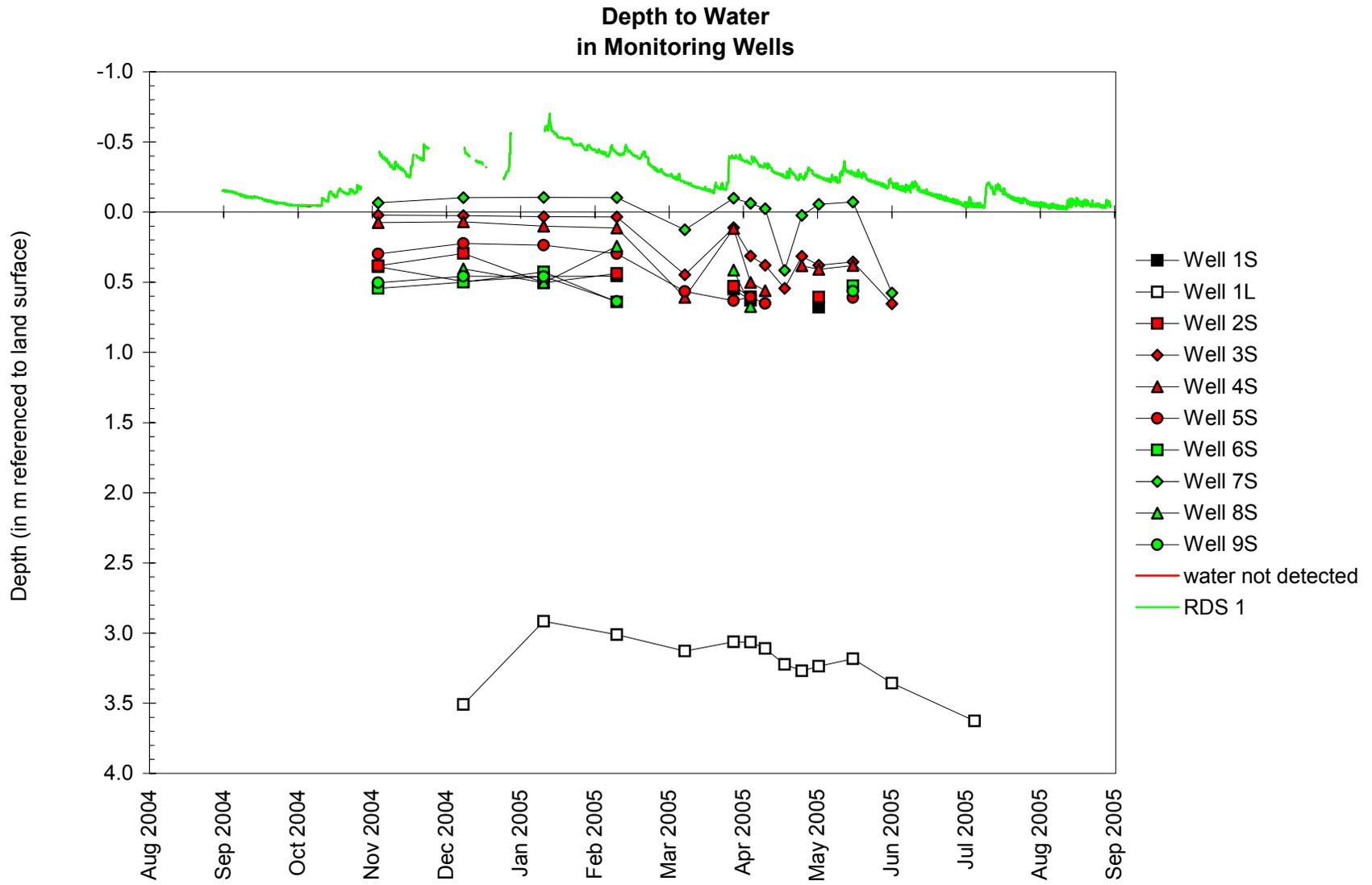
Tamms Wetland Compensation Site

September 1, 2004 to September 1, 2005

Water-Level Elevations in Monitoring Wells, on the Stage Gauges, and at the Data Loggers

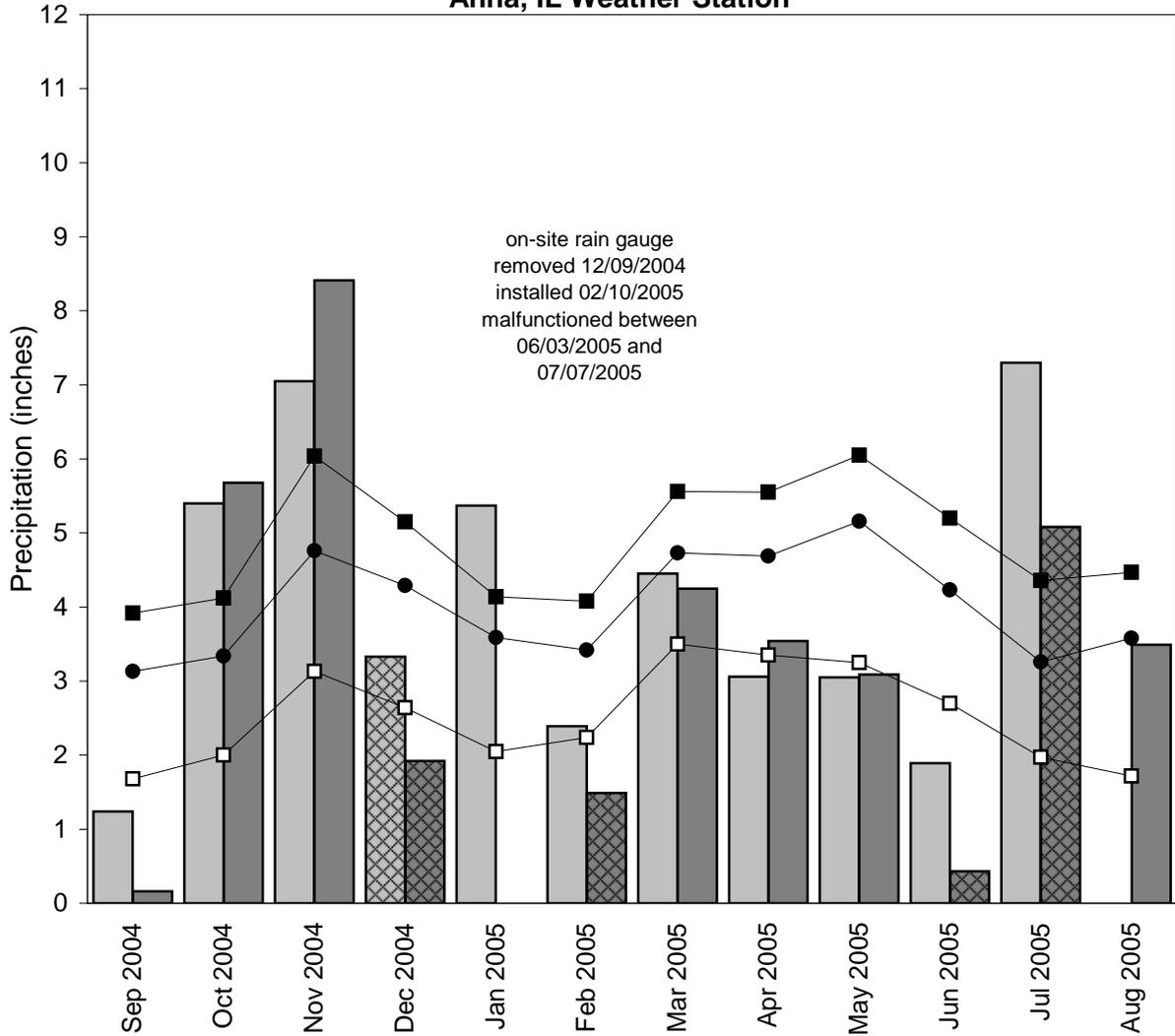


Tamms Wetland Compensation Site September 1, 2004 to September 1, 2005



Tamms Wetland Compensation Site September 2004 through August 2005

**Total Monthly Precipitation Recorded On Site and at the
Anna, IL Weather Station**



- monthly precipitation recorded at weather station (Midwestern Regional Climate Center)
- monthly precipitation recorded on site by ISGS
- 1971-2000 monthly average precipitation (National Water and Climate Center)
- 1971-2000 monthly 30% above average threshold (National Water and Climate Center)
- 1971-2000 monthly 30% below average threshold (National Water and Climate Center)
- data incomplete