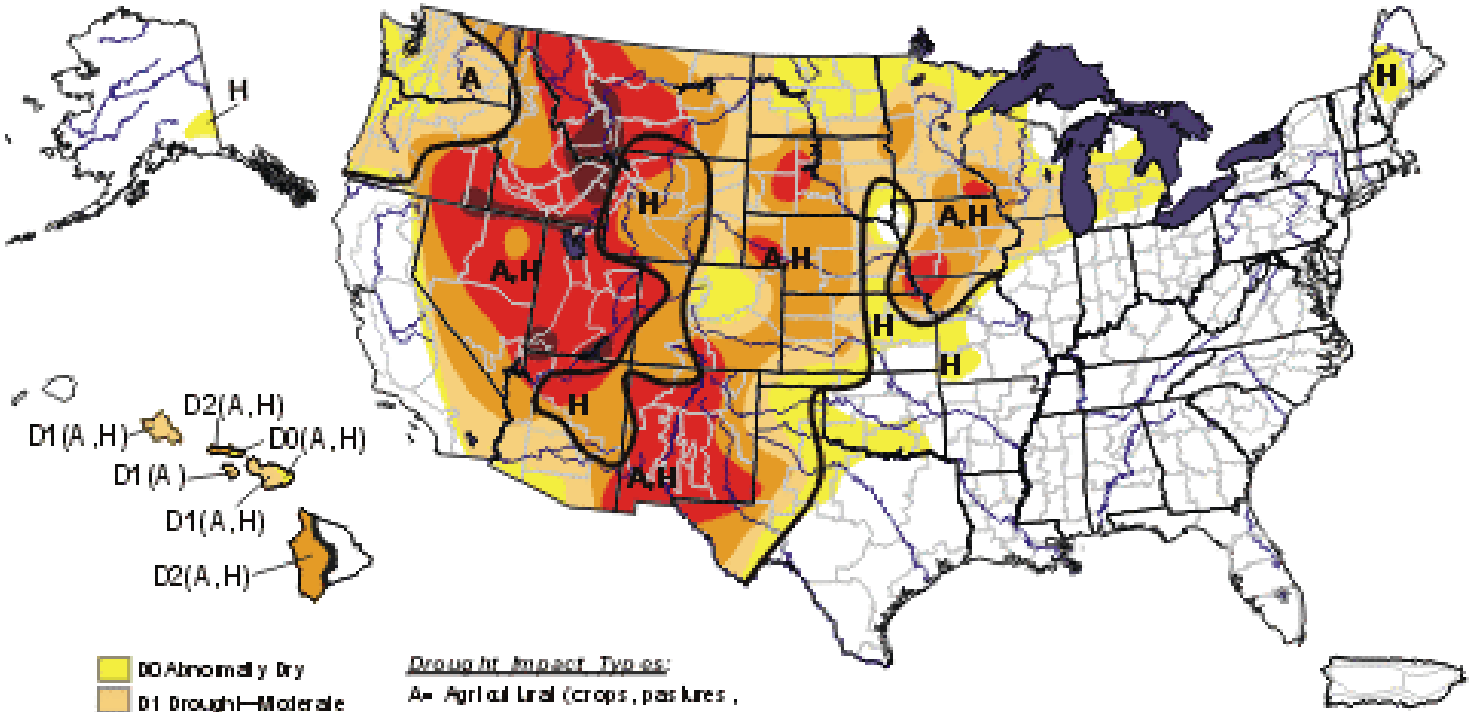
DNR Drought Assessment Committee Meeting October 9, 2003

U.S. Drought Monitor

October 7, 2003
Valid 8 a.m. EDT

DRAFT 1



D0 Abnormally Dry
D1 Drought—Moderate
D2 Drought—Severe
D3 Drought—Extreme
D4 Drought—Exceptional

Drought Impact Types:
A= Agricultural (crops, pastures, grasslands)
H= Hydrological (water)
No type = both impacts
Delineates dominant impacts

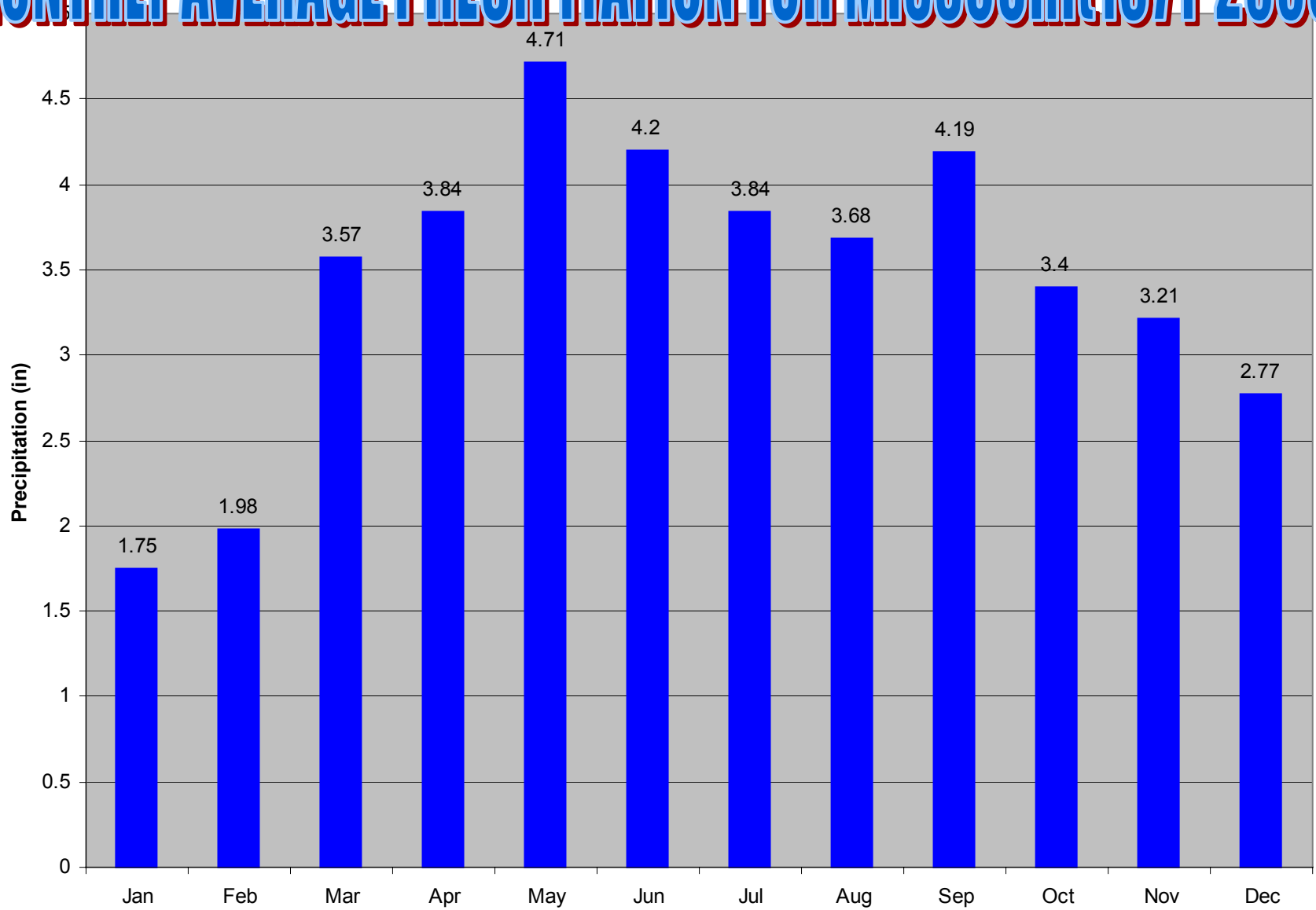
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Released Thursday, October 2, 2003

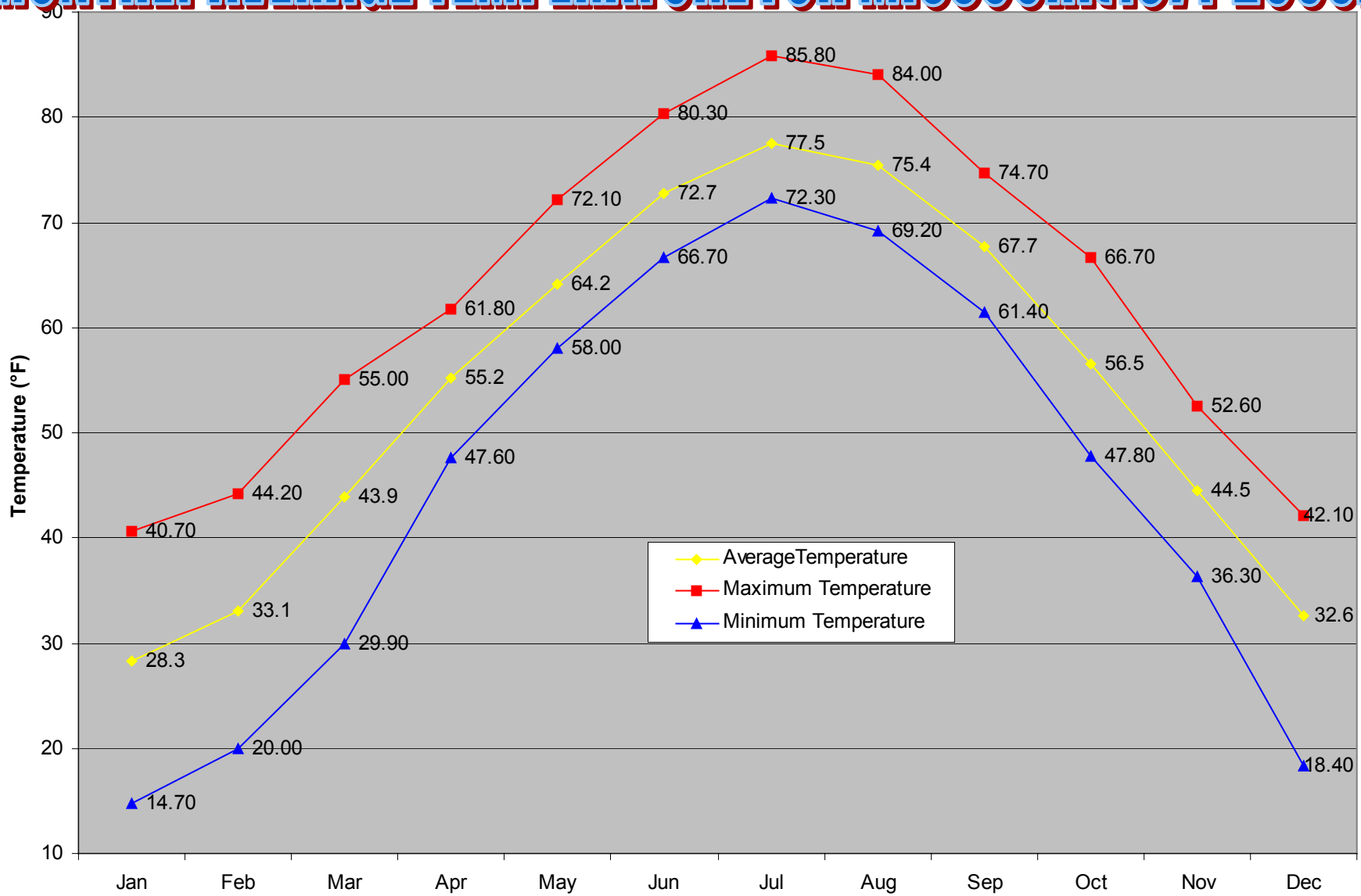
http://drought.unl.edu/dm

Author: Douglas LeComte, NOAA/CPC

MONTHLY AVERAGE PRECIPITATION FOR MISSOURI (1971-2000)

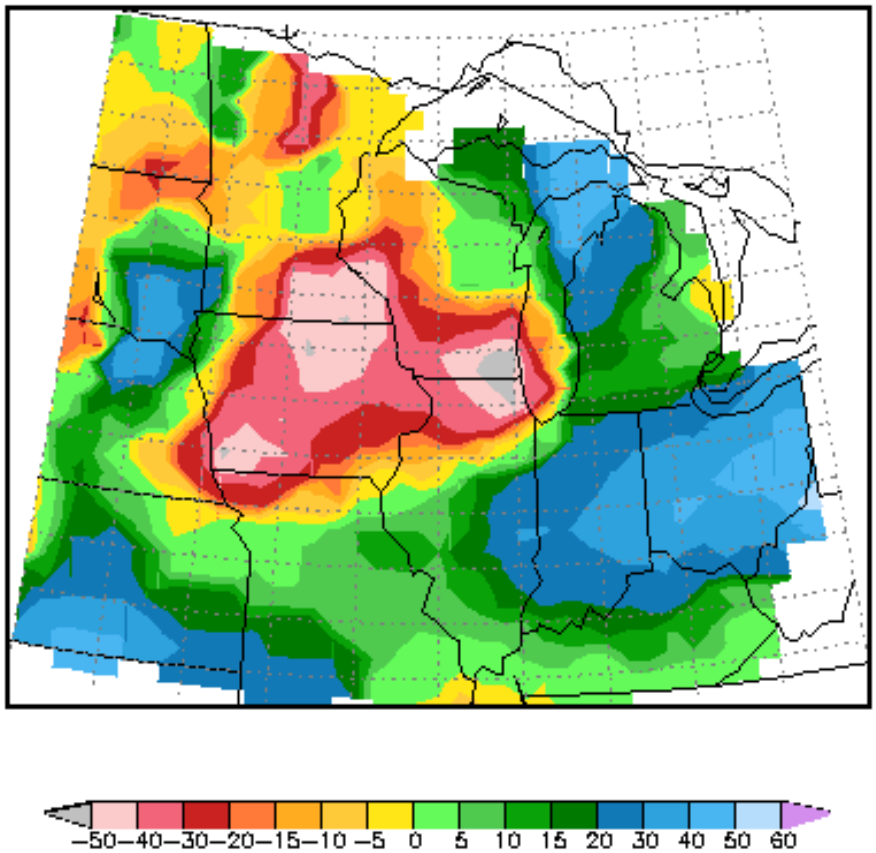


MONTHLY AVERAGE TEMPERATURE FOR MISSOURI (1971-2000)



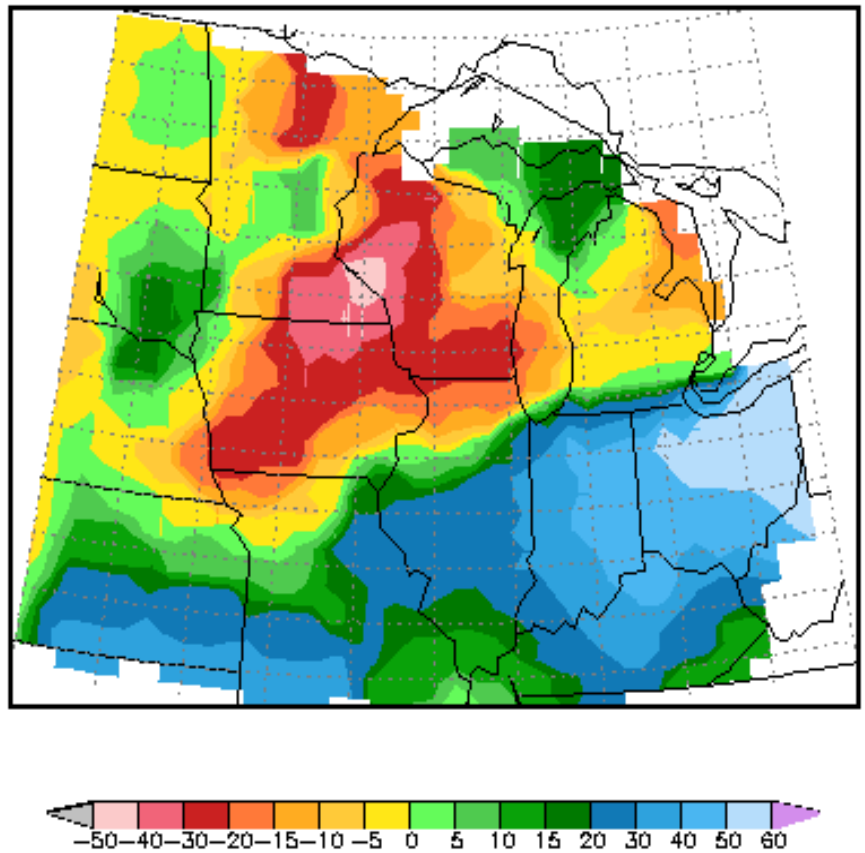
CURRENT SOIL MOISTURE

Current Soil Moisture Deviation (%), Depth = 0–12
October–6–2003



Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Current Soil Moisture Deviation (%), Depth = 0–72
October–6–2003

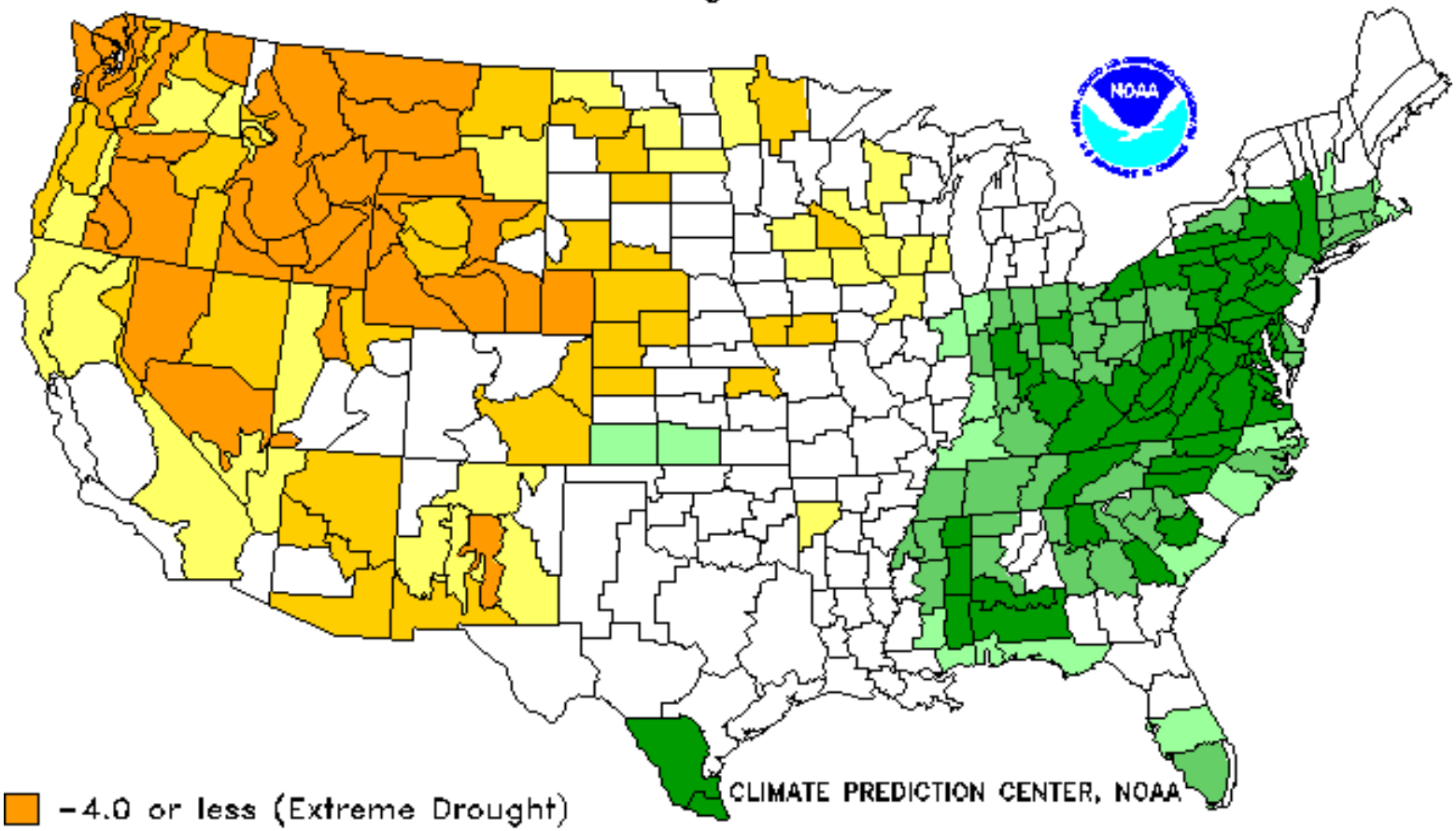


Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Drought Severity Index by Division

Weekly Value for Period Ending 4 OCT 2003

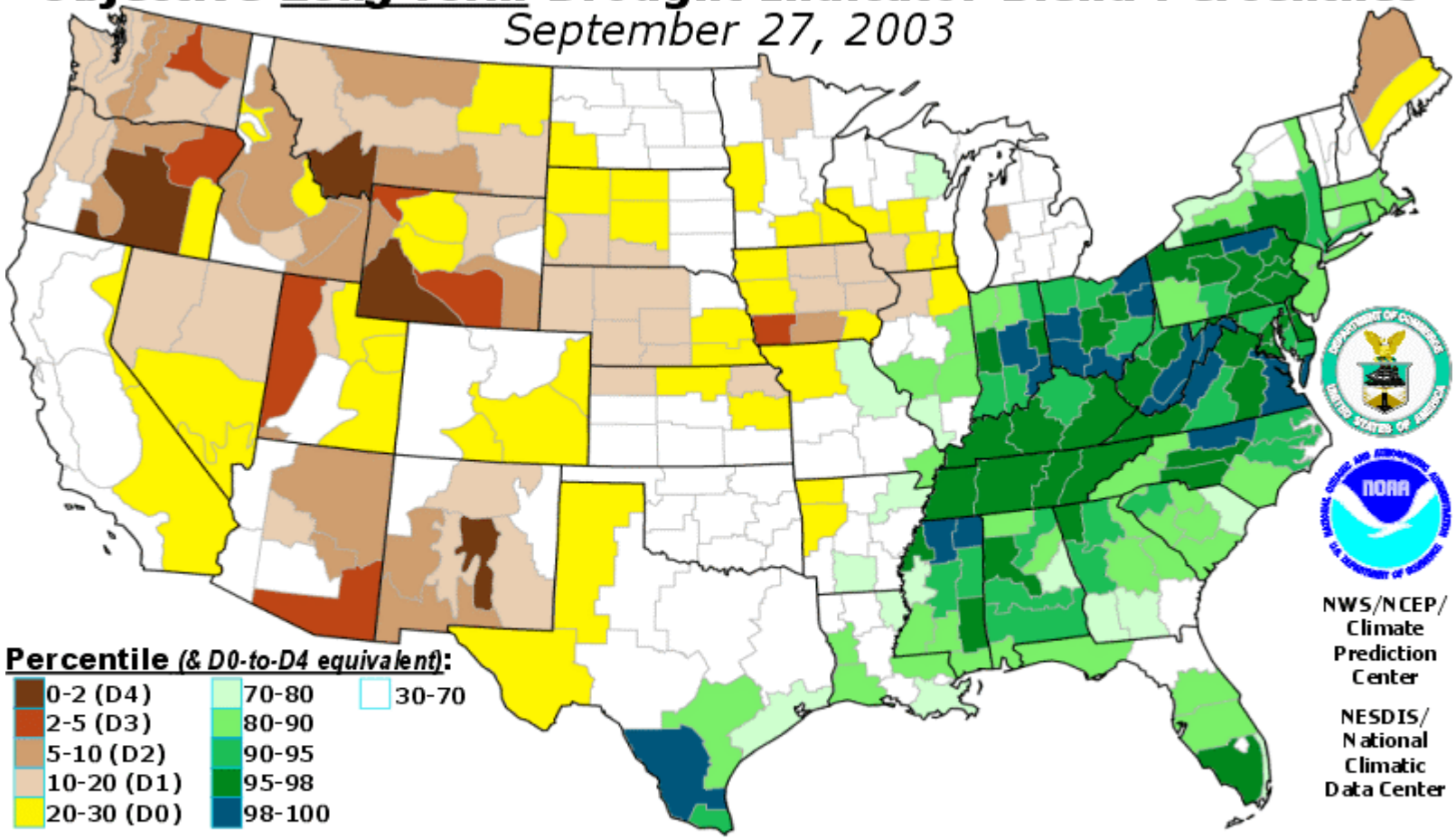
Long Term Palmer



- −4.0 or less (Extreme Drought)
- −3.0 to −3.9 (Severe Drought)
- −2.0 to −2.9 (Moderate Drought)
- −1.9 to +1.9 (Near Normal)
- +2.0 to +2.9 (Unusual Moist Spell)
- +3.0 to +3.9 (Very Moist Spell)
- +4.0 and above (Extremely Moist)

Objective *Long-Term* Drought Indicator Blend Percentiles

September 27, 2003



Percentile *(& D0-to-D4 equivalent)*:

- 0-2 (D4)
- 2-5 (D3)
- 5-10 (D2)
- 10-20 (D1)
- 20-30 (D0)
- 30-70
- 70-80
- 80-90
- 90-95
- 95-98
- 98-100

NWS/NCEP/ Climate Prediction Center

NESDIS/ National Climatic Data Center

INPUTS (as Percentiles):

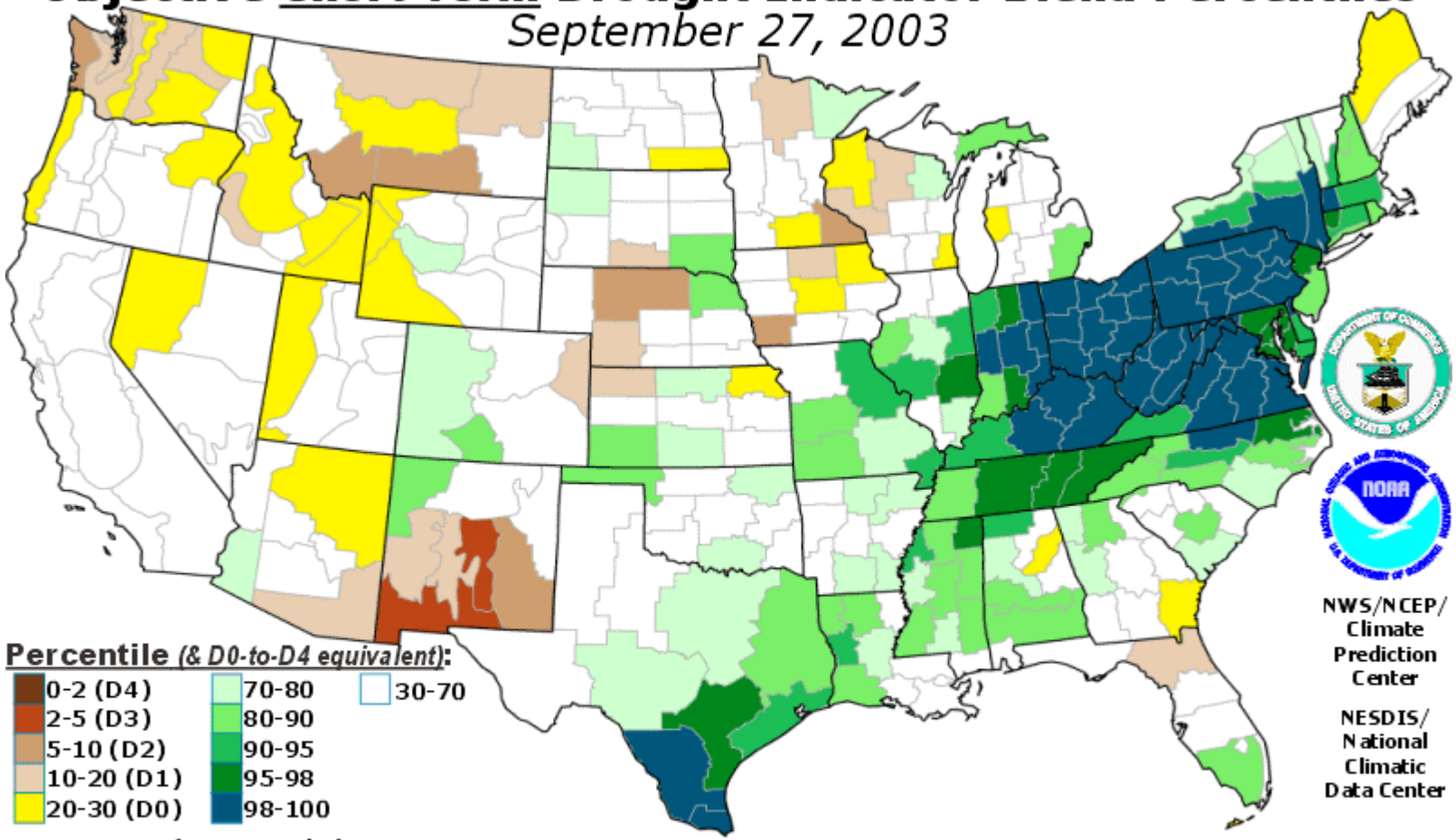
25% Palmer Hydrologic Index
20% 24-Month Precipitation
20% 12-Month Precipitation
15% 6-Month Precipitation
10% 60-Month Precipitation
10% CPC Soil Model

This map approximates impacts that respond to precipitation over several months to a few years, such as reservoir content, groundwater depth, and lake levels.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. **The relationship between indicators and water supplies can vary markedly with location, season, source, and management practices.** Do not interpret this map too literally. See full product description for more details.

Objective *Short-Term* Drought Indicator Blend Percentiles

September 27, 2003



Percentile *(& D0-to-D4 equivalent)*:

- 0-2 (D4)
- 2-5 (D3)
- 5-10 (D2)
- 10-20 (D1)
- 20-30 (D0)
- 30-70
- 70-80
- 80-90
- 90-95
- 95-98
- 98-100

INPUTS (as Percentiles):

35% Palmer Z-Index
25% 3-Month Precipitation
20% 1-Month Precipitation
13% CPC Soil Model
7% Palmer Drought Index

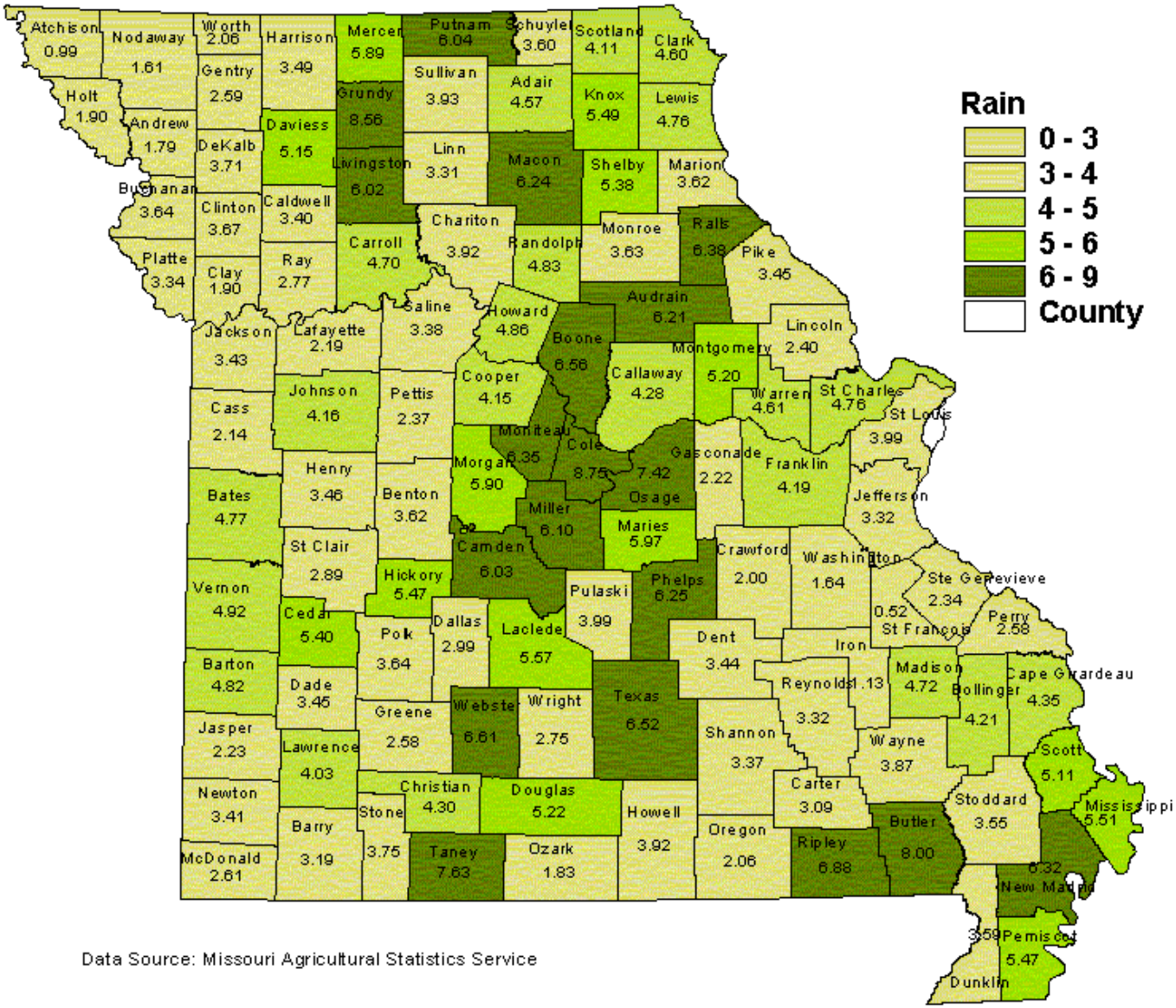
This map approximates impacts that respond to precipitation over several days to a few months, such as agriculture, topsoil moisture, unregulated streamflows, and most aspects of wildfire danger.

This map is based on preliminary climate division data. Local conditions and/or final data may differ. The relationship between indicators and impacts varies with location and season. Do not interpret this map too literally. See full product description for more details.

NWS/NCEP/ Climate Prediction Center

NESDIS/ National Climatic Data Center

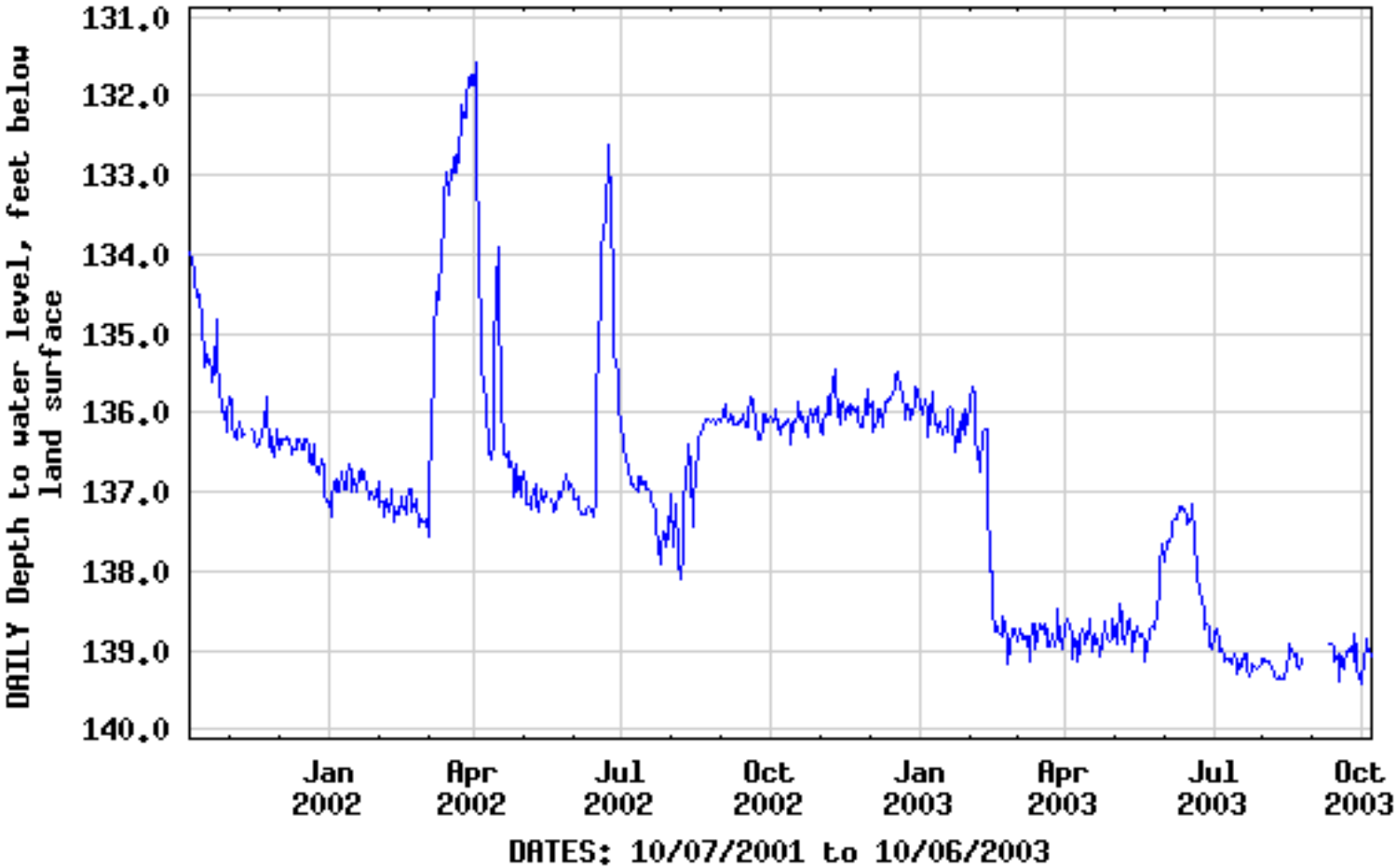
Four Week Rainfall by County (Sep 1-28,2003)



Data Source: Missouri Agricultural Statistics Service

USGS

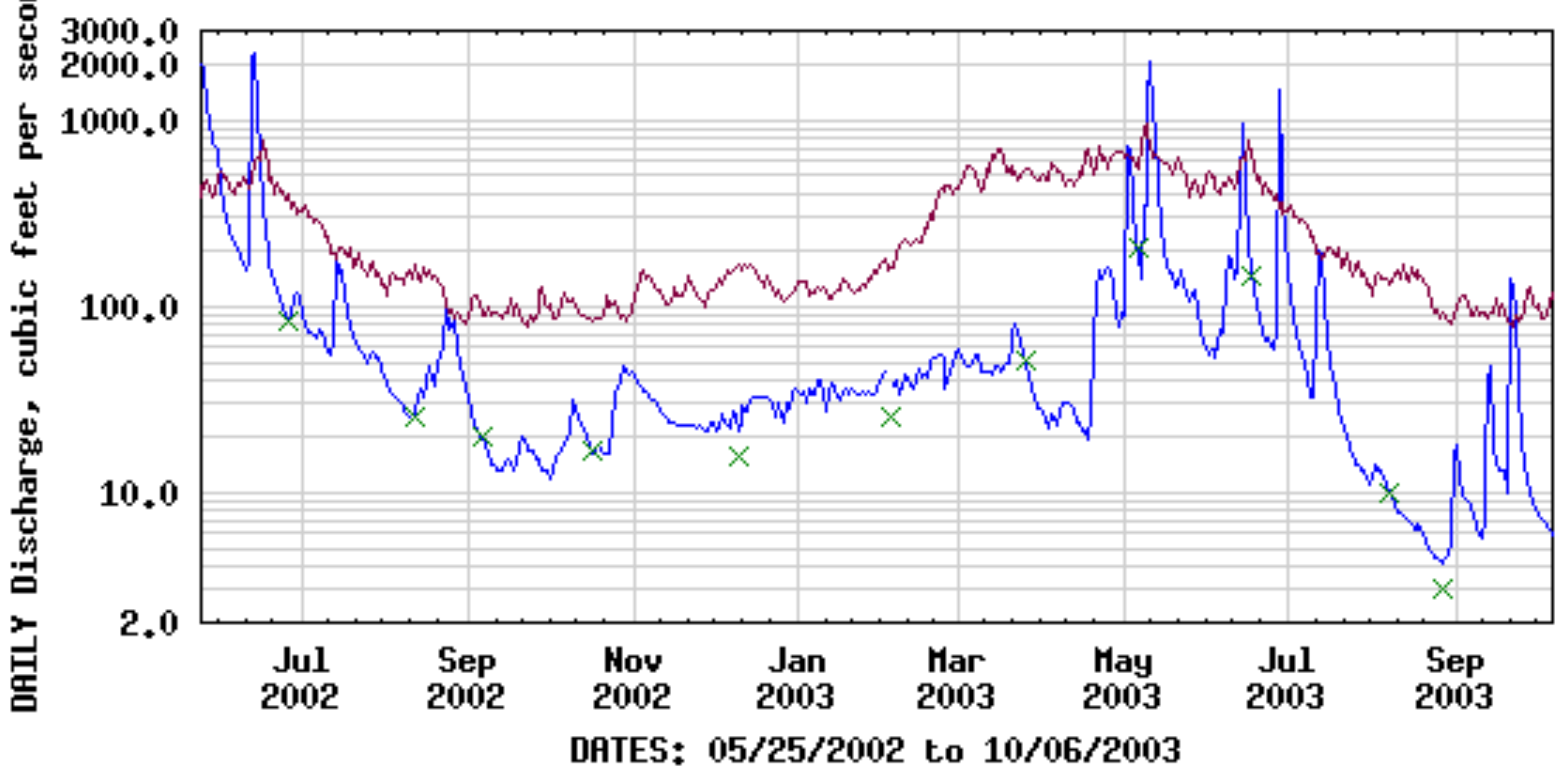
USGS 400458093582001 Coffey



Provisional Data Subject to Revision

USGS

USGS 06897500 Grand River near Gallatin, MO



EXPLANATION

— DAILY MEAN DISCHARGE

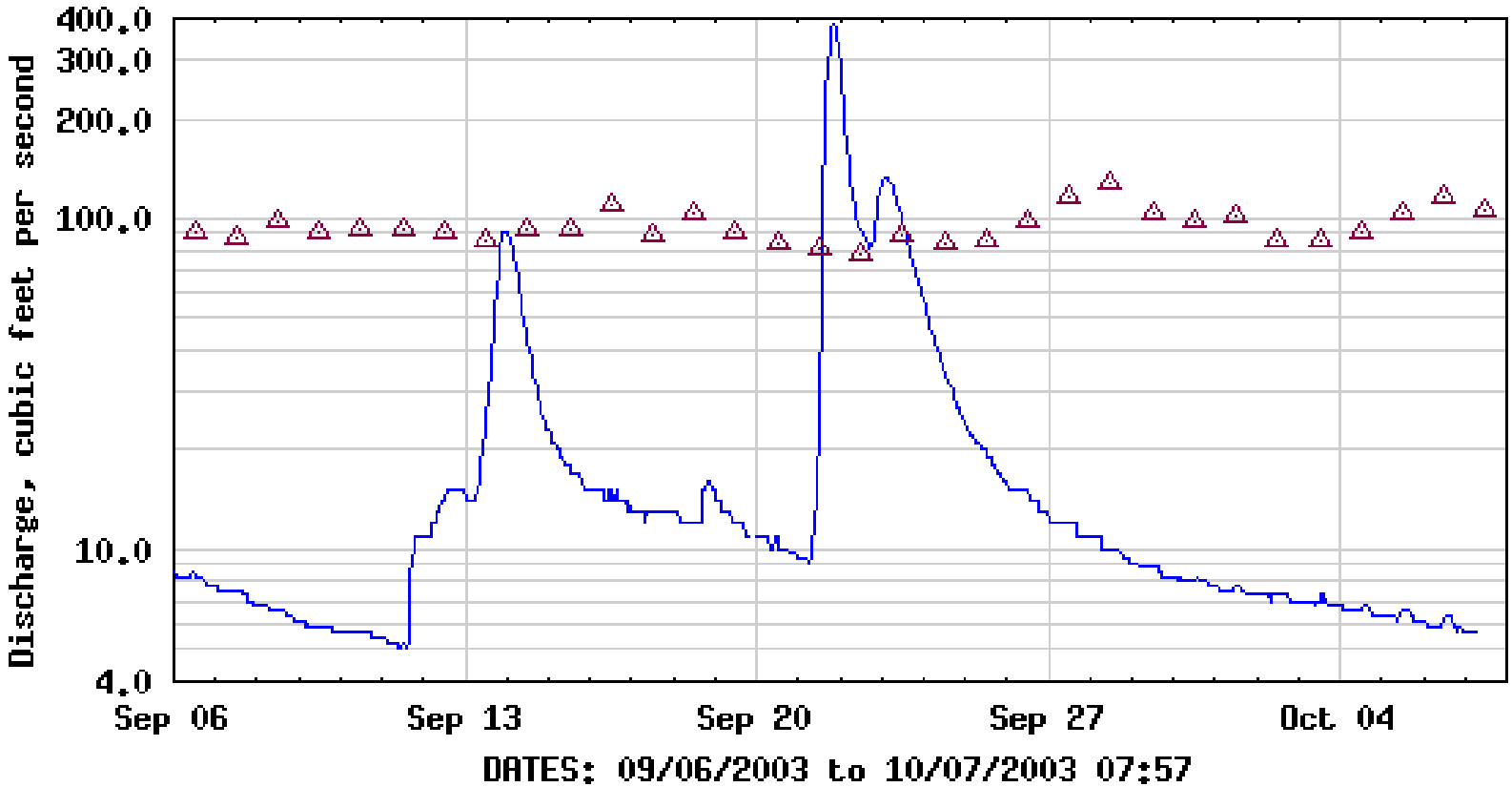
— MEDIAN DAILY STREAMFLOW BASED ON 82 YEARS OF RECORD

× MEASURED Discharge

Provisional Data Subject to Revision

USGS

USGS 06897500 Grand River near Gallatin, MO



EXPLANATION

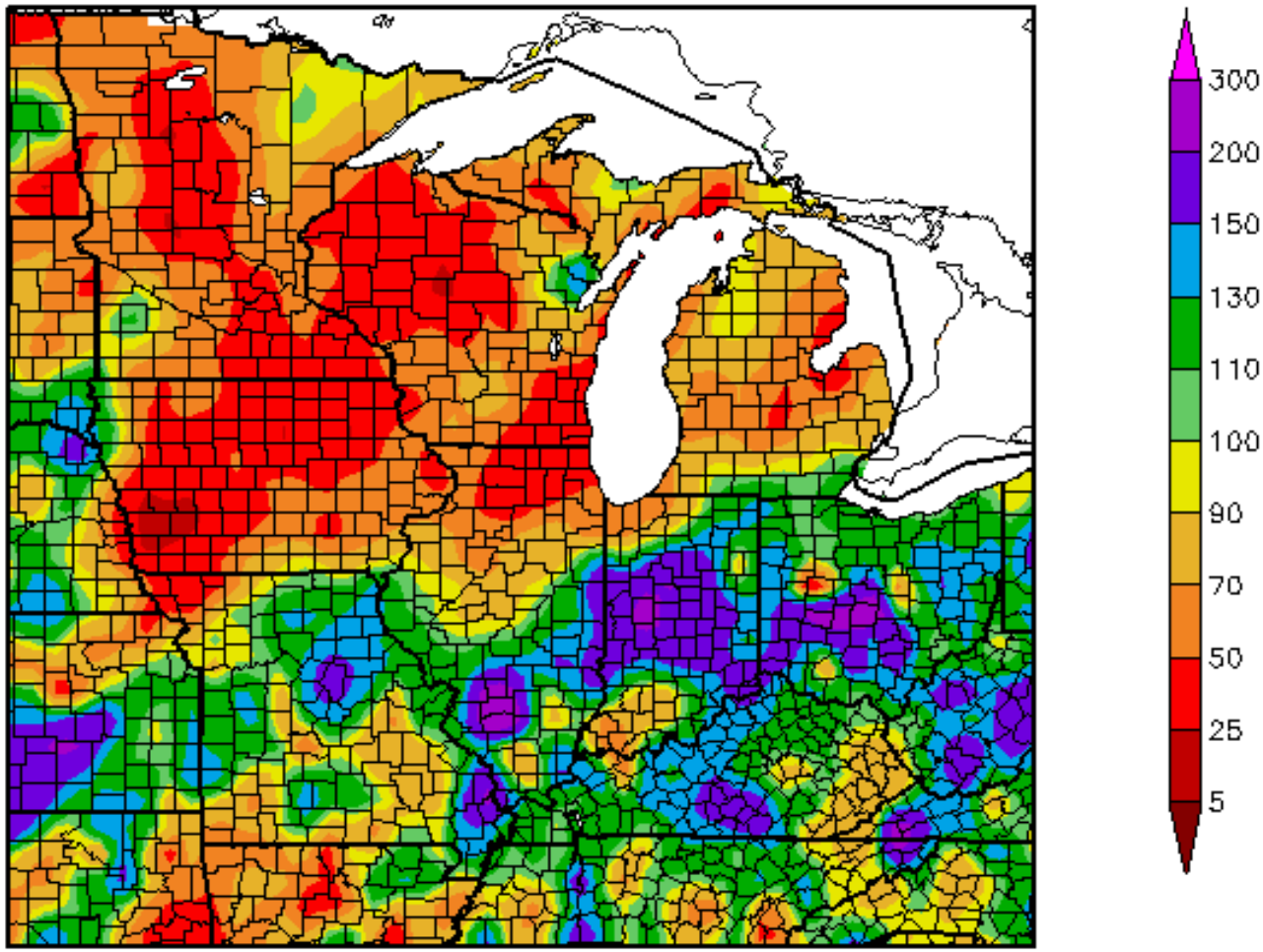
DISCHARGE

MEDIAN DAILY STREAMFLOW BASED ON 82 YEARS OF RECORD

Provisional Data Subject to Revision

60 DAY

Percent of Normal Precipitation (%)
8/7/2003 – 10/5/2003

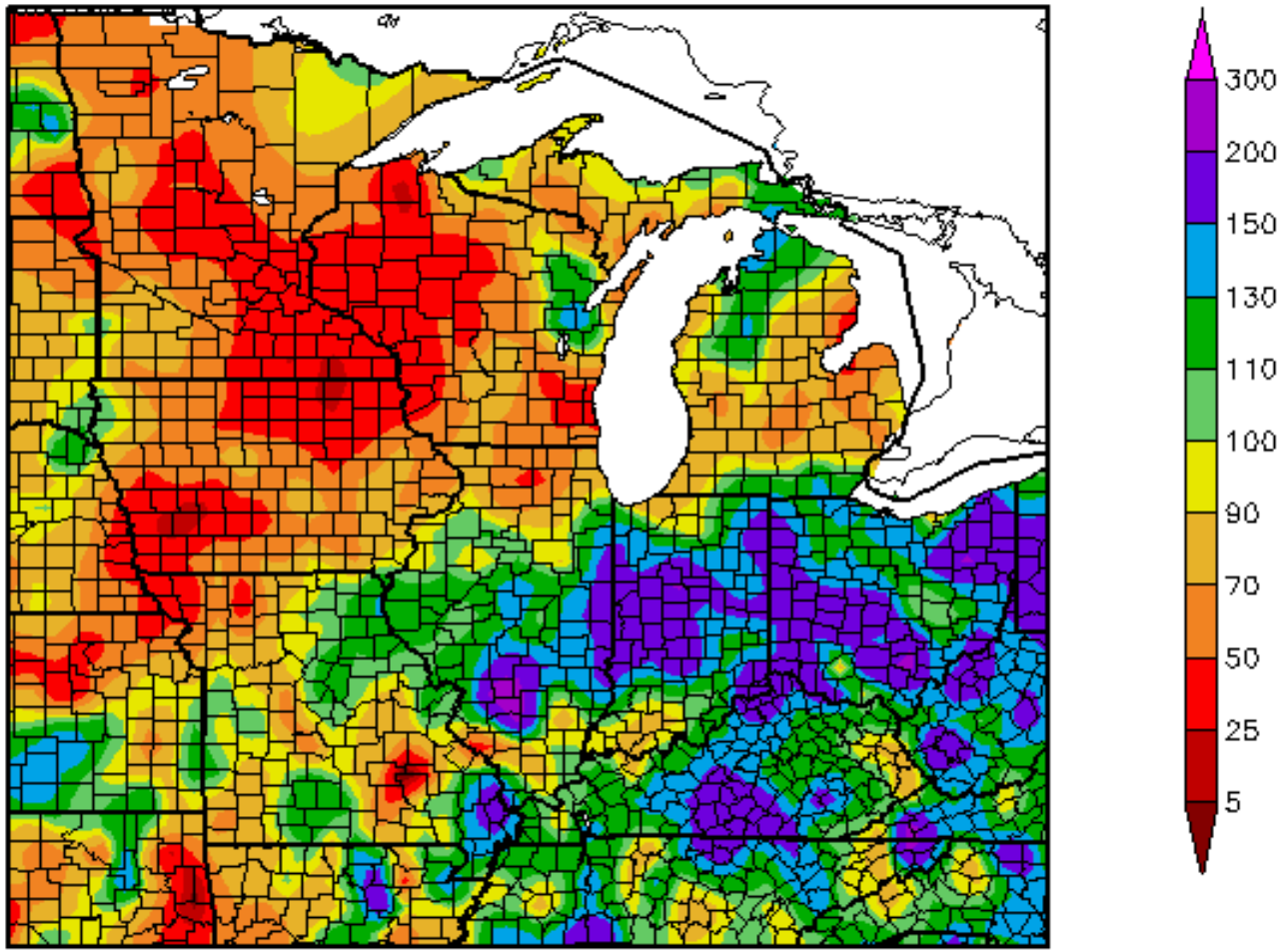


Generated 10/6/2003 at HPRCC using provisional data.

NOAA Regional Climate Centers

90 DAY

Percent of Normal Precipitation (%)
7/8/2003 – 10/5/2003

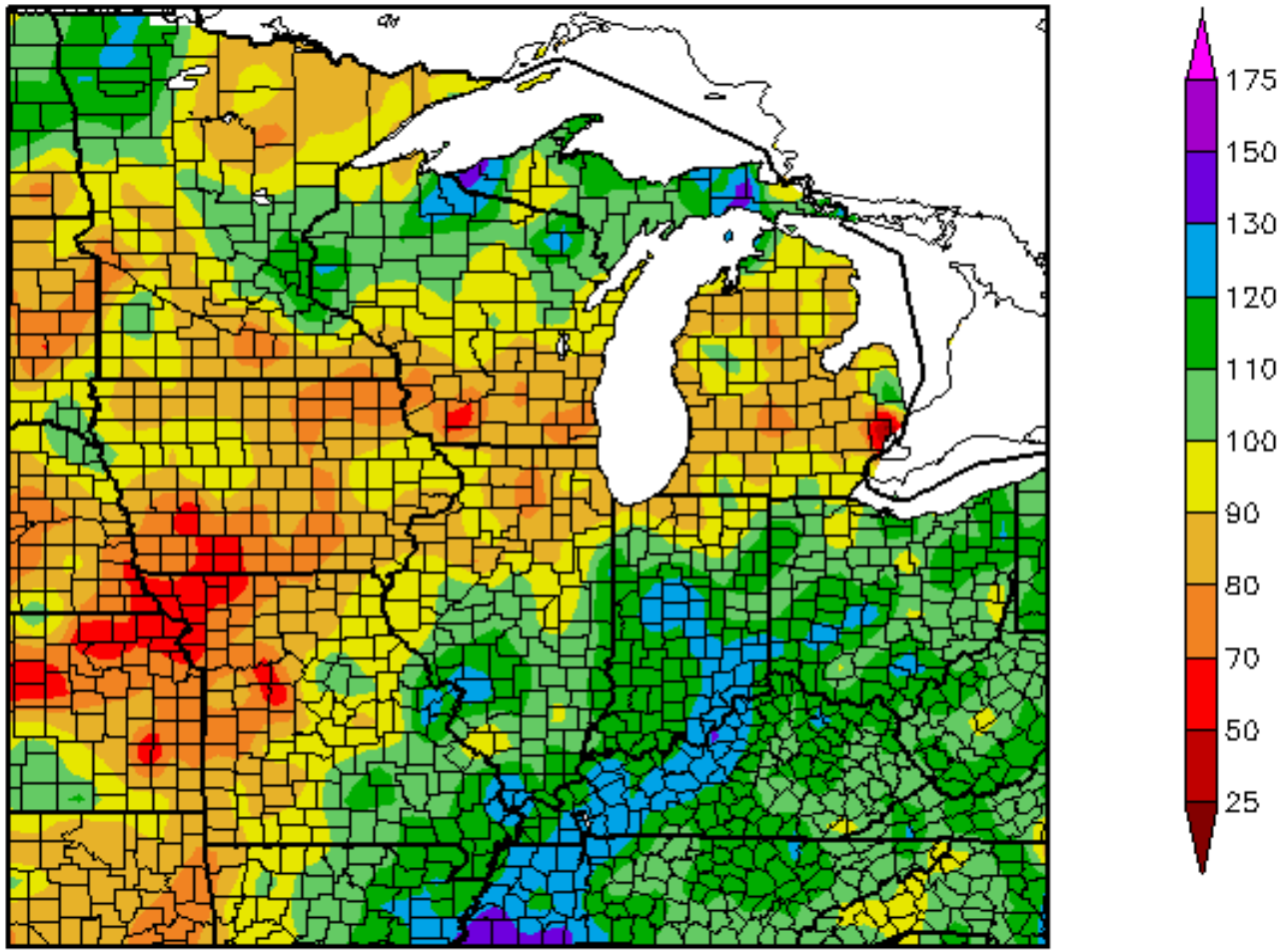


Generated 10/6/2003 at HPRCC using provisional data.

NOAA Regional Climate Centers

24 MONTH

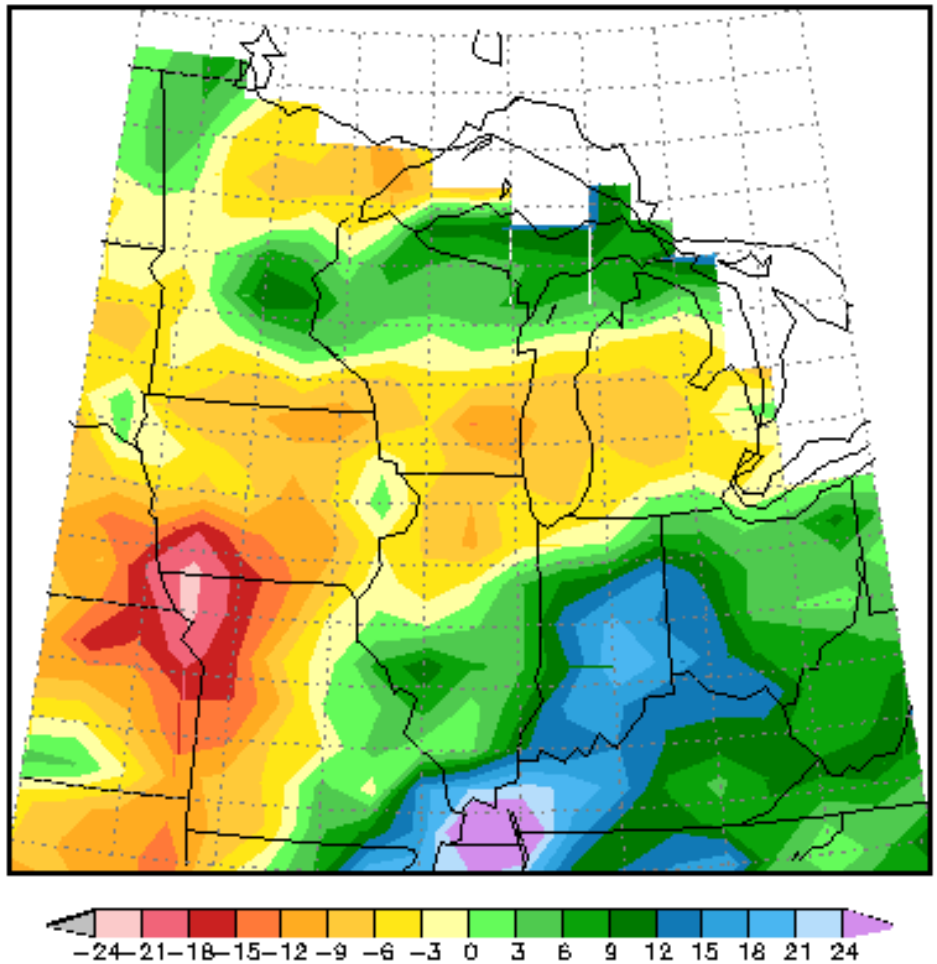
Percent of Normal Precipitation (%)
10/6/2001 – 10/5/2003



Generated 10/6/2003 at HPRCC using provisional data.

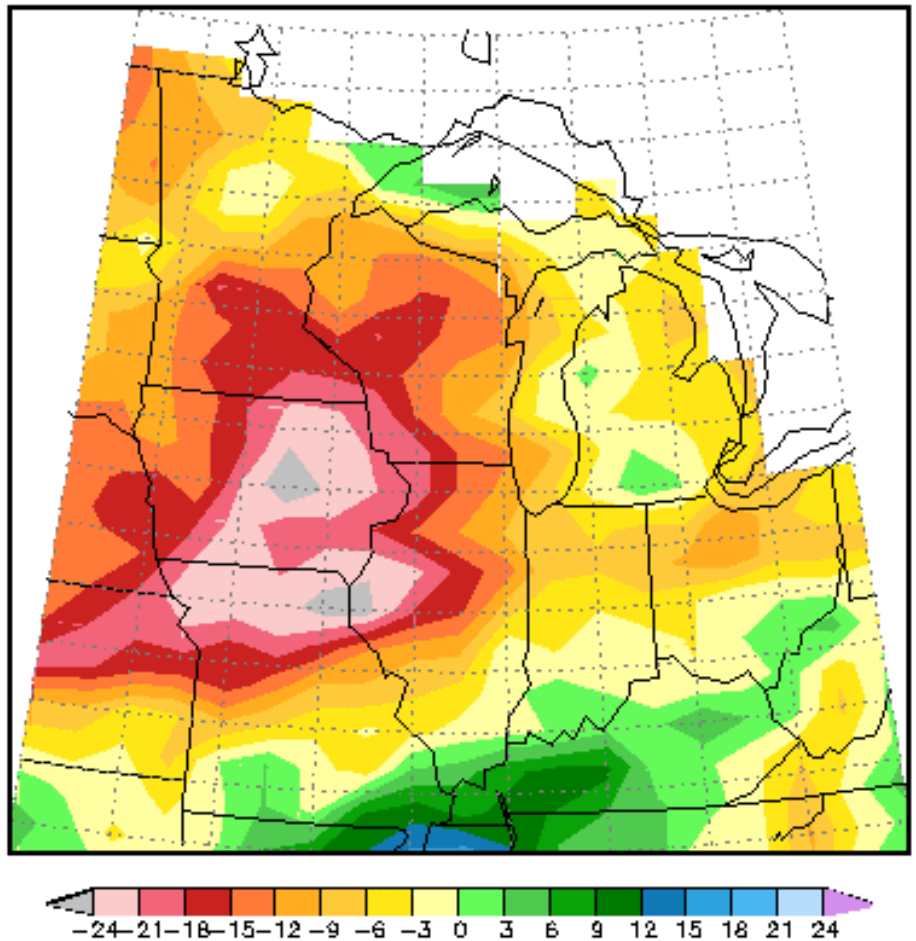
NOAA Regional Climate Centers

Total Precipitation Departure from Mean in Inches
September 1, 2001 to September 30, 2003



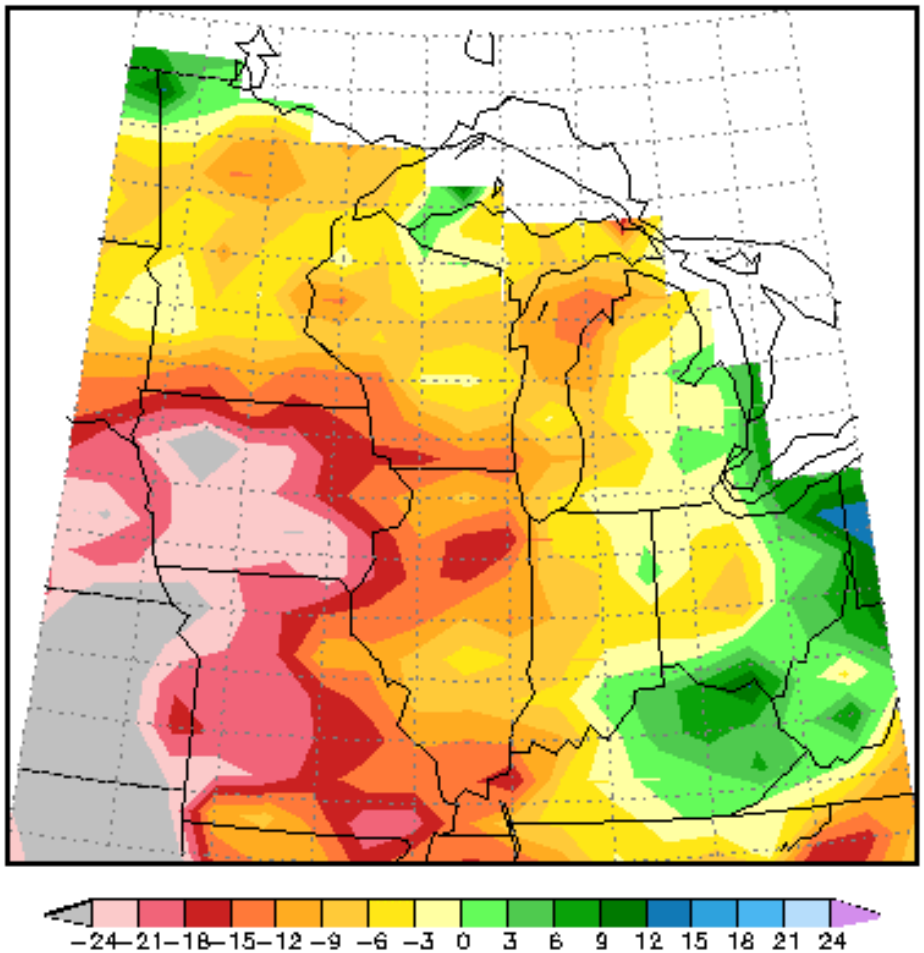
Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Total Precipitation Departure from Mean in Inches
September 1, 1987 to September 30, 1989



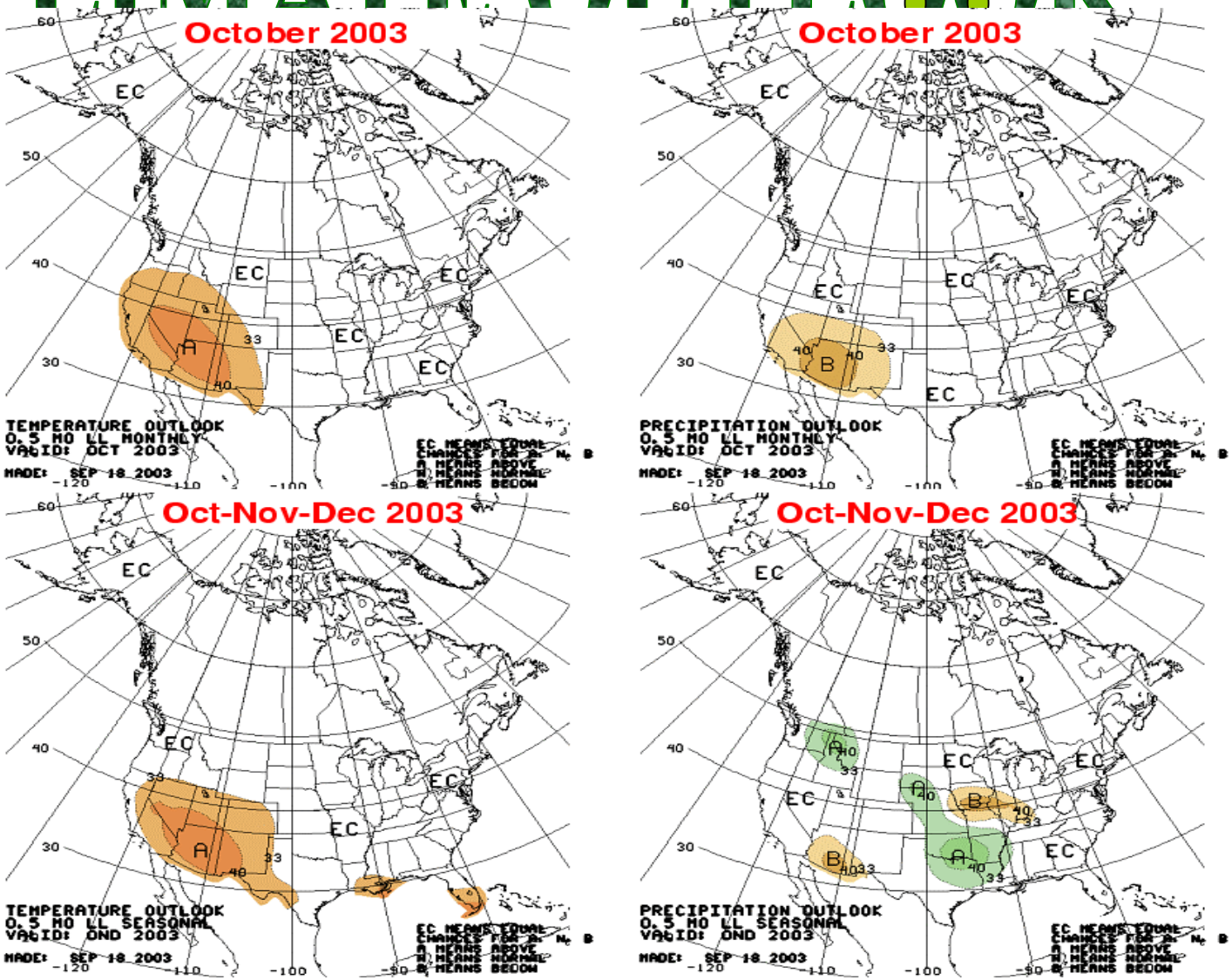
Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

Total Precipitation Departure from Mean in Inches
September 1, 1954 to September 30, 1956



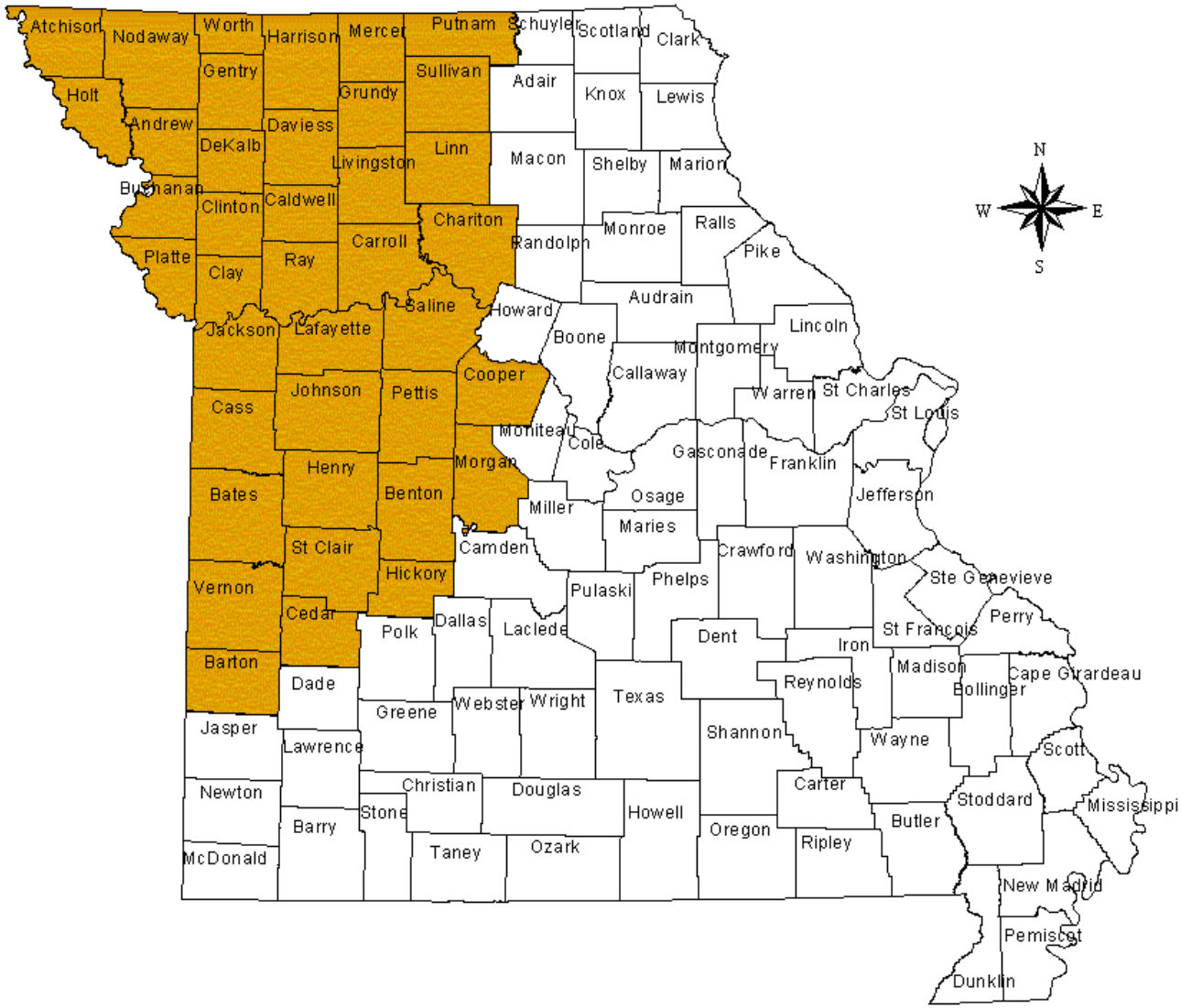
Midwestern Regional Climate Center
Illinois State Water Survey
Champaign, Illinois

CLIMATE OUTLOOK

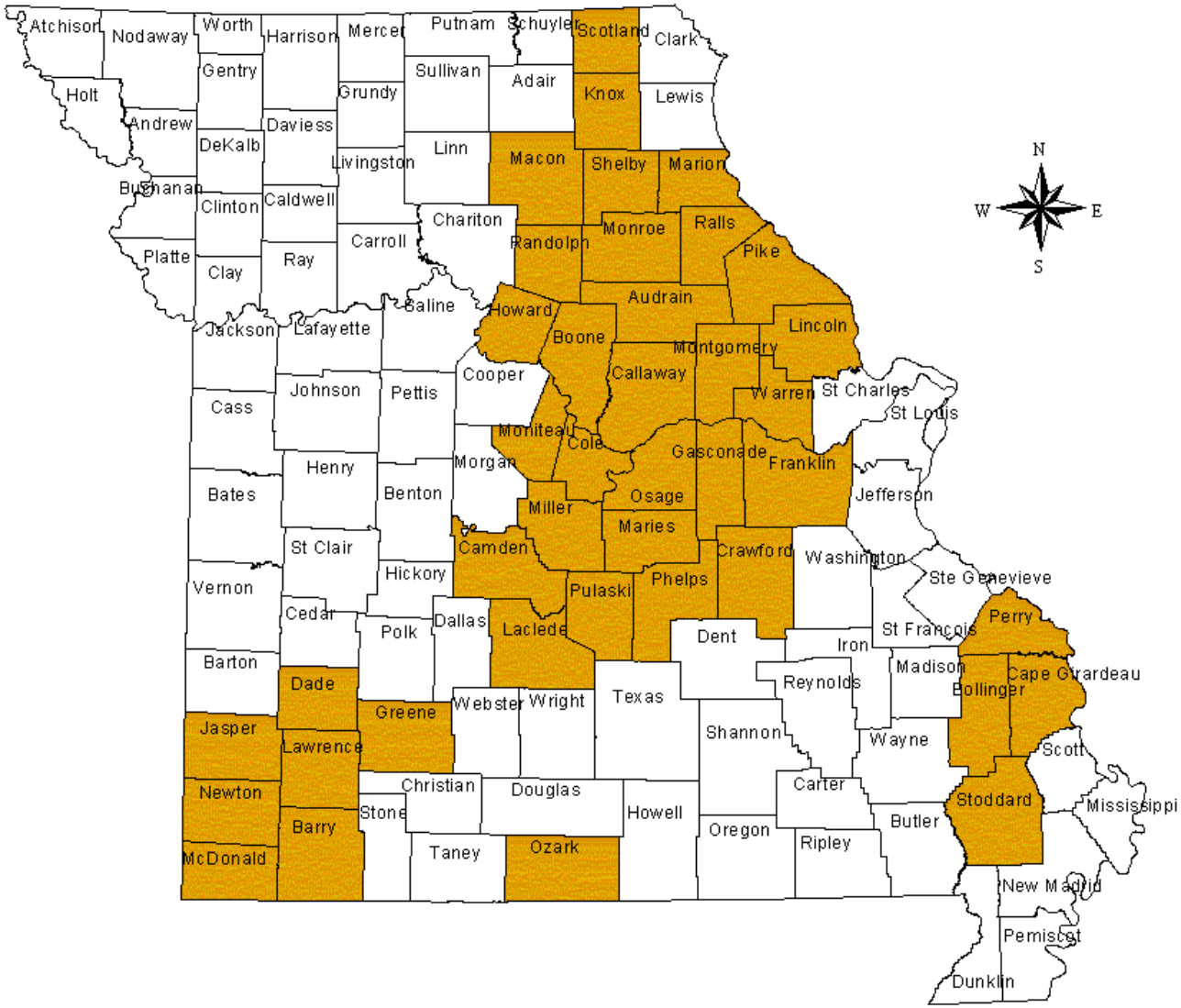


Drought Assessment Committee

39 Counties Governor requested damage assessment reports

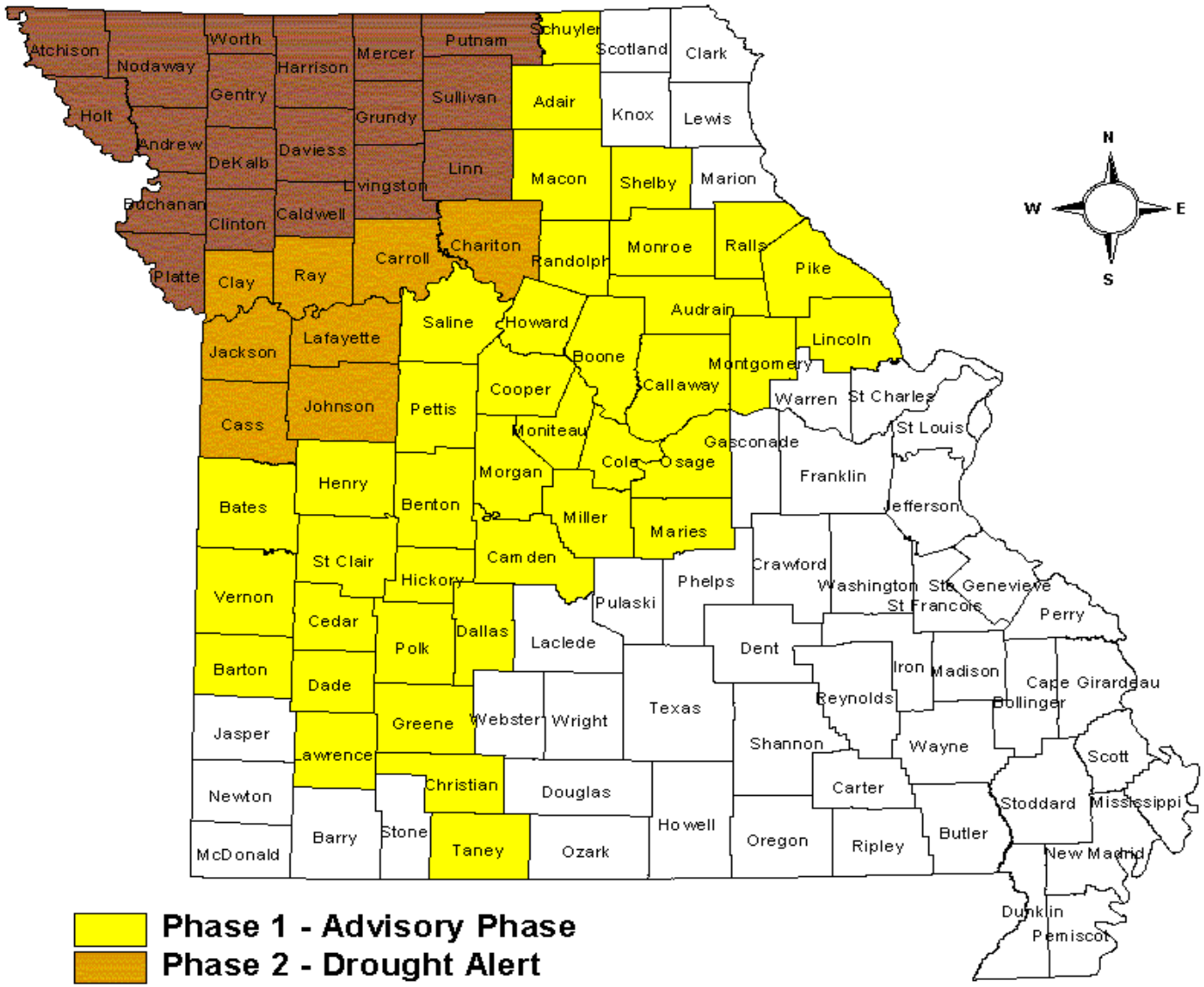


40 more counties Governor requested damage assessment reports



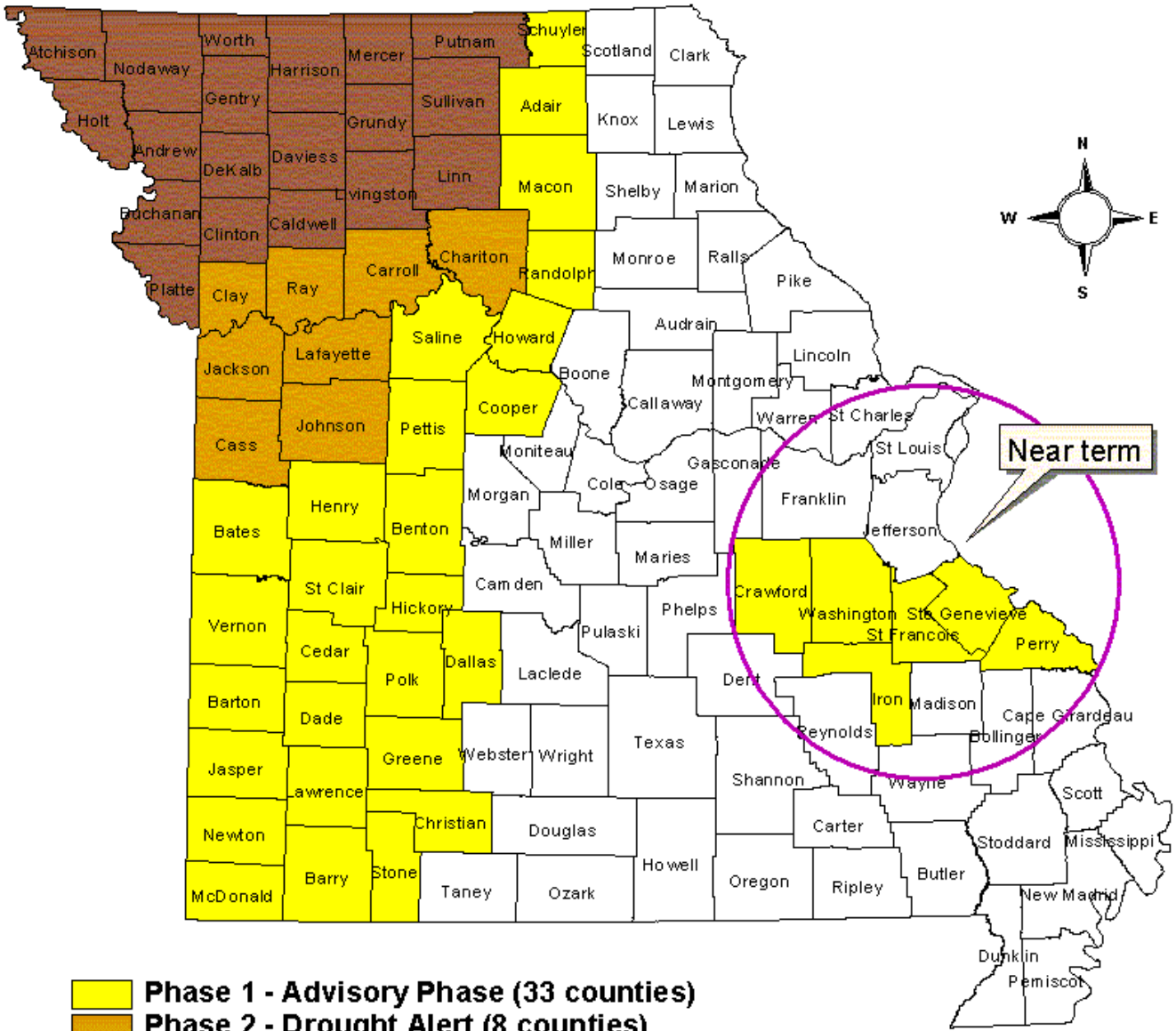
Drought Assessment Committee

Drought Condition Status (September 5, 2003)



Phase 1 - Advisory Phase

Phase 2 - Drought Alert

Phase 3 - Conservation Phase

Drought Condition Status (October 9, 2003)