



**PYATTS BLACKTOP
WETLAND COMPENSATION SITE**

ISGS #67

FAP 42

Sequence #409

Perry County, near Pyatts, Illinois

Primary Project Manager: Geoffrey E. Pociask

Secondary Project Manager: Gregory A. Shofner

SITE HISTORY

- April 2002: ISGS was tasked by IDOT to monitor wetland hydrology.
- May 2002: ISGS initiated monitoring of the site.

WETLAND HYDROLOGY CALCULATION FOR 2005

We estimate that the total area that satisfied wetland hydrology criteria (Environmental Laboratory 1987) for greater than 5% of the growing season in 2005 was 2.6 ha (6.4 ac) out of 6.7 ha (16.4 ac), whereas 1.4 ha (3.4 ac) satisfied wetland hydrology for greater than 12.5% of the growing season. These estimates are based on the following factors:

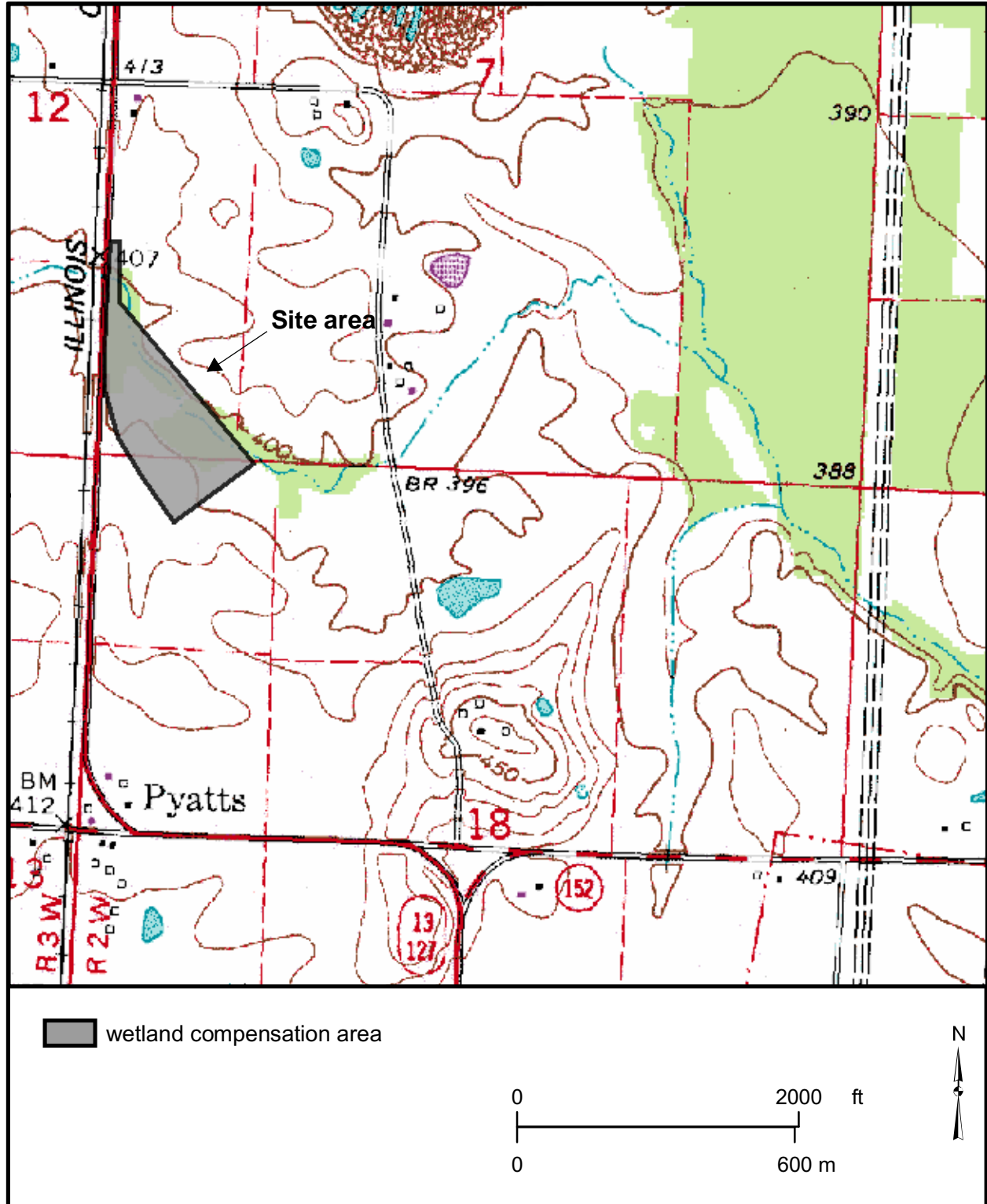
- According to the Midwestern Climate Center, the median date that the growing season begins in nearby Du Quoin, Illinois, is April 5 and the season lasts 207 days; 5% of the growing season is 10 days and 12.5% of the growing season is 26 days.
- Total precipitation for the reporting period from September 2004 through August 2005 was 87% of normal. Drier than normal conditions prevailed in September and December 2004, and in February through June 2005, with precipitation in April through June 2005 at only 47% of normal. Precipitation was at or above normal in October and November 2004 and in January, July, and August 2005.
- Wells 1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S and 12S satisfied the wetland hydrology criteria for 5% of the growing season. Furthermore, wells 1S, 2S, 3S, 4S, 7S, 8S, and 12S also satisfied wetland hydrology criteria for greater than 12.5% of the growing season.
- The surface-water levels recorded at Gauge C indicated that the stream did not flood the site during the 2005 growing season.
- Limitations of the wetland hydrology determination are as follows:
 - The wetland hydrology estimate includes some areas of the IDOT parcel that were planned for wetland preservation and enhancement.
 - 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 digital orthophotography.

PLANNED FUTURE ACTIVITIES

- Monitoring will continue at the site through 2007 or until no longer required by IDOT.

Pyatts Blacktop Wetland Compensation Site (FAP 42) Site and Vicinity

from the USGS Topographic Series, Pyatts, IL (USGS 1974; photorevised 1982) 7.5-minute Quadrangle
contour interval is 10 feet

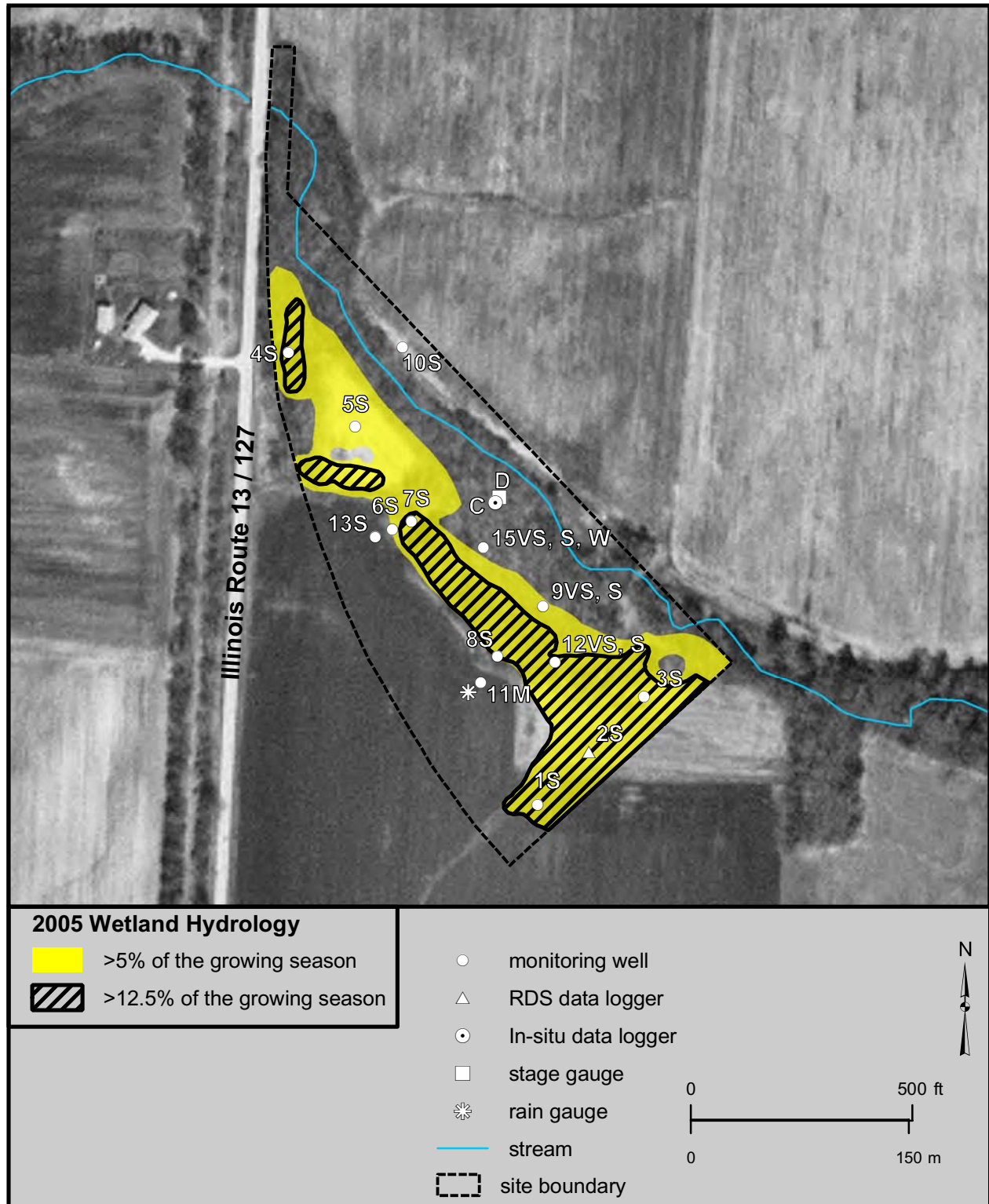


Pyatts Blacktop Wetland Compensation Site (FAP 42)

Estimated Areal Extent of 2005 Wetland Hydrology

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

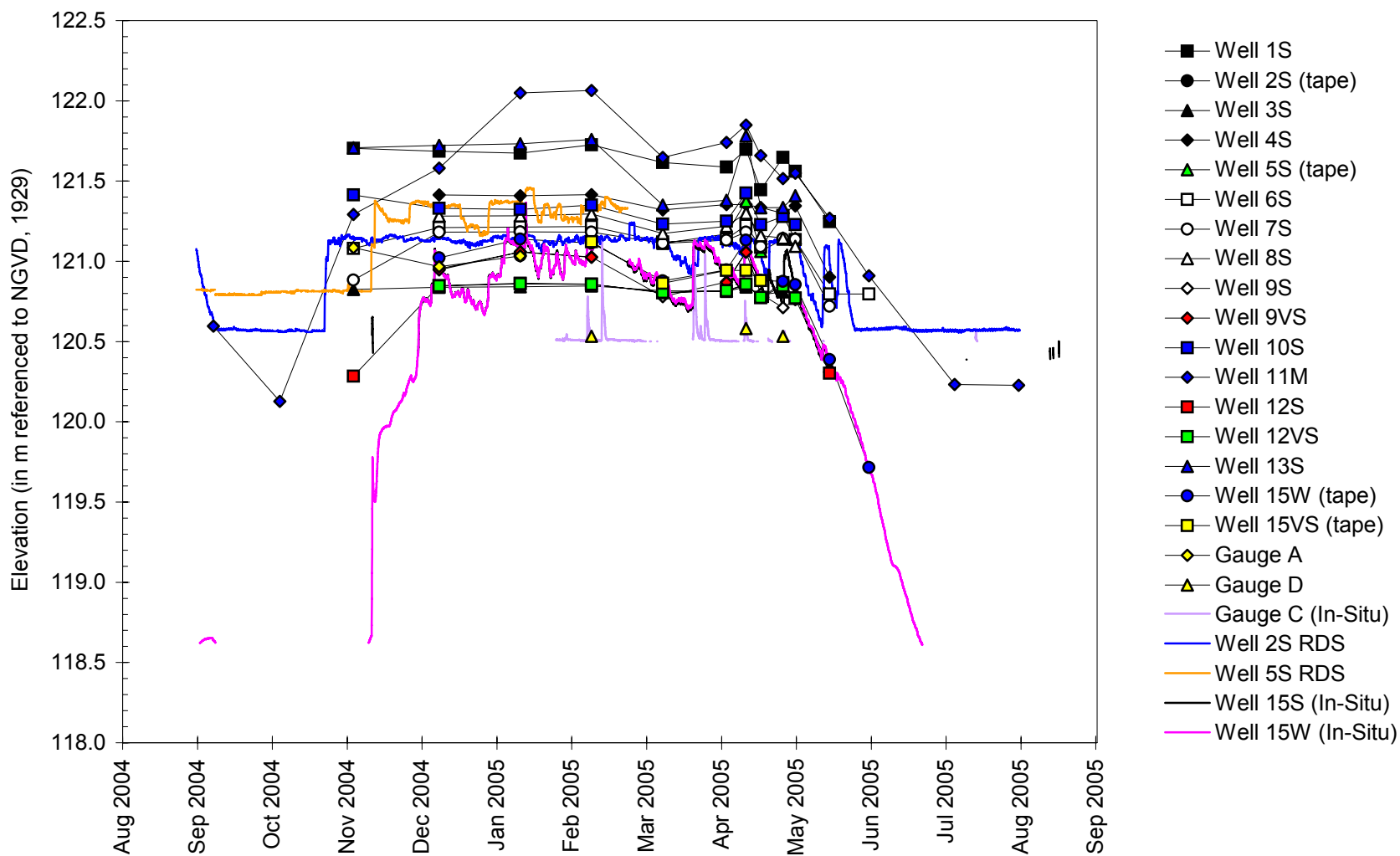
Map produced by rectifying IDOT design plans to USGS digital orthophotograph
Pinckneyville, SE quarter quadrangle, aerial photography from 04/06/1998 (ISGS 2002)



Pyatts Blacktop Wetland Compensation Site

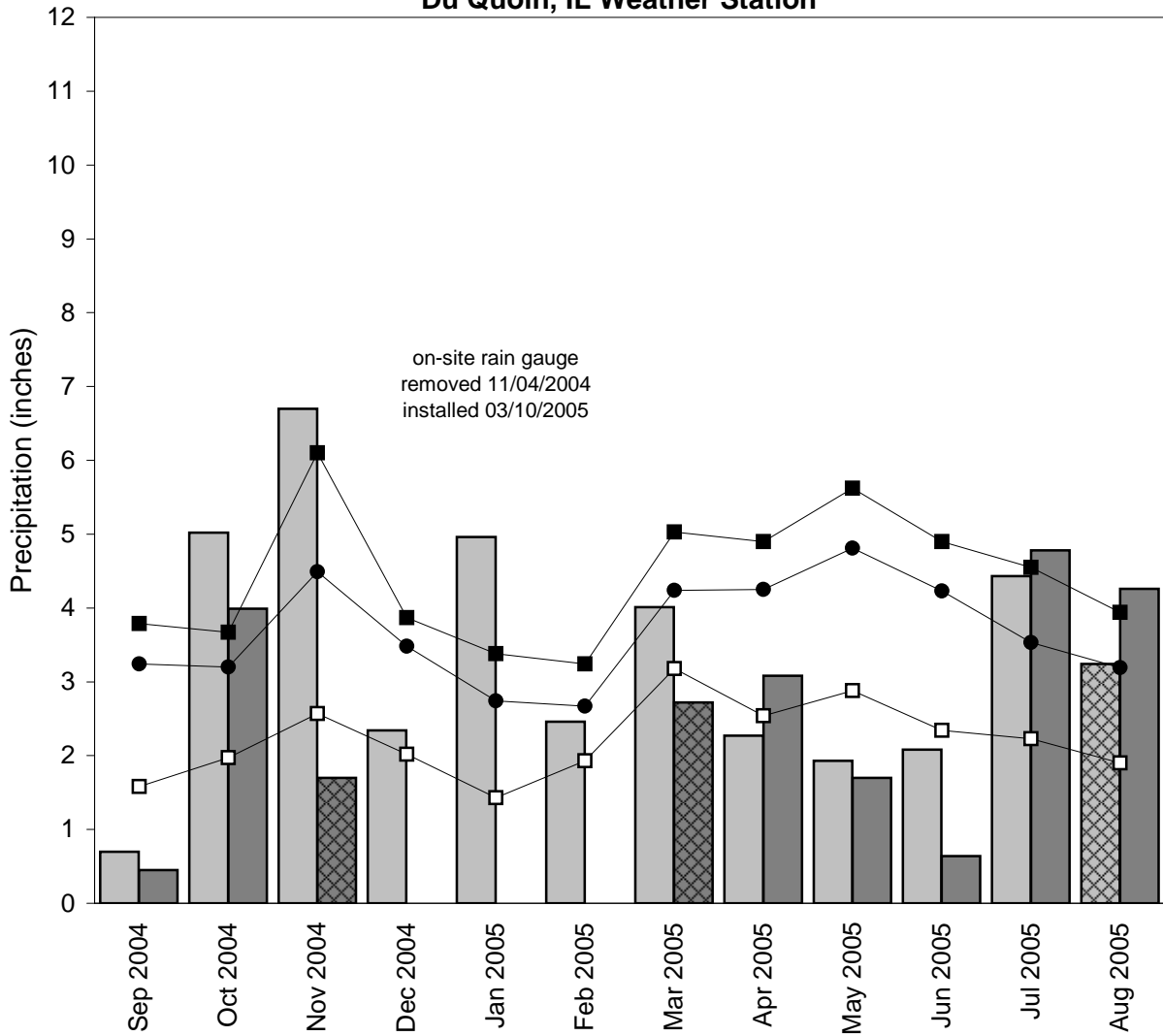
September 1, 2004 to September 1, 2005

Water-Level Elevations



Pyatts Blacktop Wetland Compensation Site September 2004 through August 2005

Total Monthly Precipitation Recorded On Site and at the Du Quoin, 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