

Drought Update

May 2005 WTF Meeting

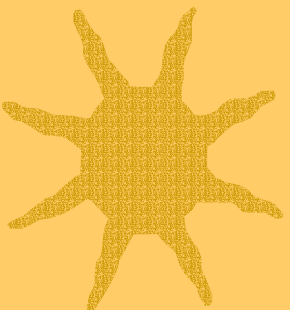
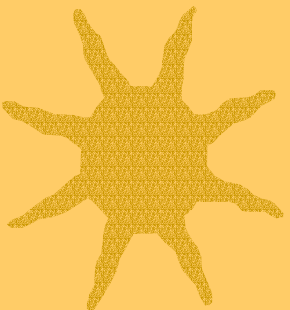
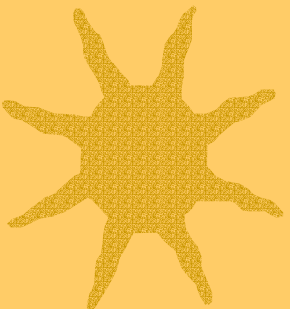
Roger A. Pielke, Sr.
Colorado Climate Center

presented at the Water Task Force meeting,
Division of Wildlife, Denver, CO, May 12, 2005

Prepared by Odie Bliss

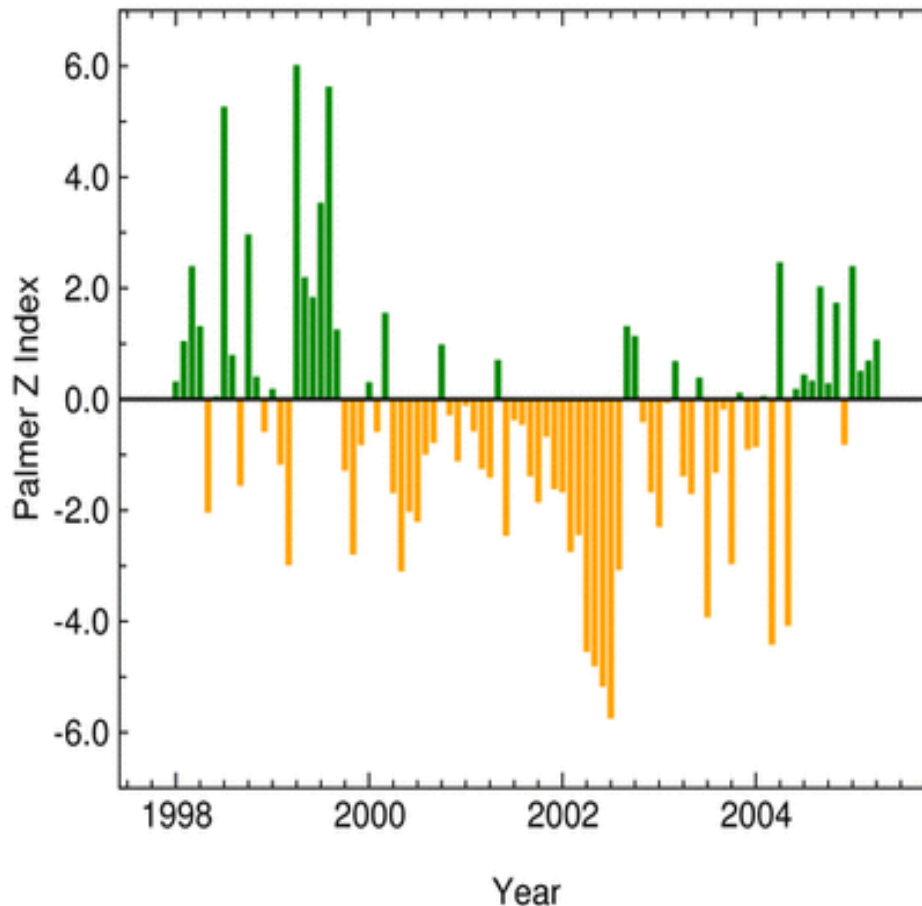
<http://ccc.atmos.colostate.edu>



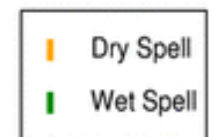


Colorado Statewide Z Index*

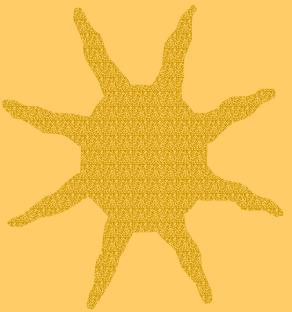
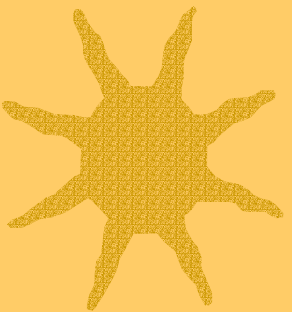
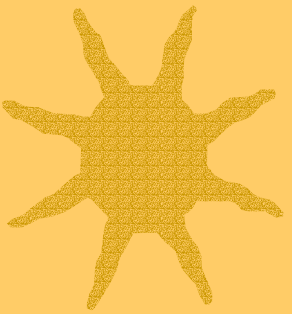
January 1998 - April 2005



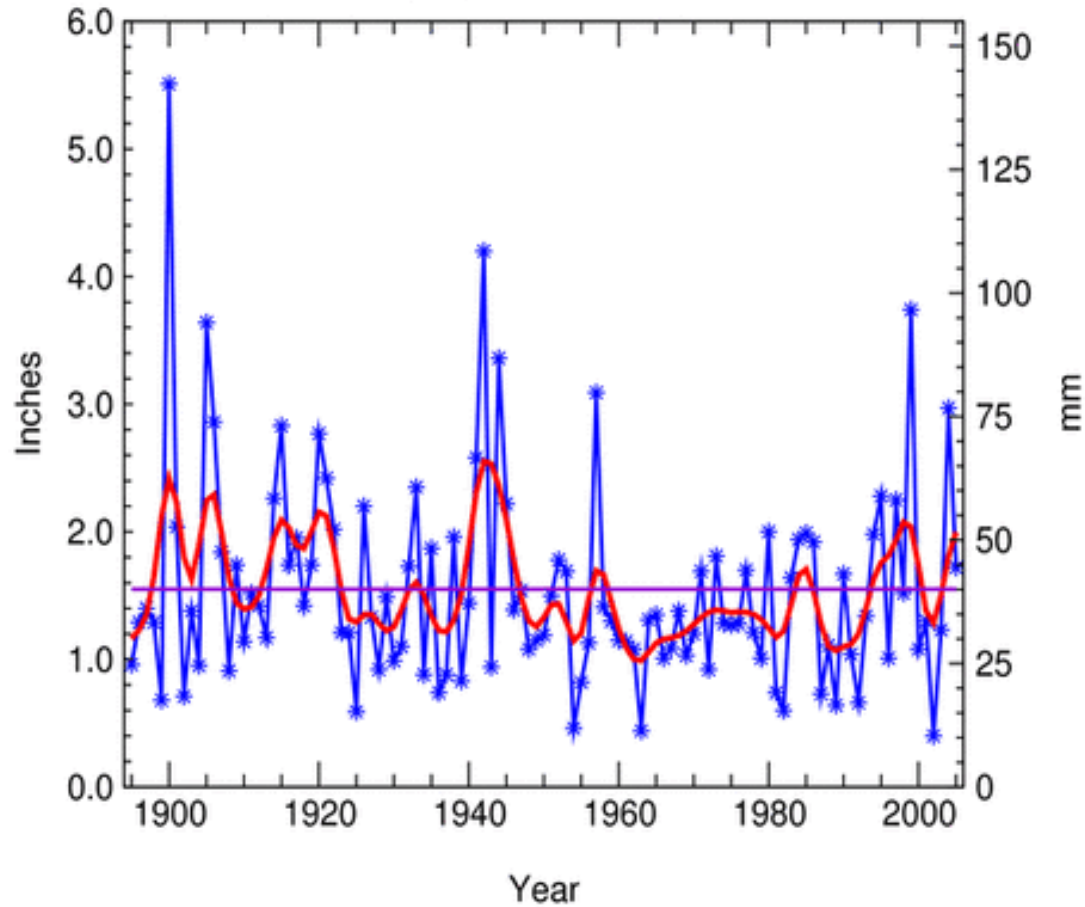
*Palmer Z Index
Short-Term Drought



National Climatic Data Center / NESDIS / NOAA

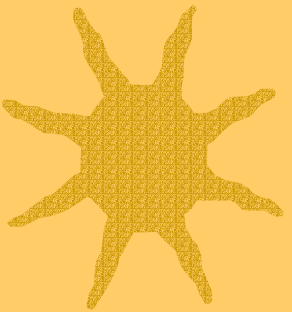
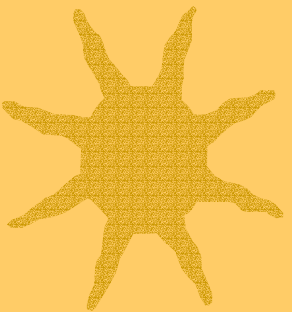
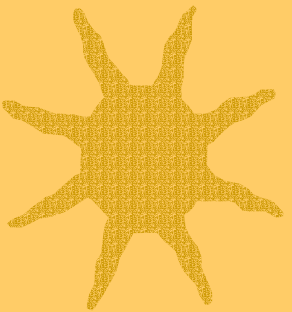


Colorado Statewide Precipitation April, 1895 - 2005

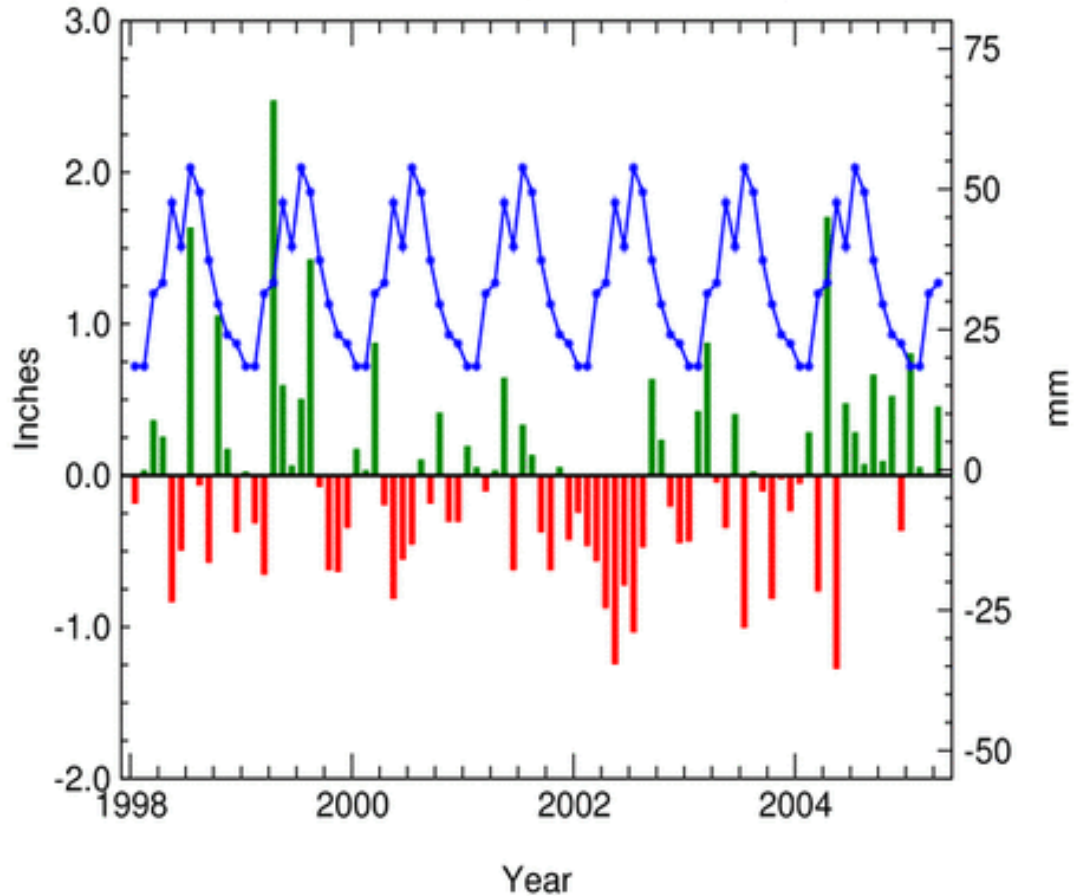


- Yearly Values
- Filtered Values
- Long-Term Mean

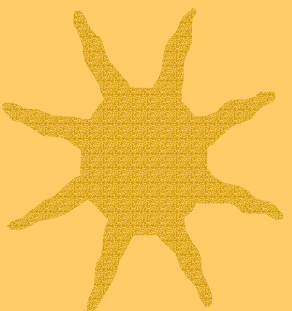
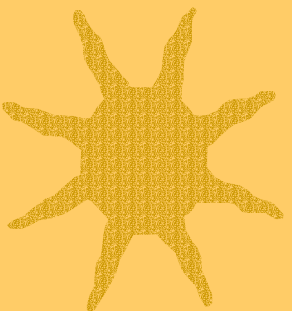
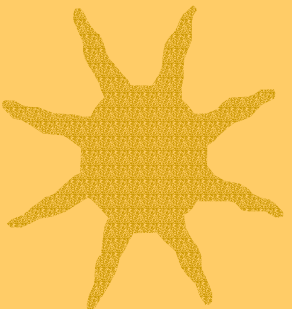
National Climatic Data Center / NESDIS / NOAA



Colorado Statewide Precipitation Normal & Departure, Jan 1998 - Apr 2005



National Climatic Data Center / NESDIS / NOAA



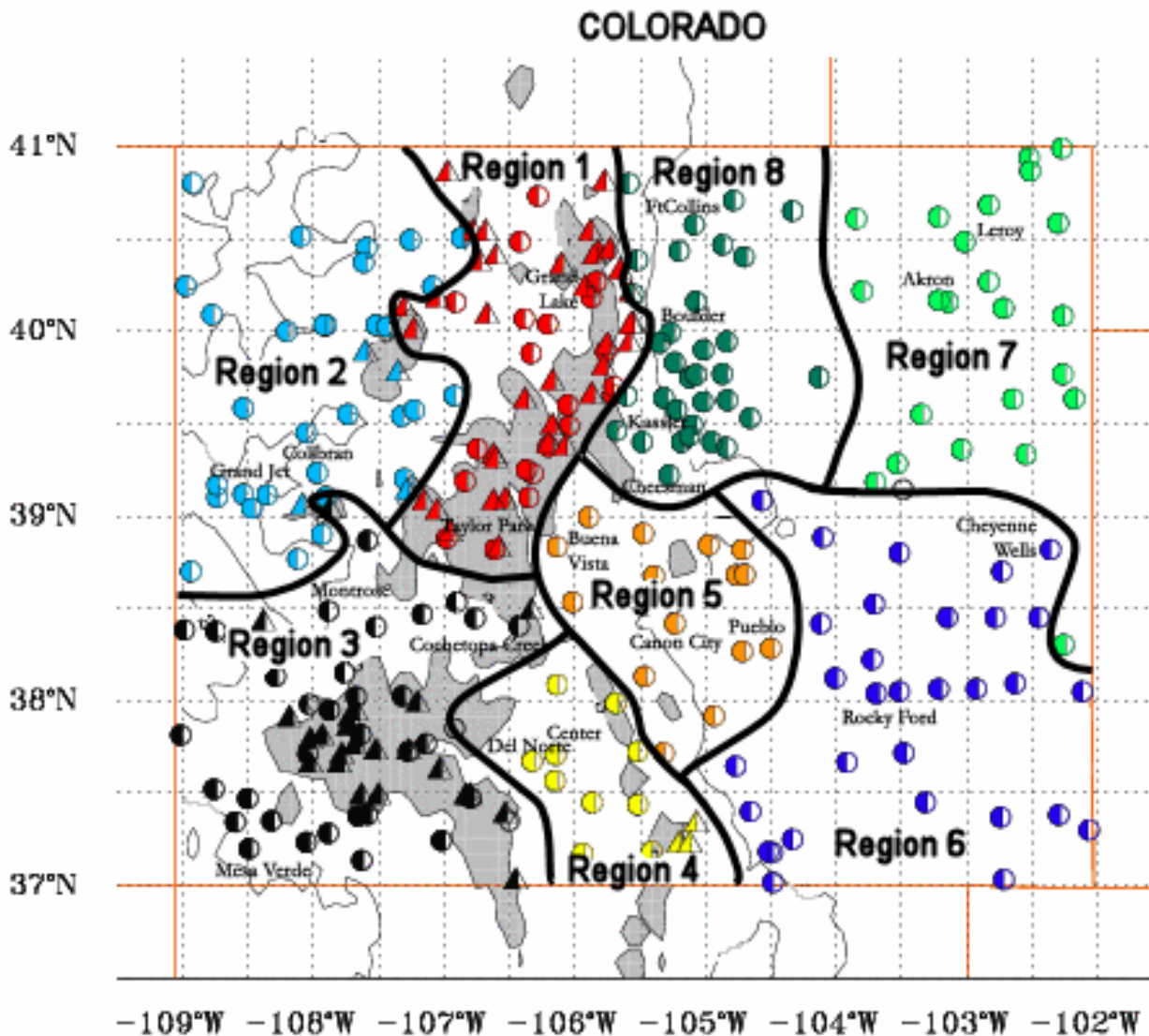
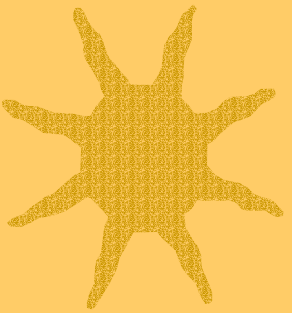
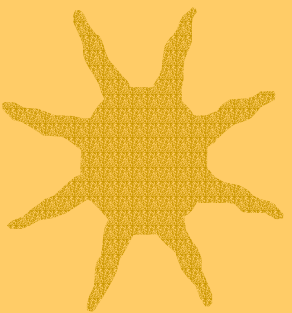
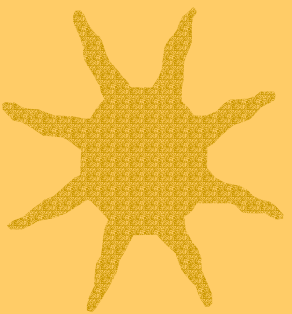
Statewide Precipitation Ranks for Colorado , 2004-2005

Period	Rank
Apr	<u>36th wettest</u> <u>(76th driest)</u>
Mar-Apr	<u>45th wettest</u> <u>(67th driest)</u>
Feb-Apr	<u>44th wettest</u> <u>(67th driest)</u>
Jan-Apr	<u>24th wettest</u> <u>(88th driest)</u>
Dec-Apr	<u>33rd wettest</u> <u>(77th driest)</u>
Nov-Apr	<u>24th wettest</u> <u>(87th driest)</u>
Oct-Apr	<u>31st wettest</u> <u>(80th driest)</u>
Sep-Apr	<u>11th wettest</u> <u>(100th driest)</u>
Aug-Apr	<u>19th wettest</u> <u>(92nd driest)</u>
Jul-Apr	<u>17th wettest</u> <u>(94th driest)</u>
Jun-Apr	<u>17th wettest</u> <u>(94th driest)</u>
May-Apr	<u>37th wettest</u> <u>(74th driest)</u>

Colorado Precipitation Ranking 1895-2005

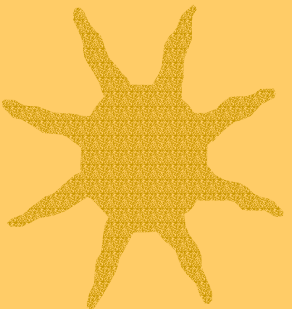
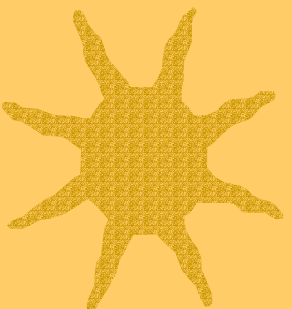
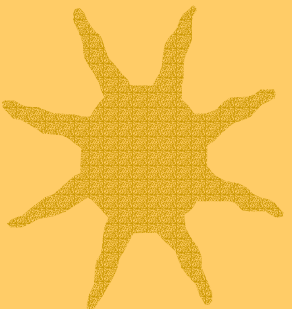


Climate divisions defined by Dr. Klaus Wolter of NOAA's Climate Diagnostic Center in Boulder, CO

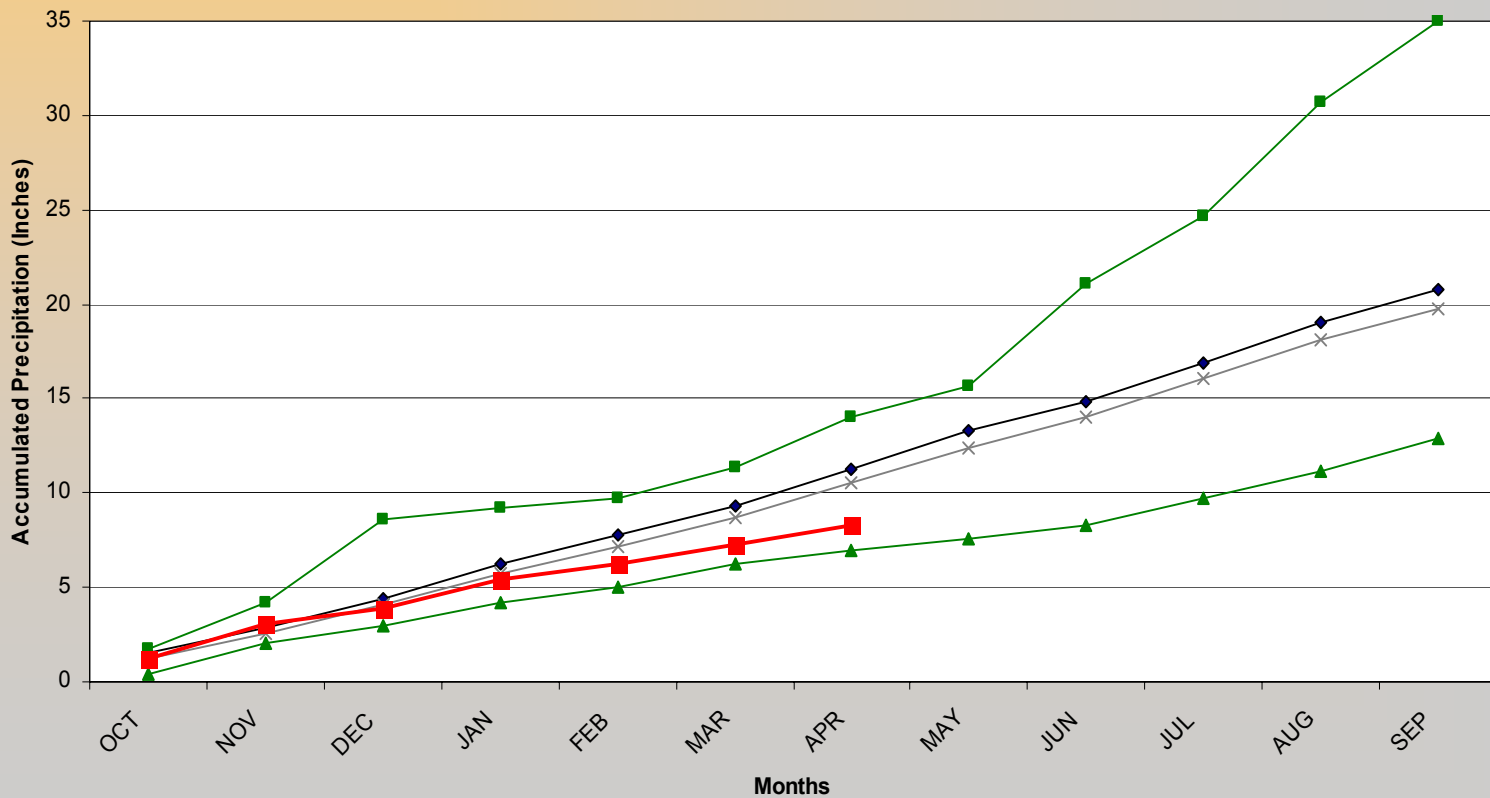
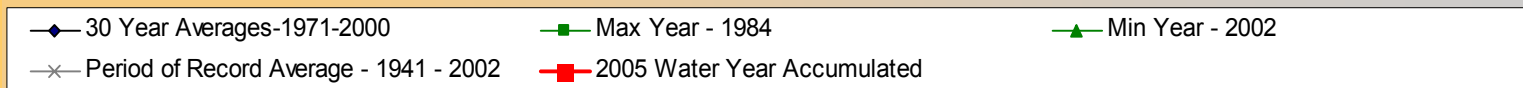




Division 1– Grand Lake 1NW

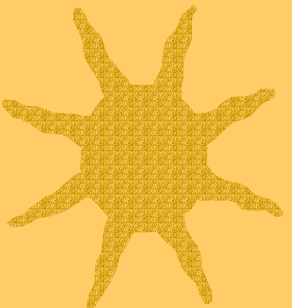
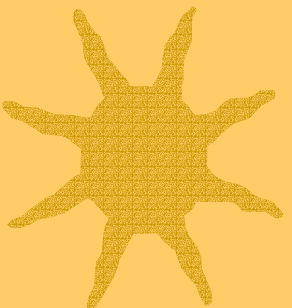
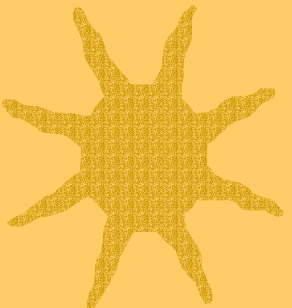


Grand Lake 1 NW 2005 Water Year

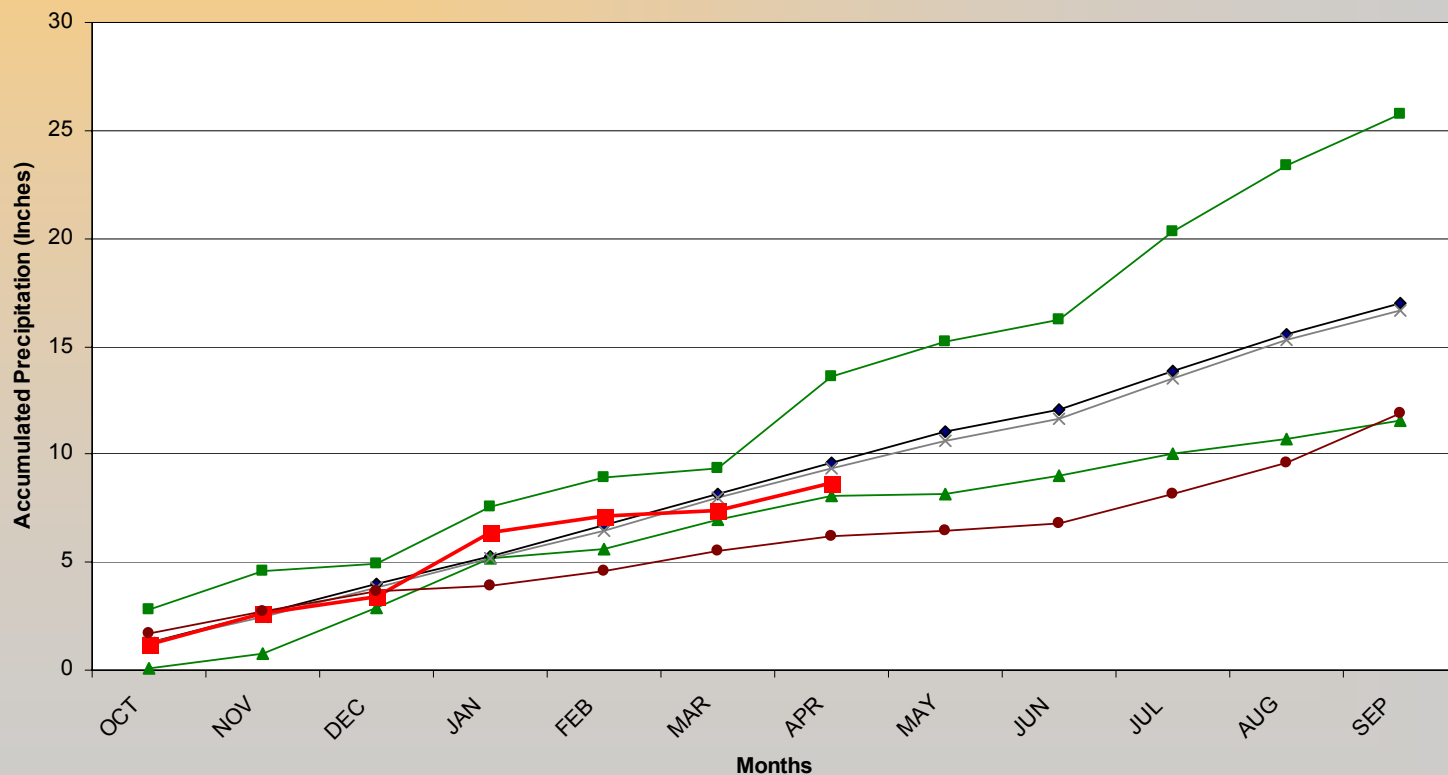
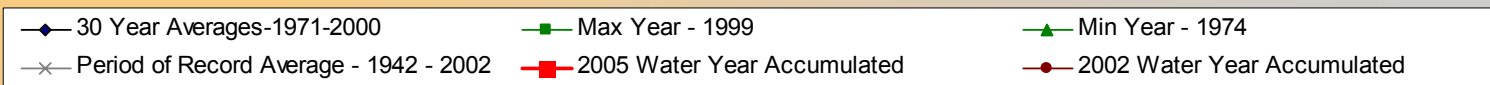




Division 1– Taylor Park

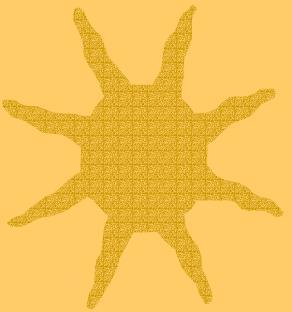
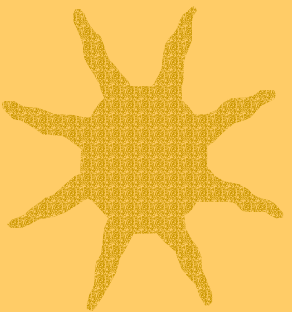
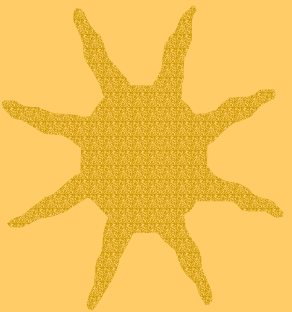


Taylor Park 2005 Water Year

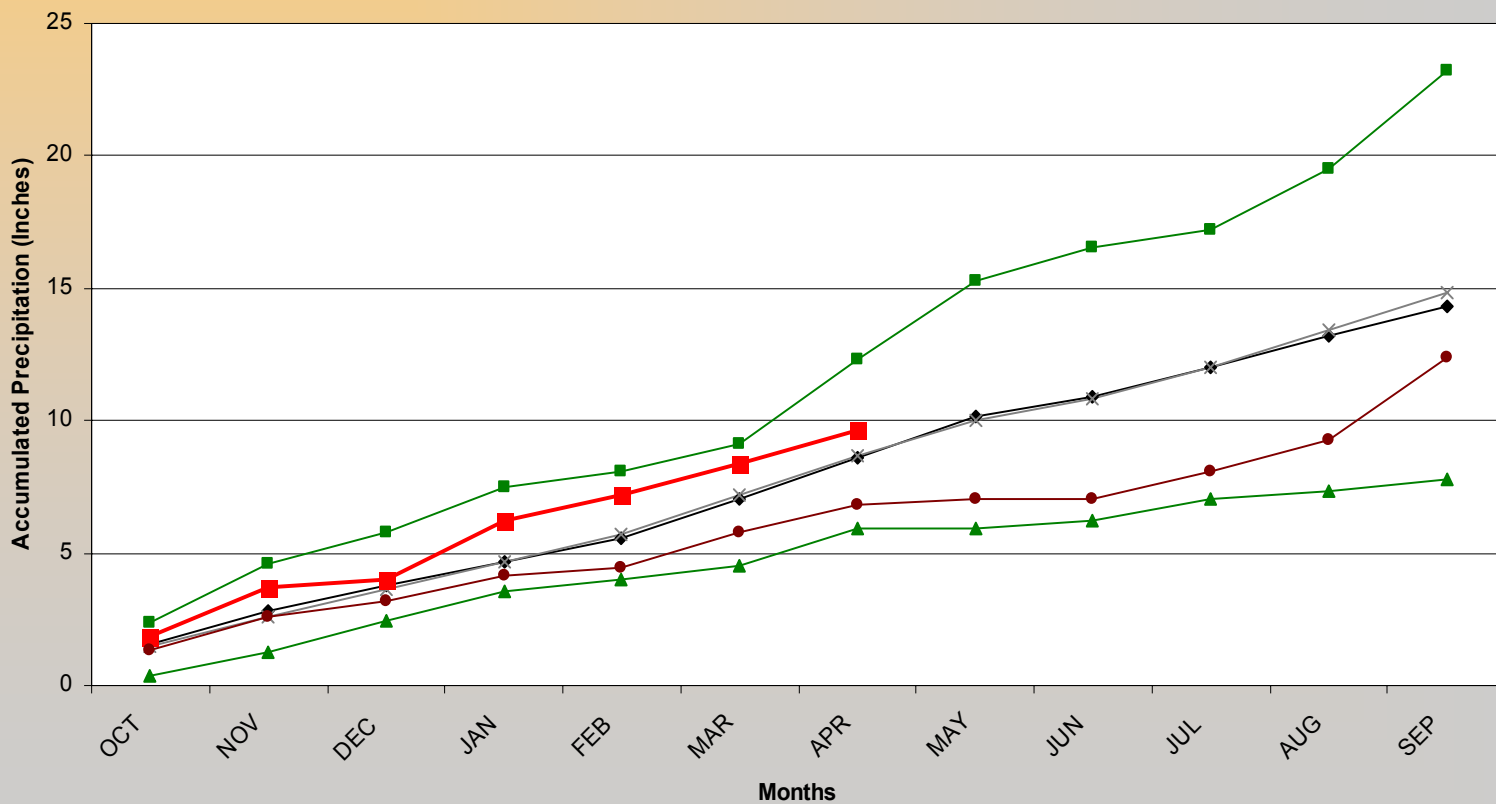
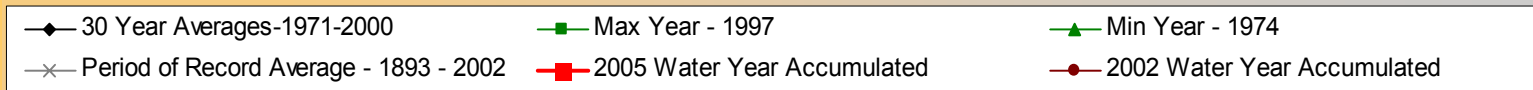




Division 2– Collbran

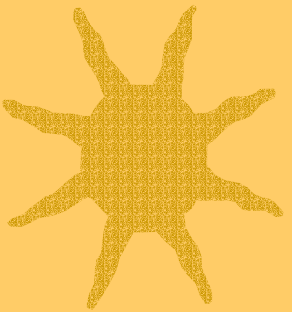
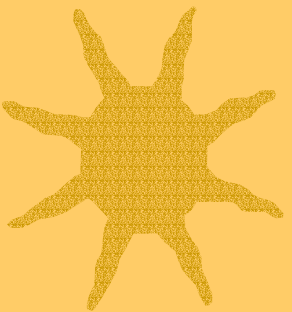
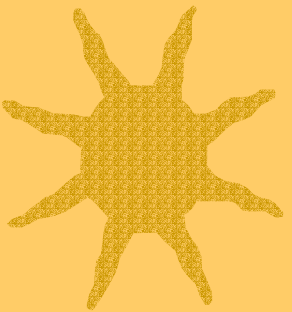


Collbran 2SW 2005 Water Year

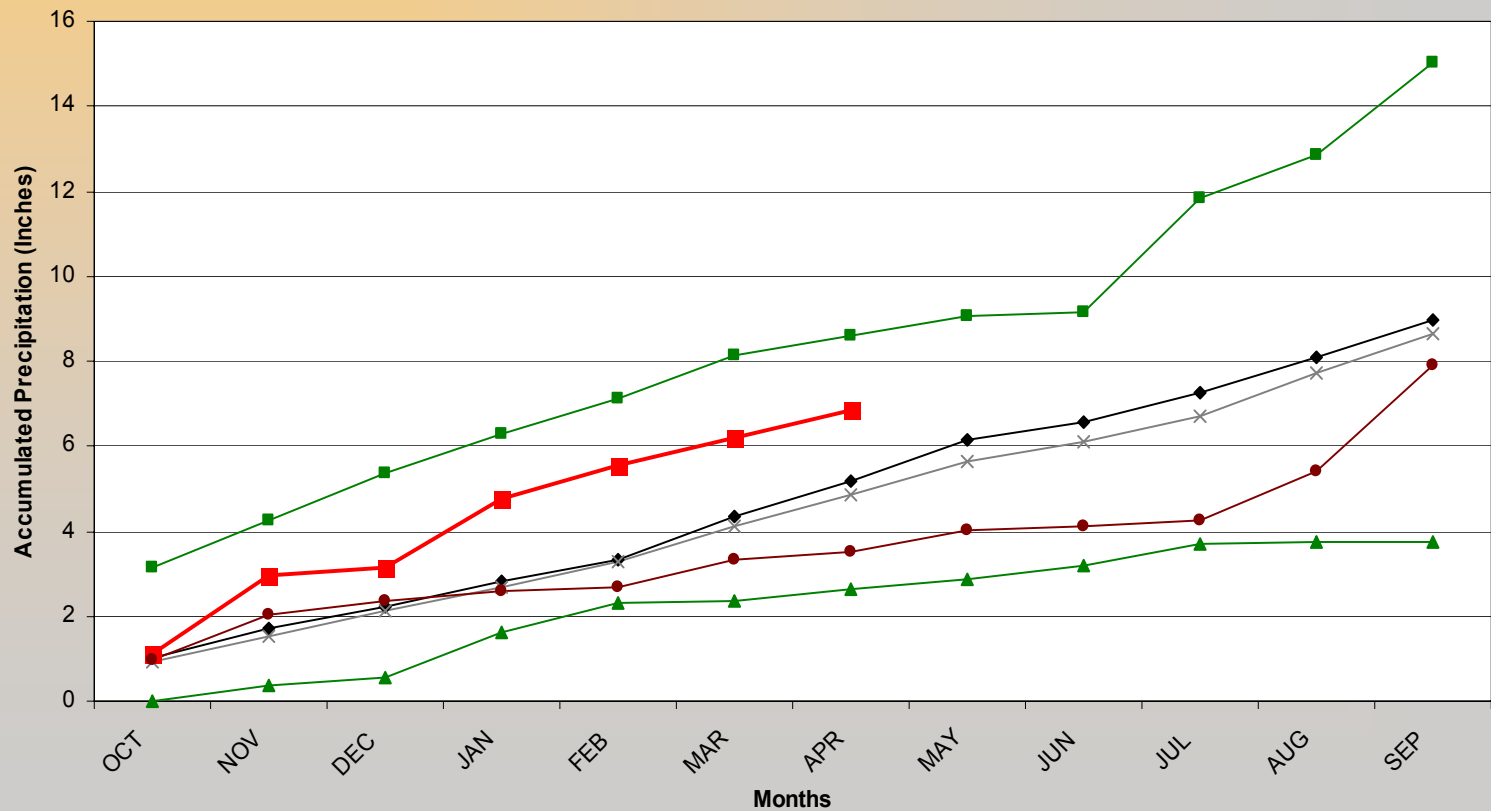
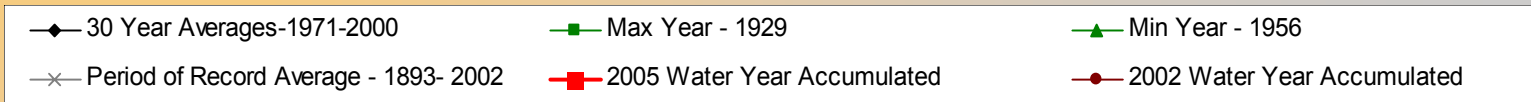




Division 2 – Grand Junction

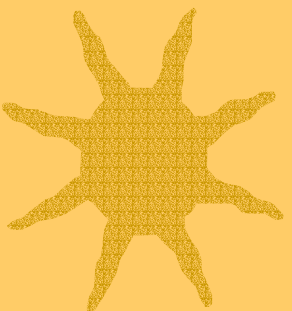
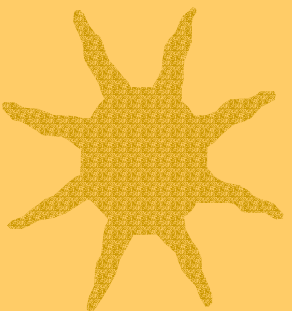
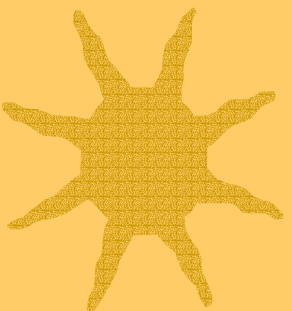


Grand Junction WSFO 2005 Water Year

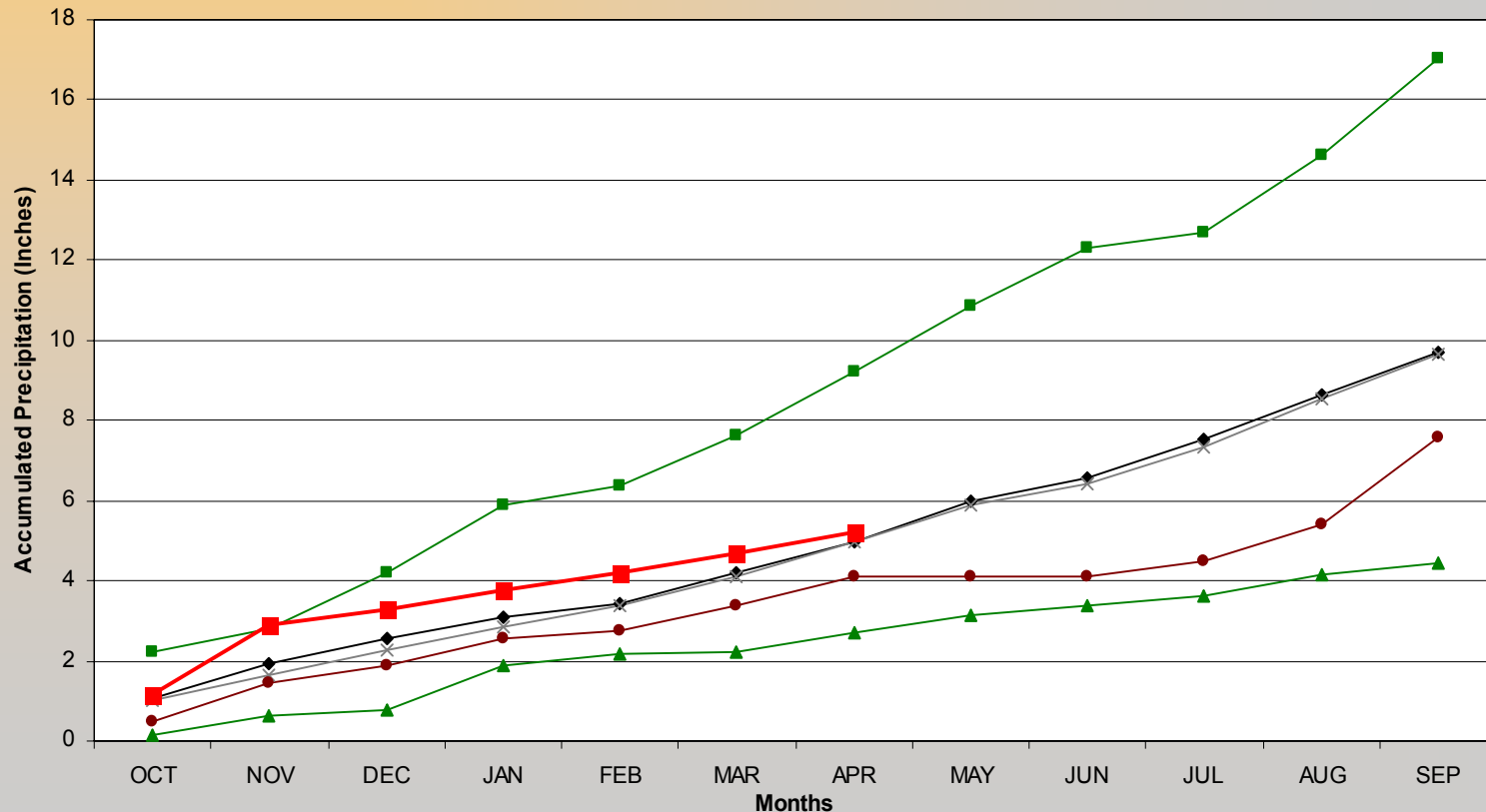
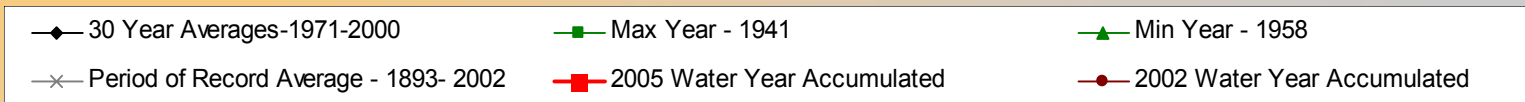




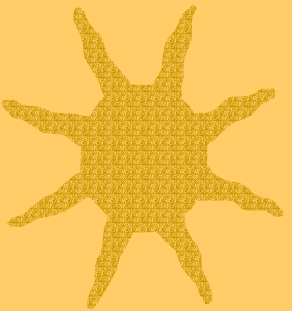
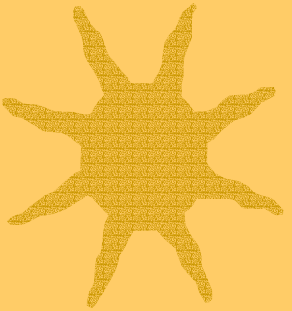
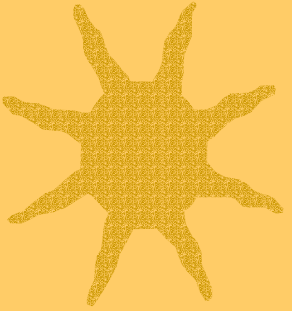
Division 3 – Montrose



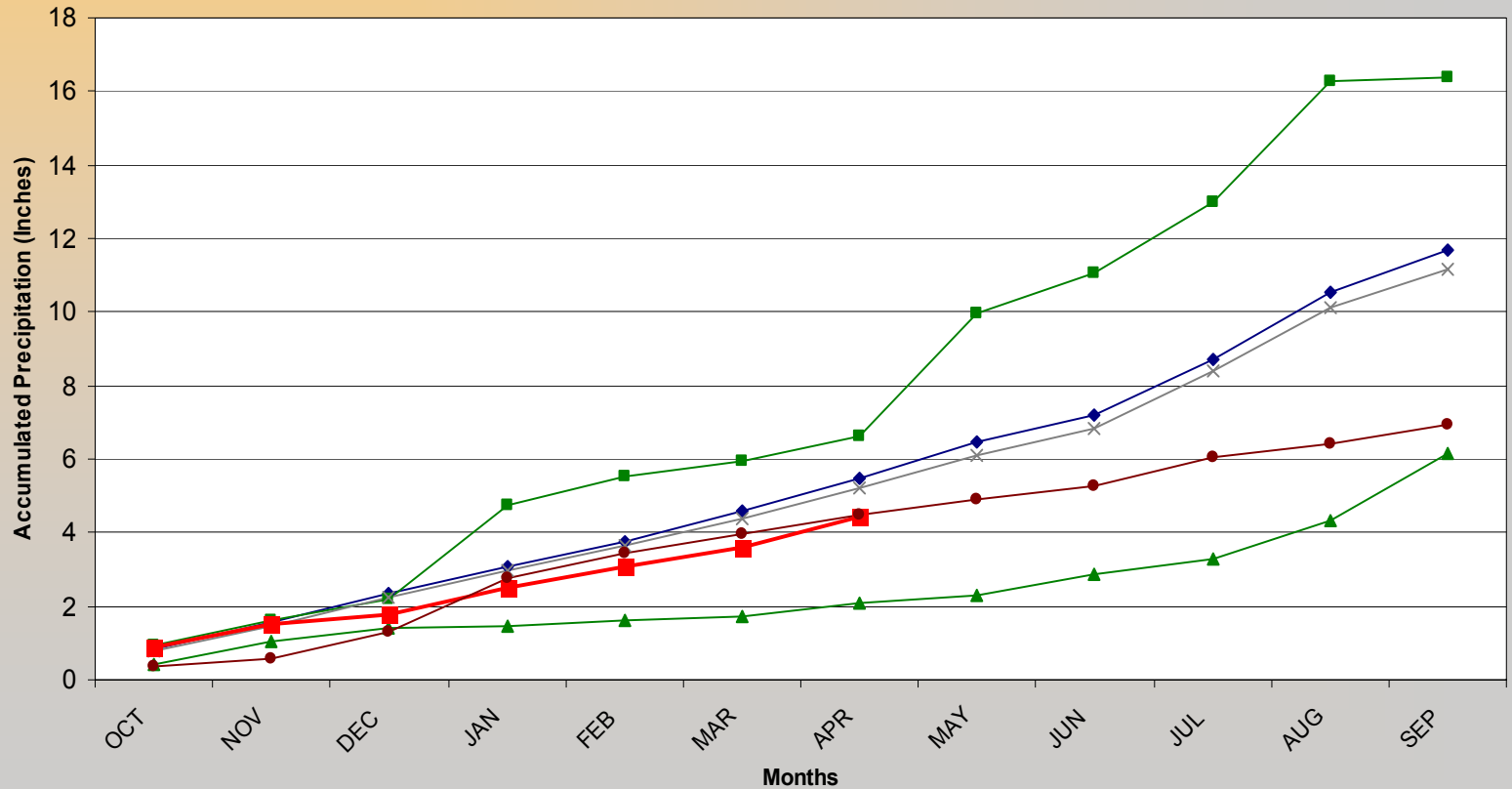
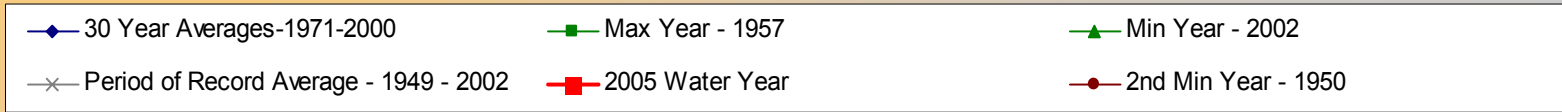
Montrose #2 2005 Water Year



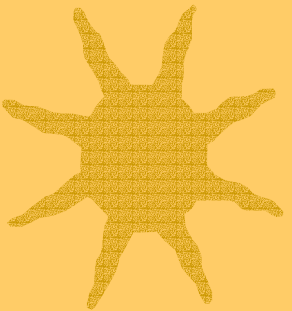
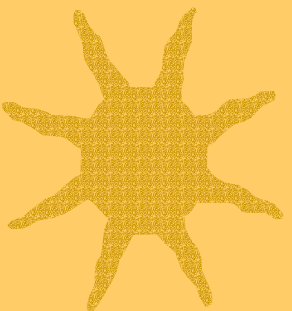
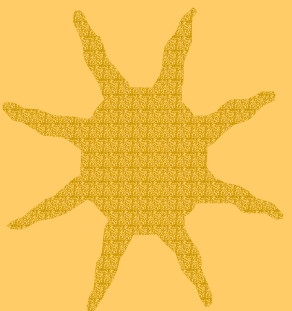
Division 3 – Cochetopa Creek



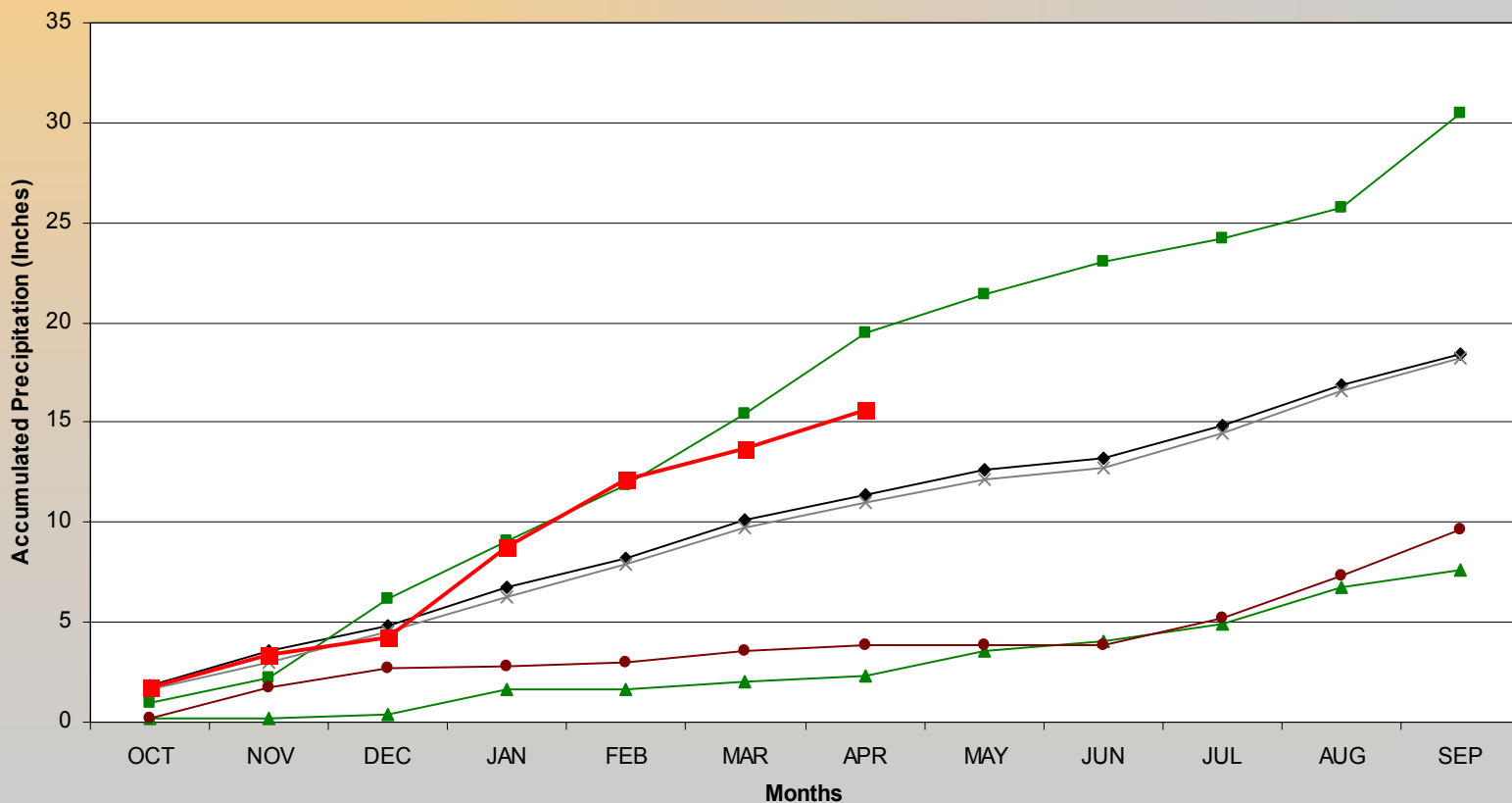
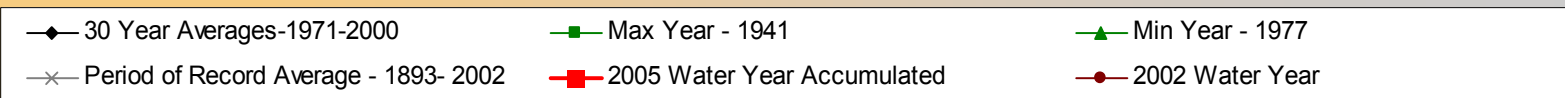
Cochetopa Creek 2005 Water Year



Division 3 – Mesa Verde

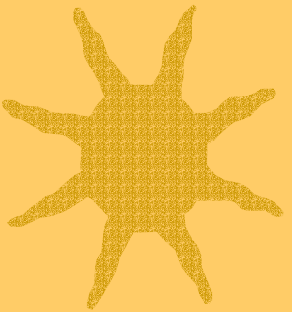
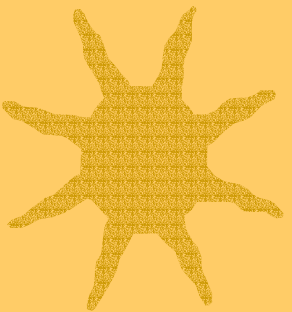
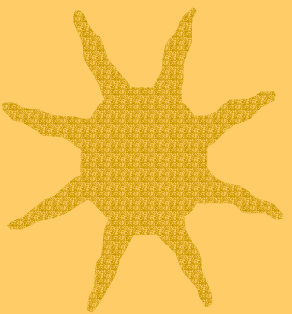


Mesa Verde NP 2005 Water Year

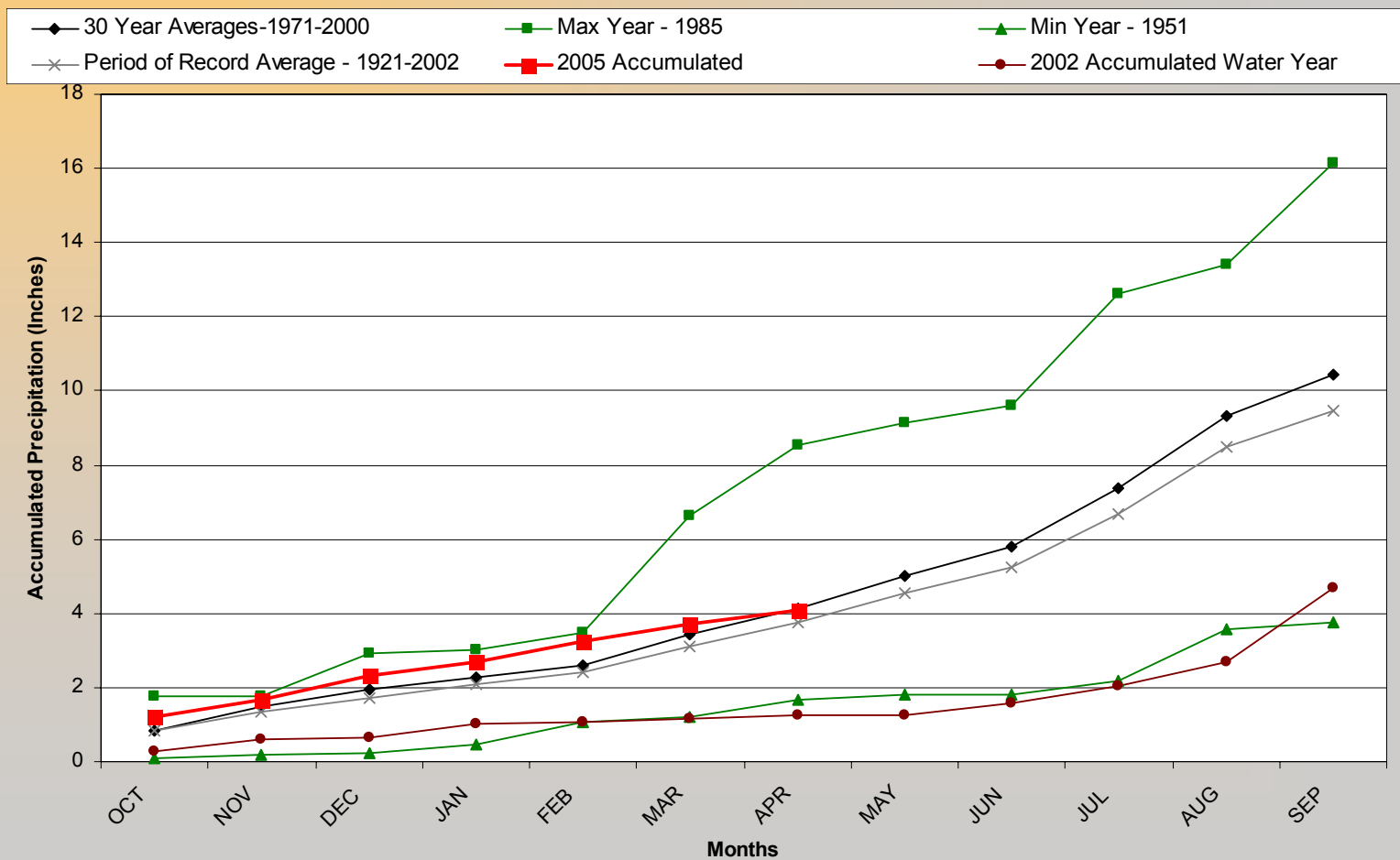




Division 4 – Del Norte

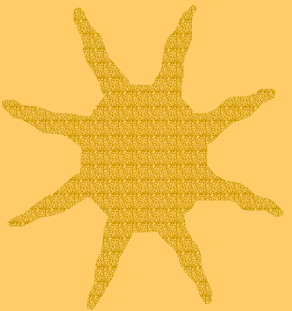
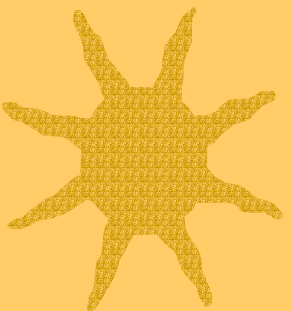
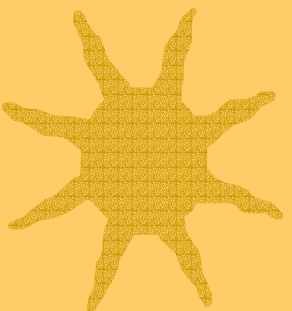


Del Norte 2005 Water Year

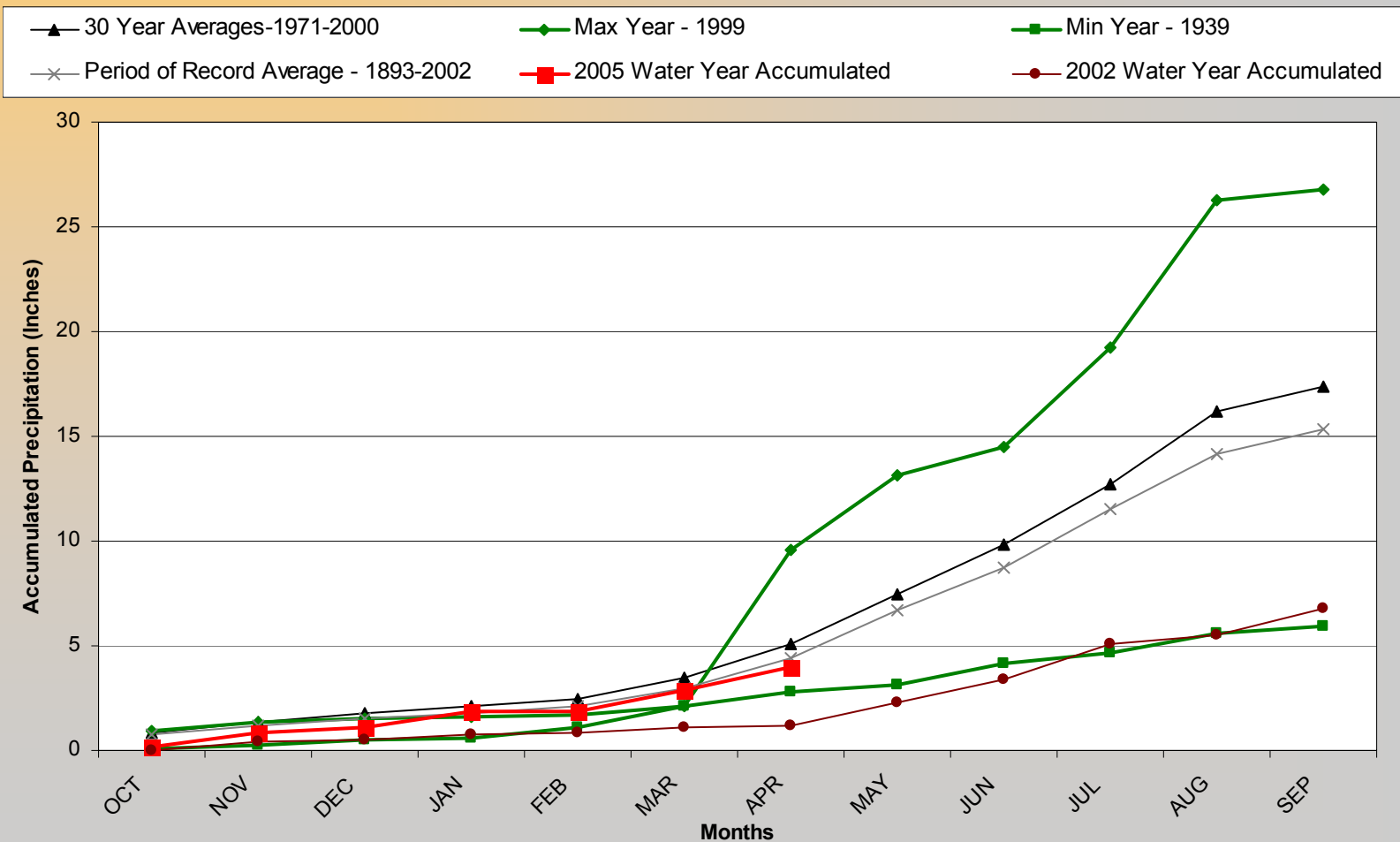




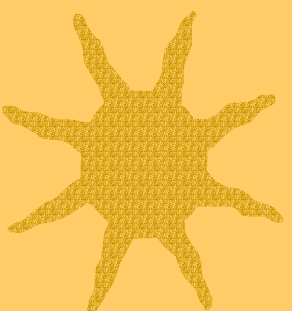
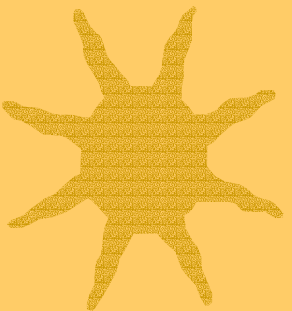
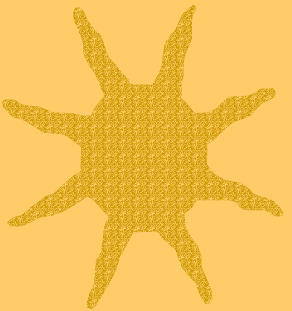
Division 5 – Colorado Springs



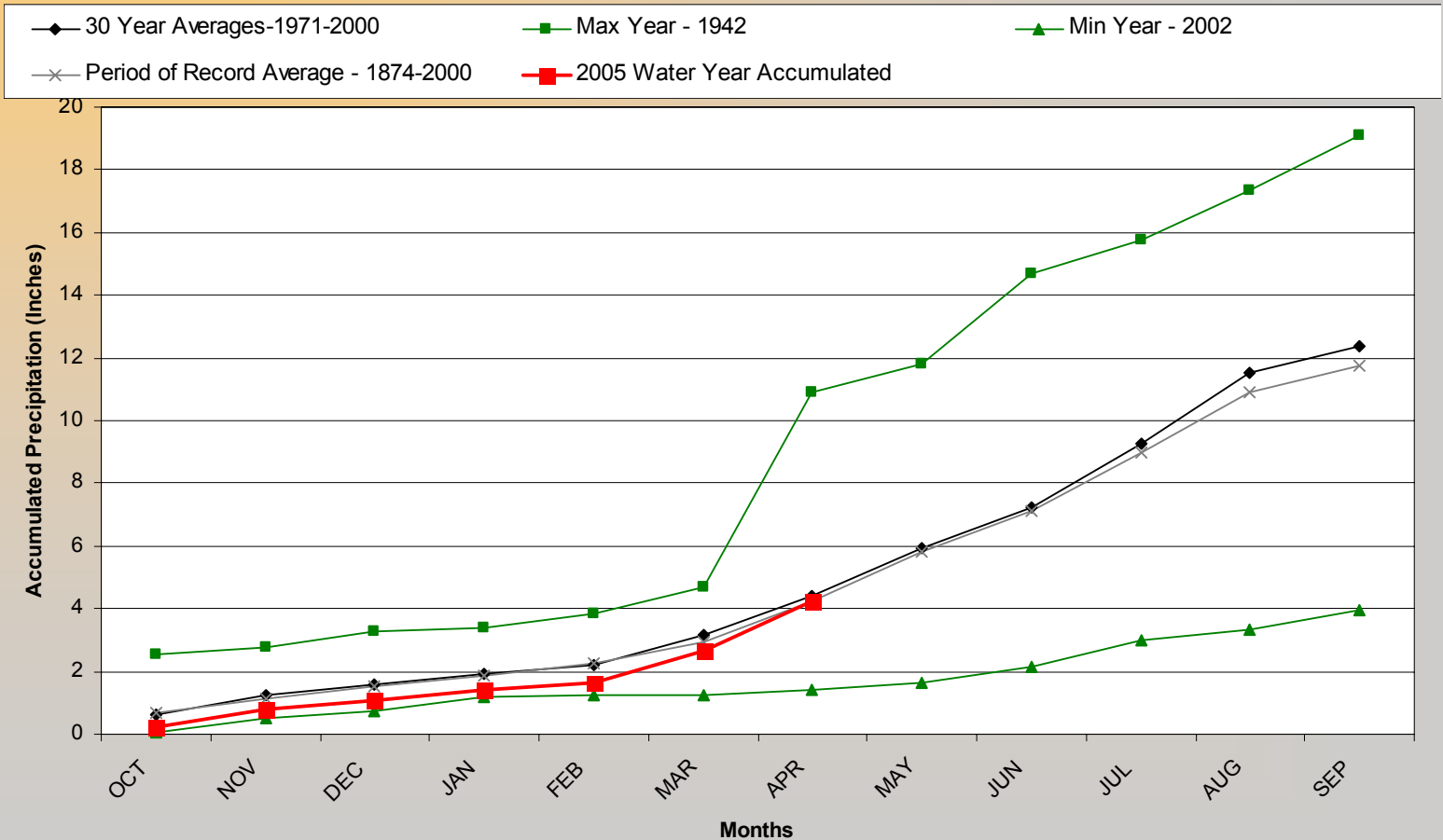
Colorado Springs 2005 Water Year



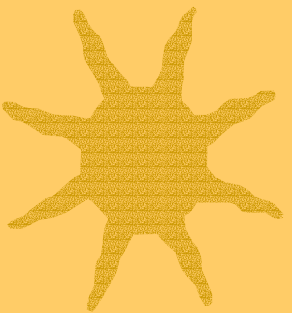
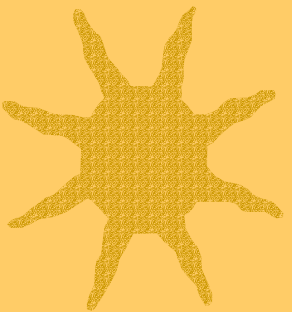
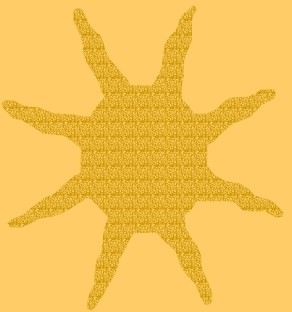
Division 5 – Pueblo



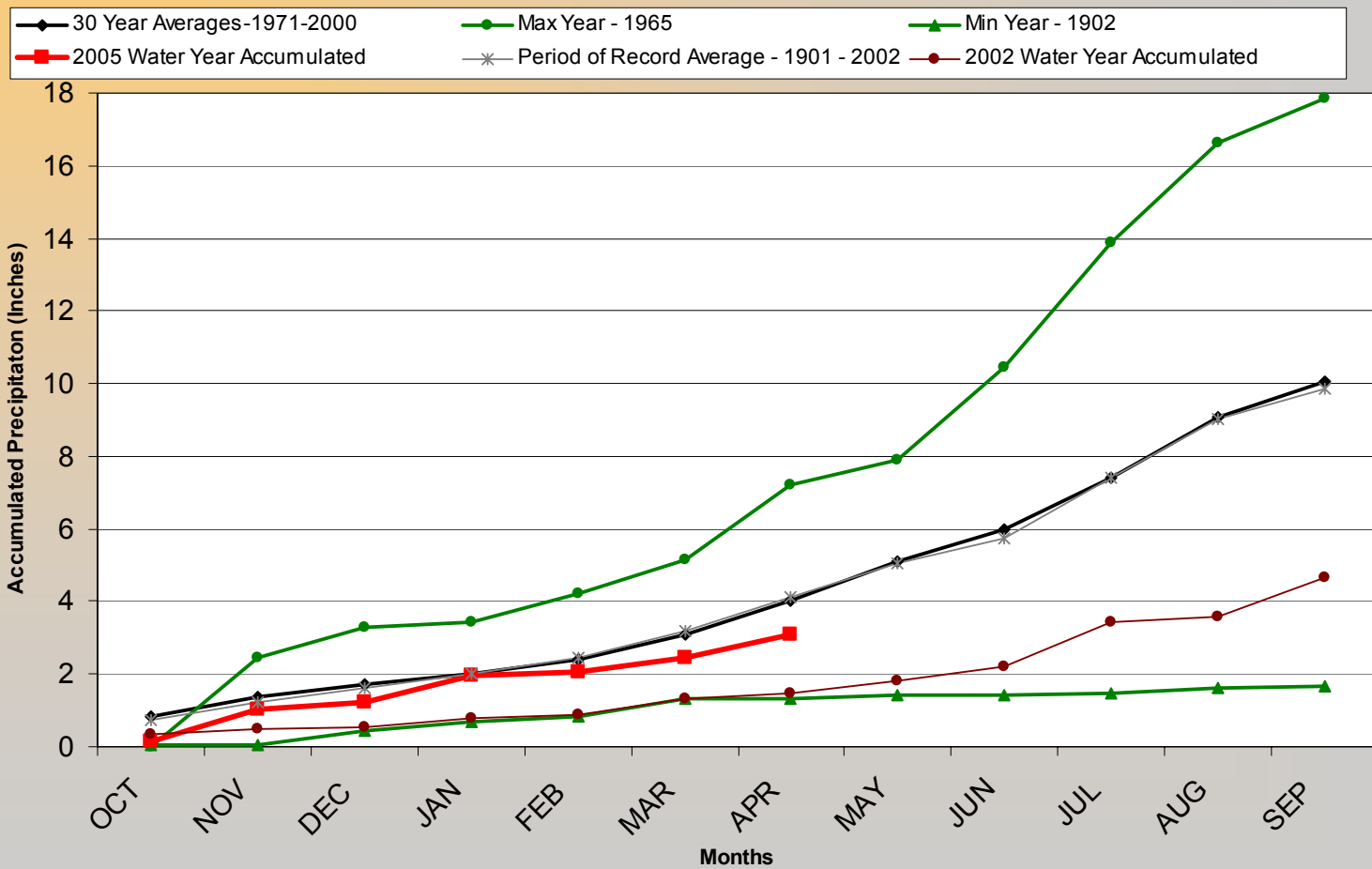
Pueblo WSO 2005 Water Year



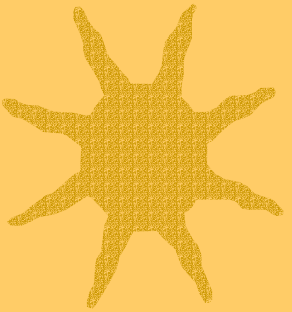
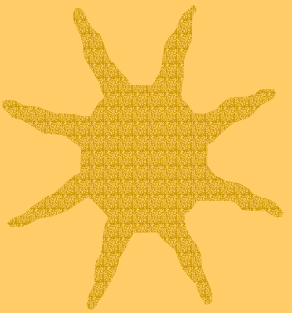
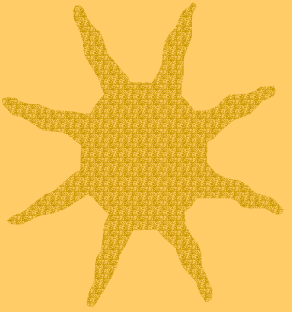
Division 5 – Buena Vista



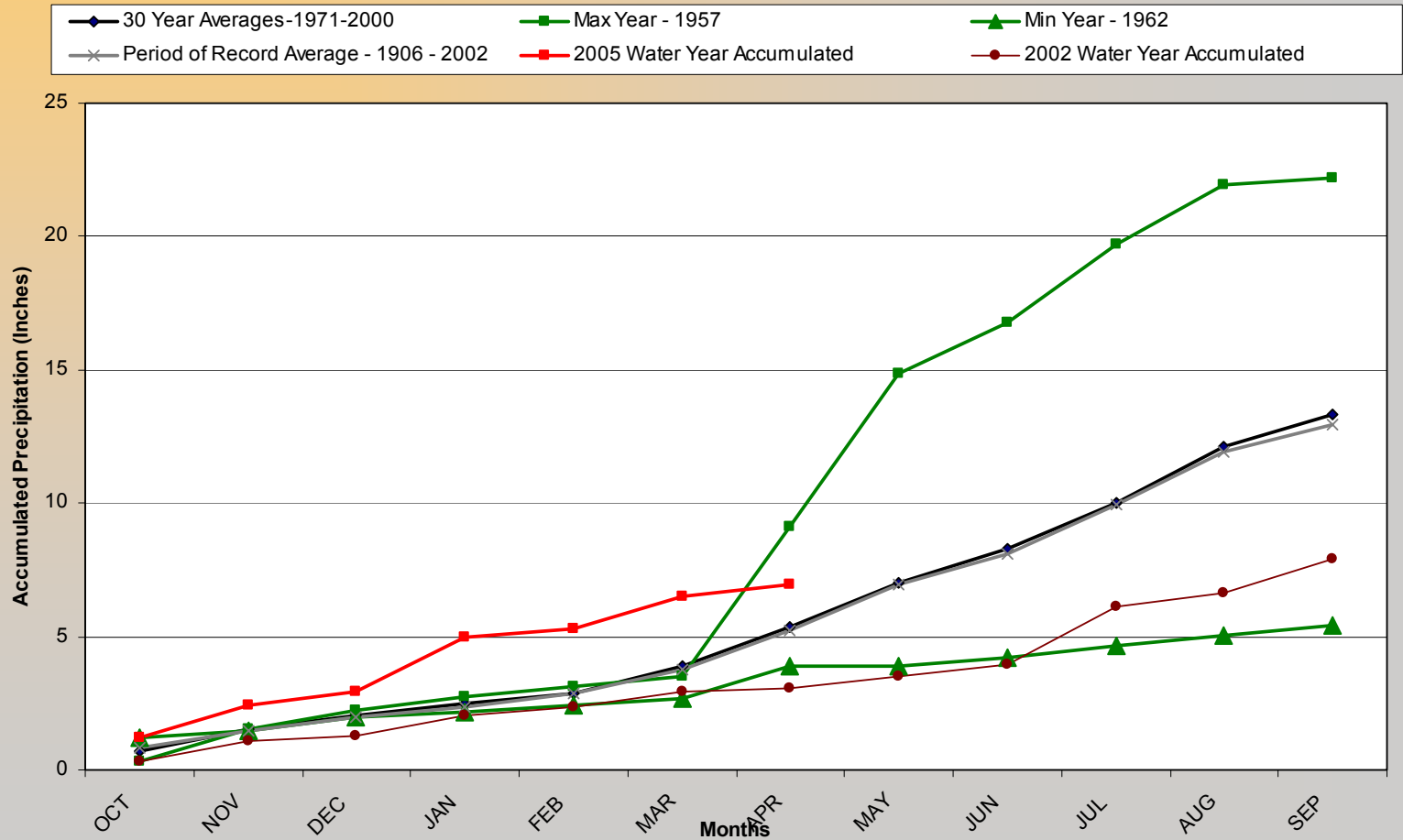
Buena Vista 2005 Water Year



Division 5 – Canon City

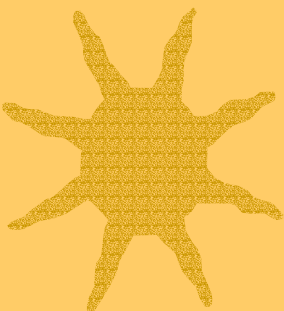
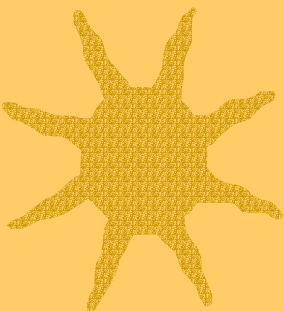
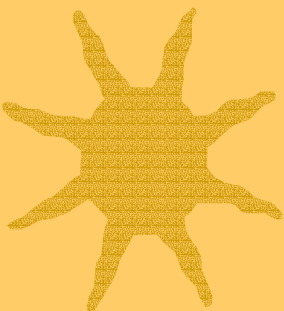


Canon City 2005 Water Year

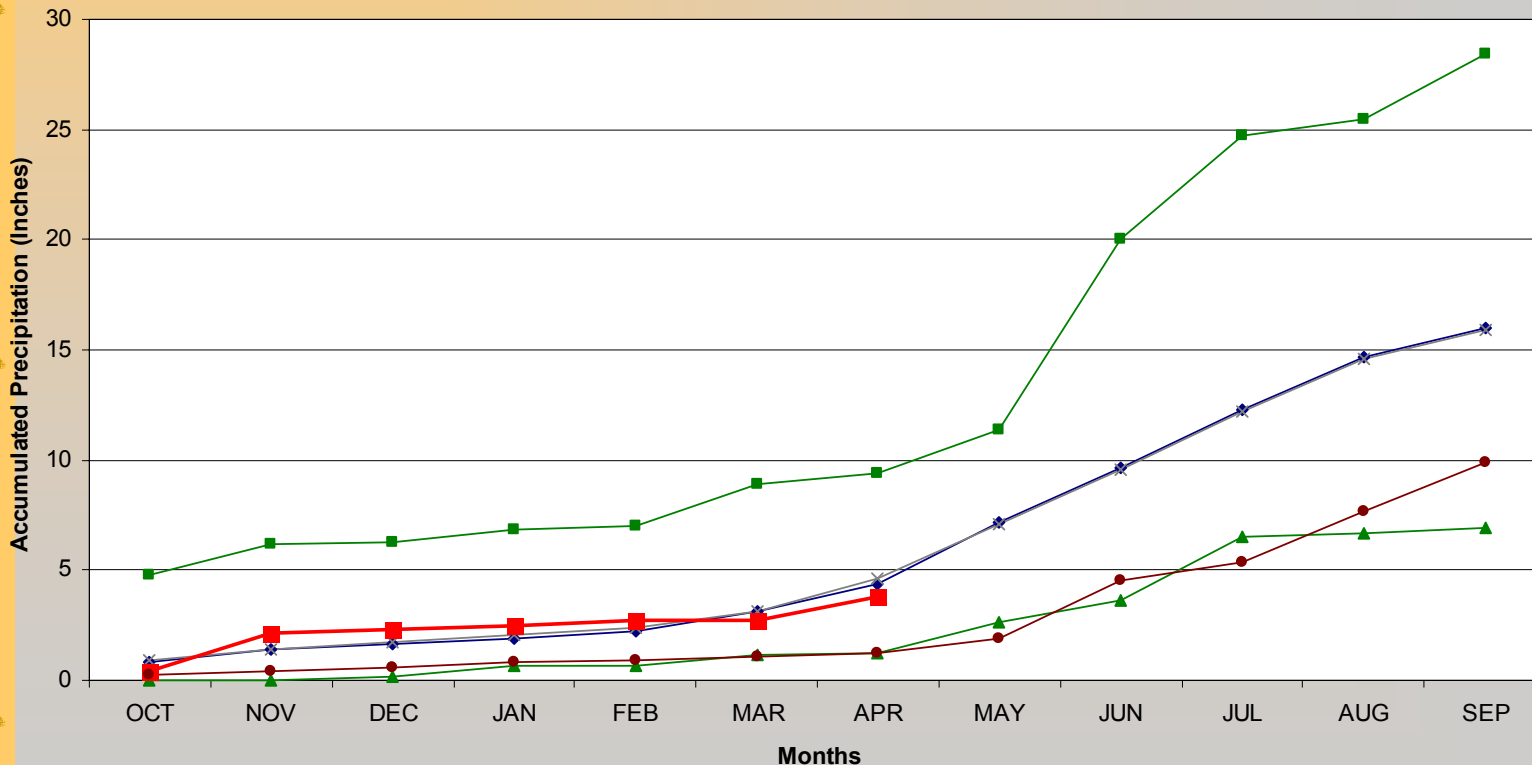
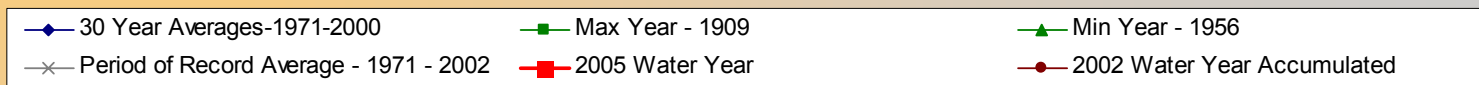




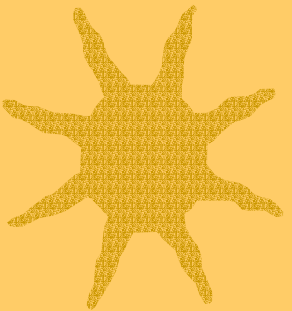
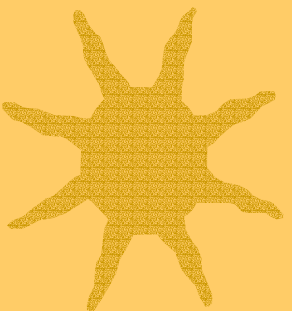
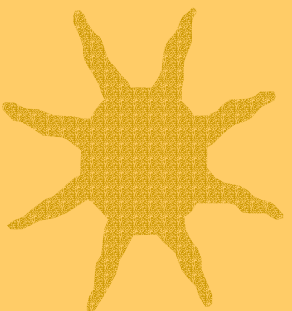
Division 6 – Cheyenne Wells



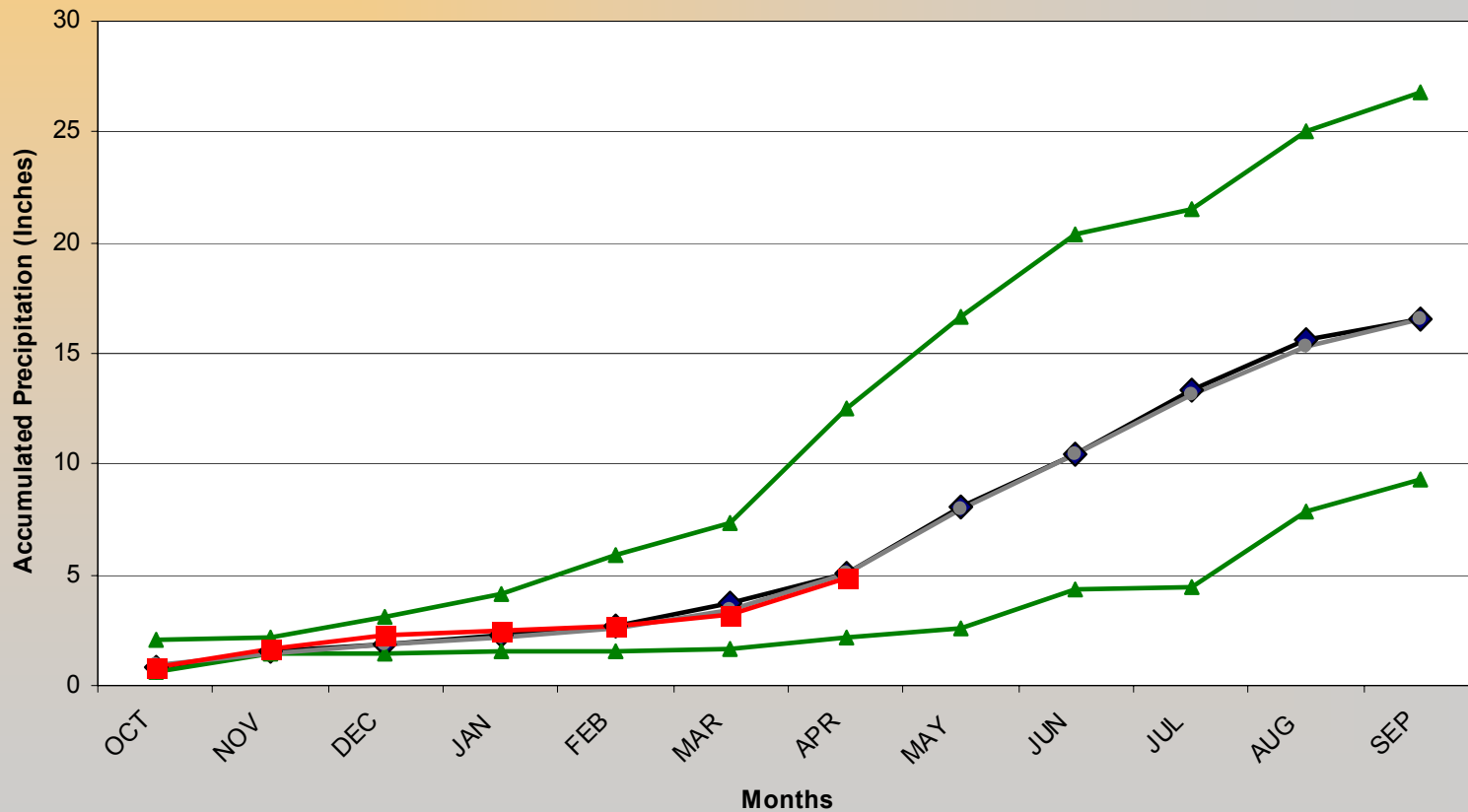
Cheyenne Wells 2005 Water Year



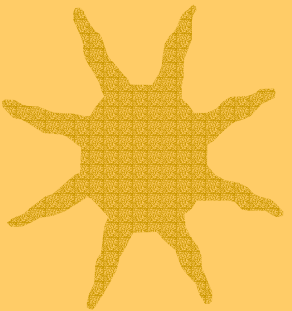
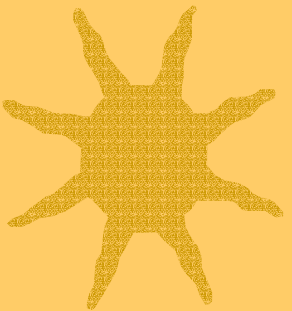
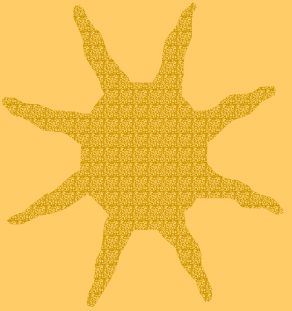
Division 7 – Akron



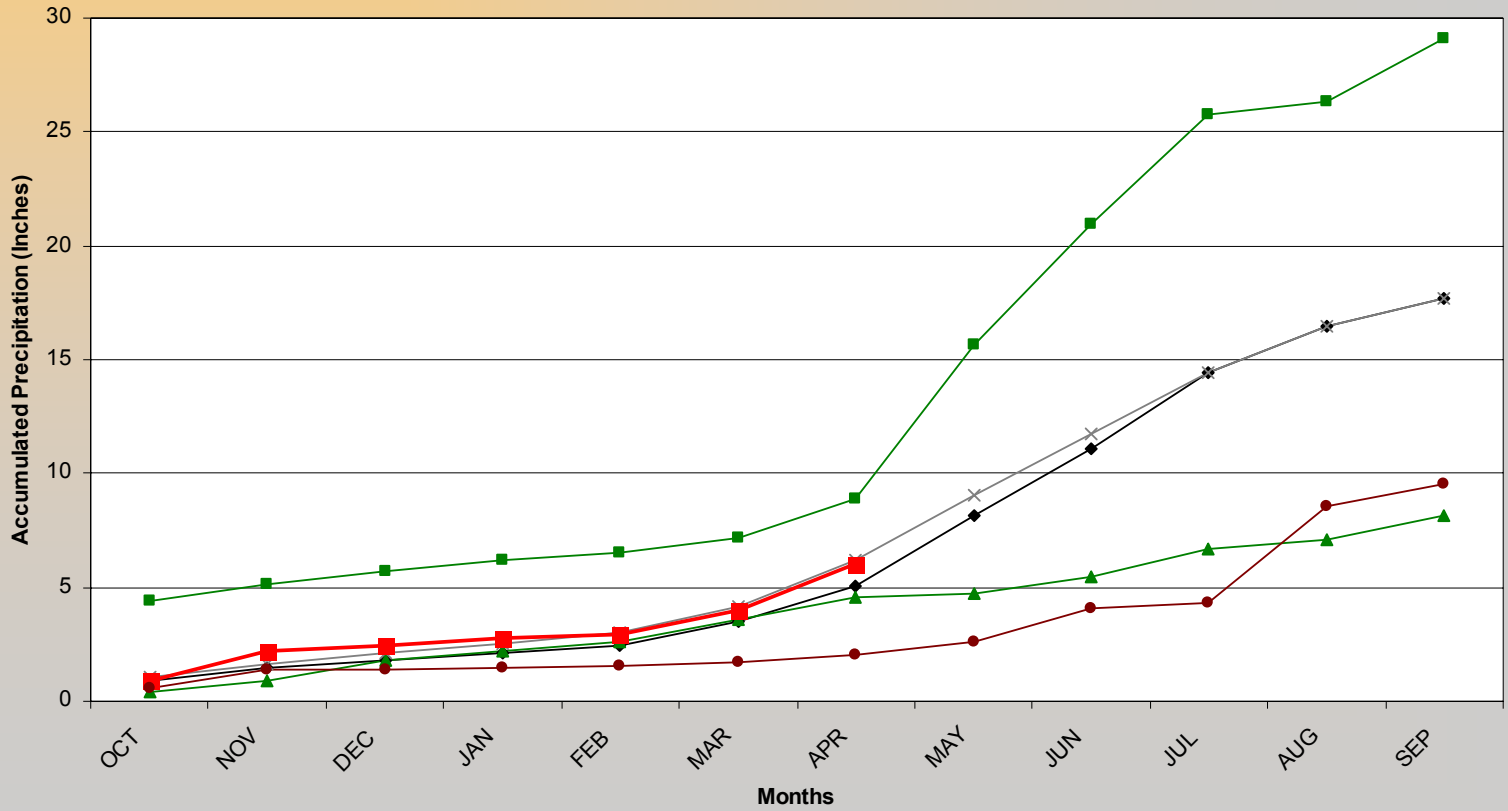
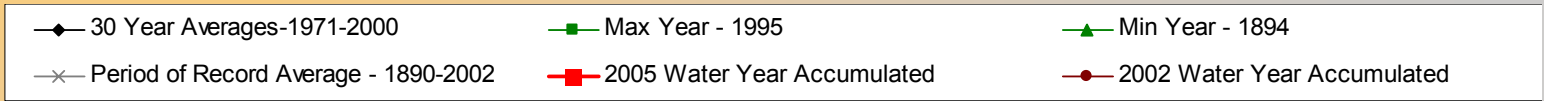
Akron 4E 2005 Water Year



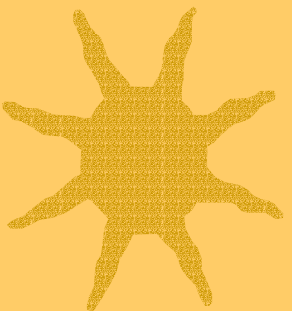
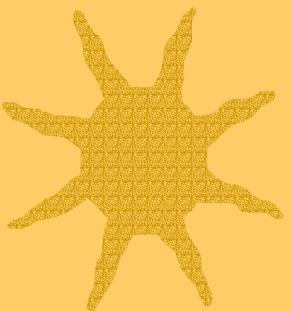
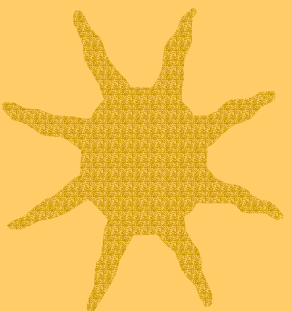
Division 7 – Leroy



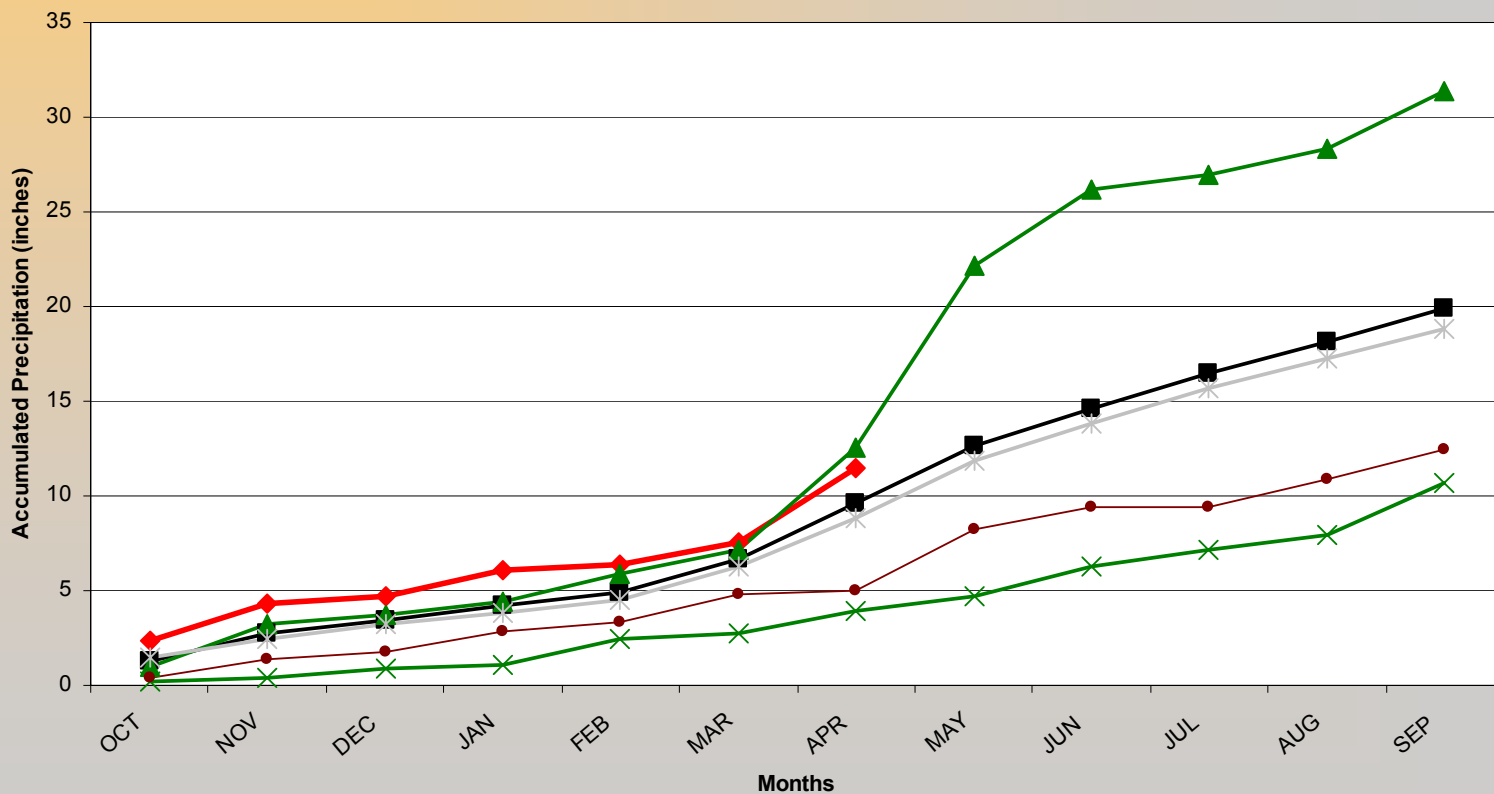
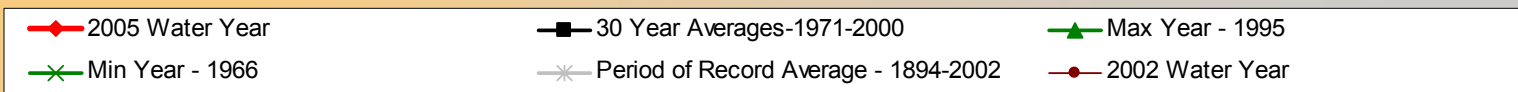
Leroy 5SW 2005 Water Year



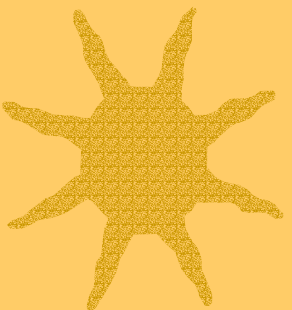
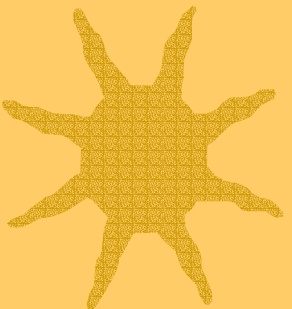
Division 8 – Boulder



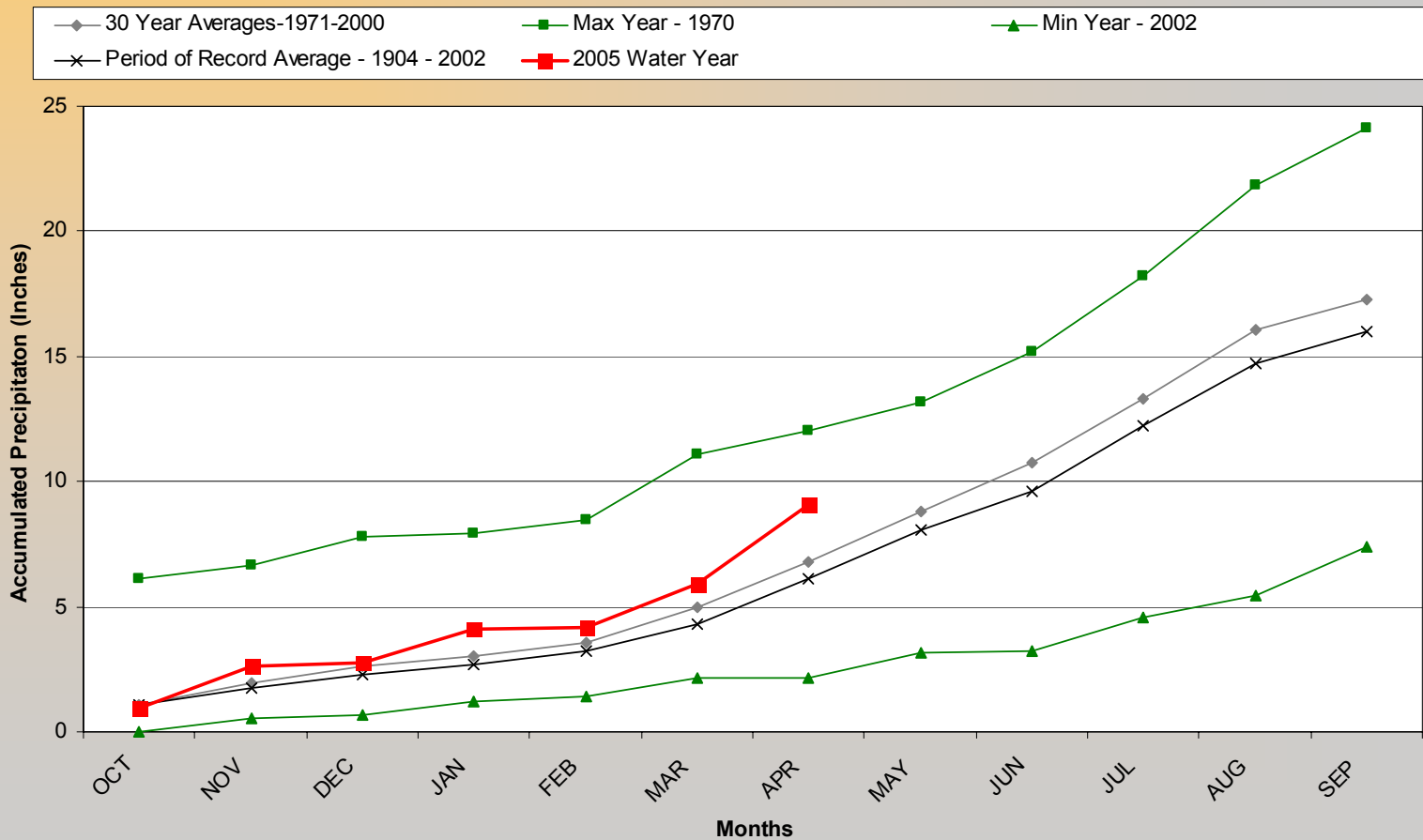
Boulder 2005 Water Year



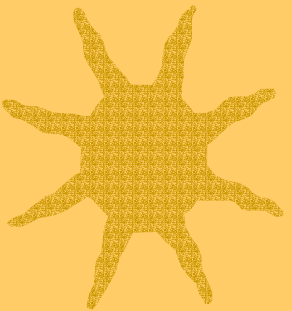
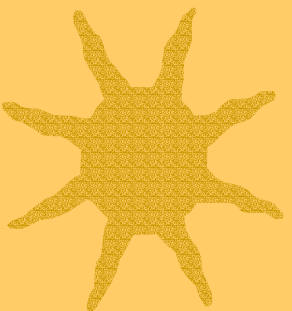
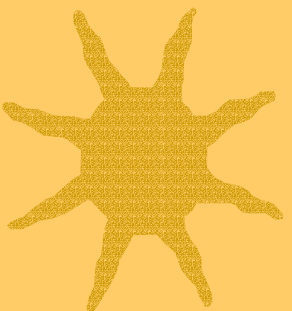
Division 8 – Cheesman



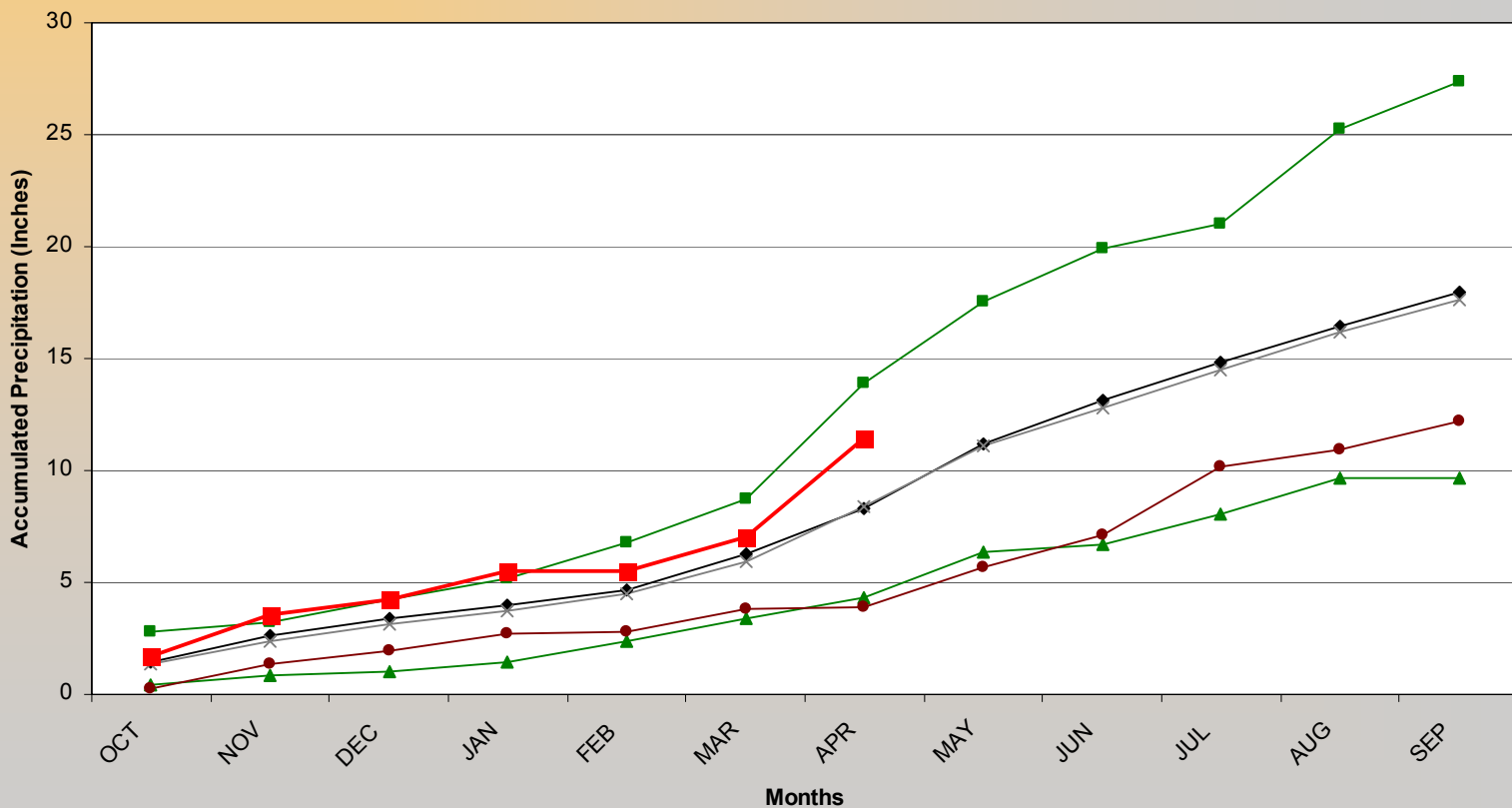
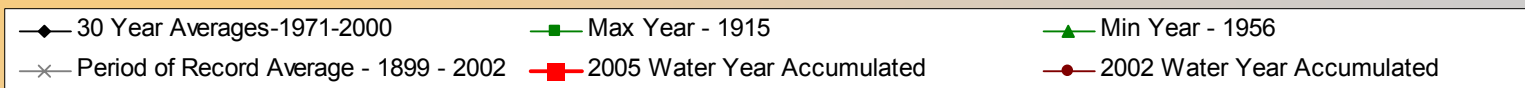
Cheesman 2005 Water Year



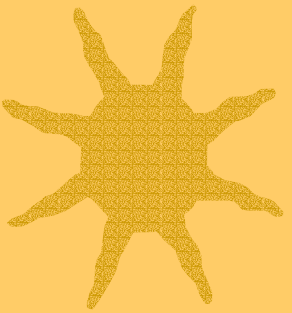
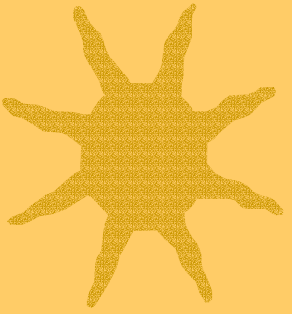
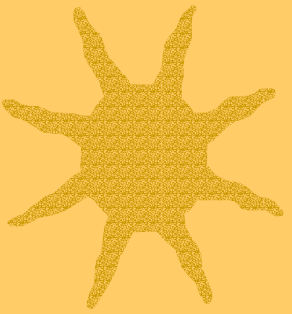
Division 8 – Kassler



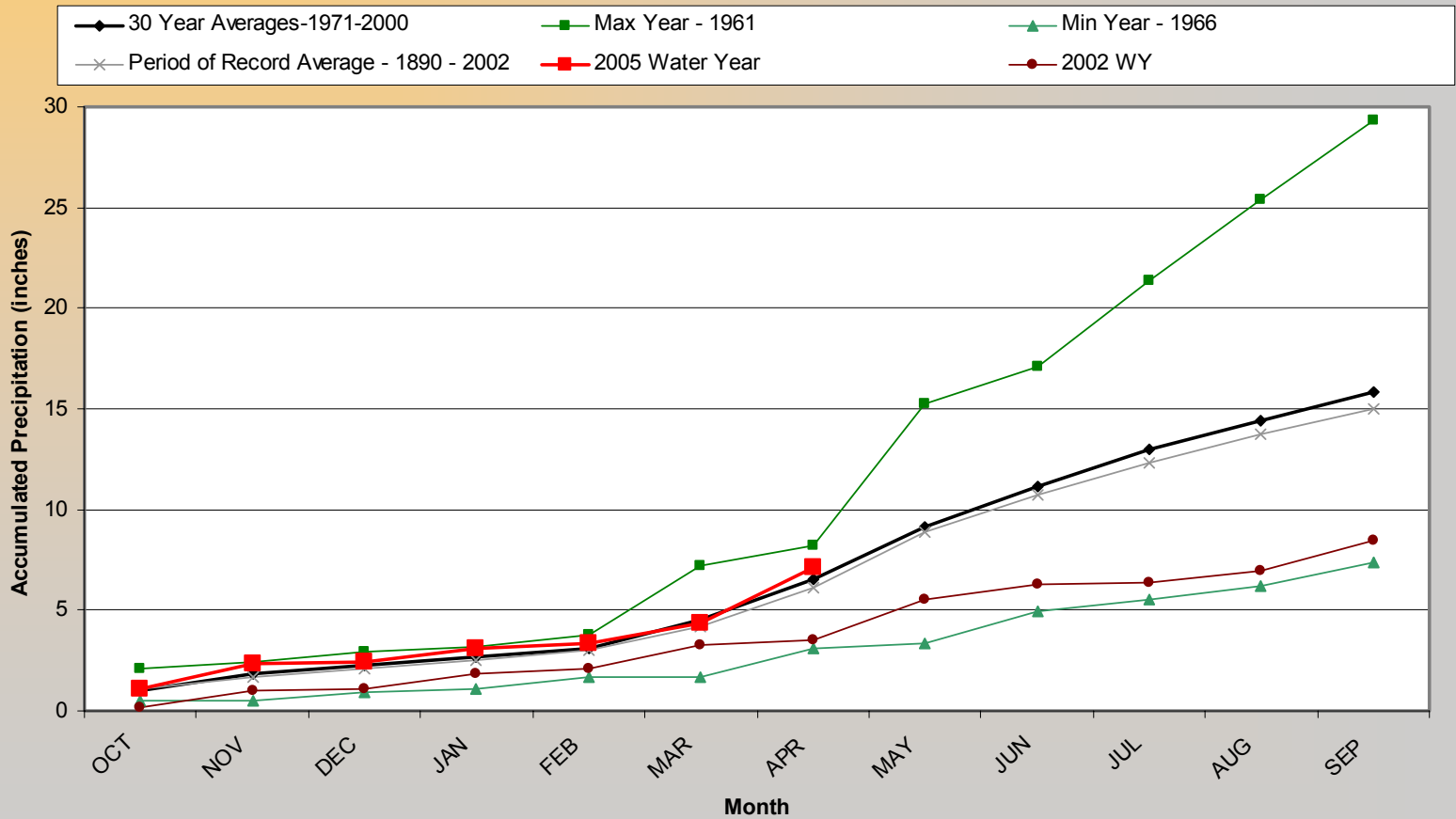
Kassler 2005 Water Year



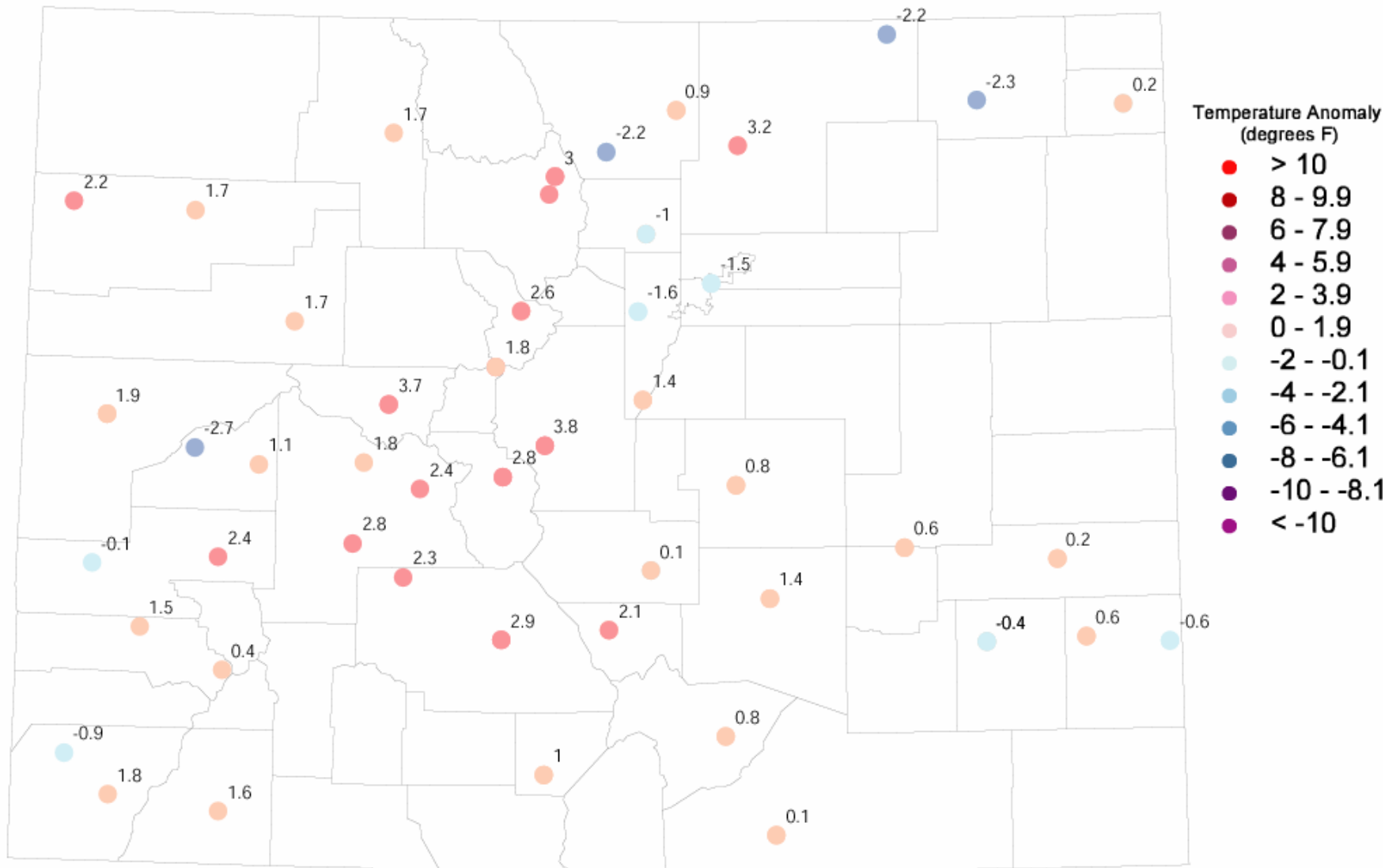
Division 8 – Fort Collins



Fort Collins 2005 Water Year

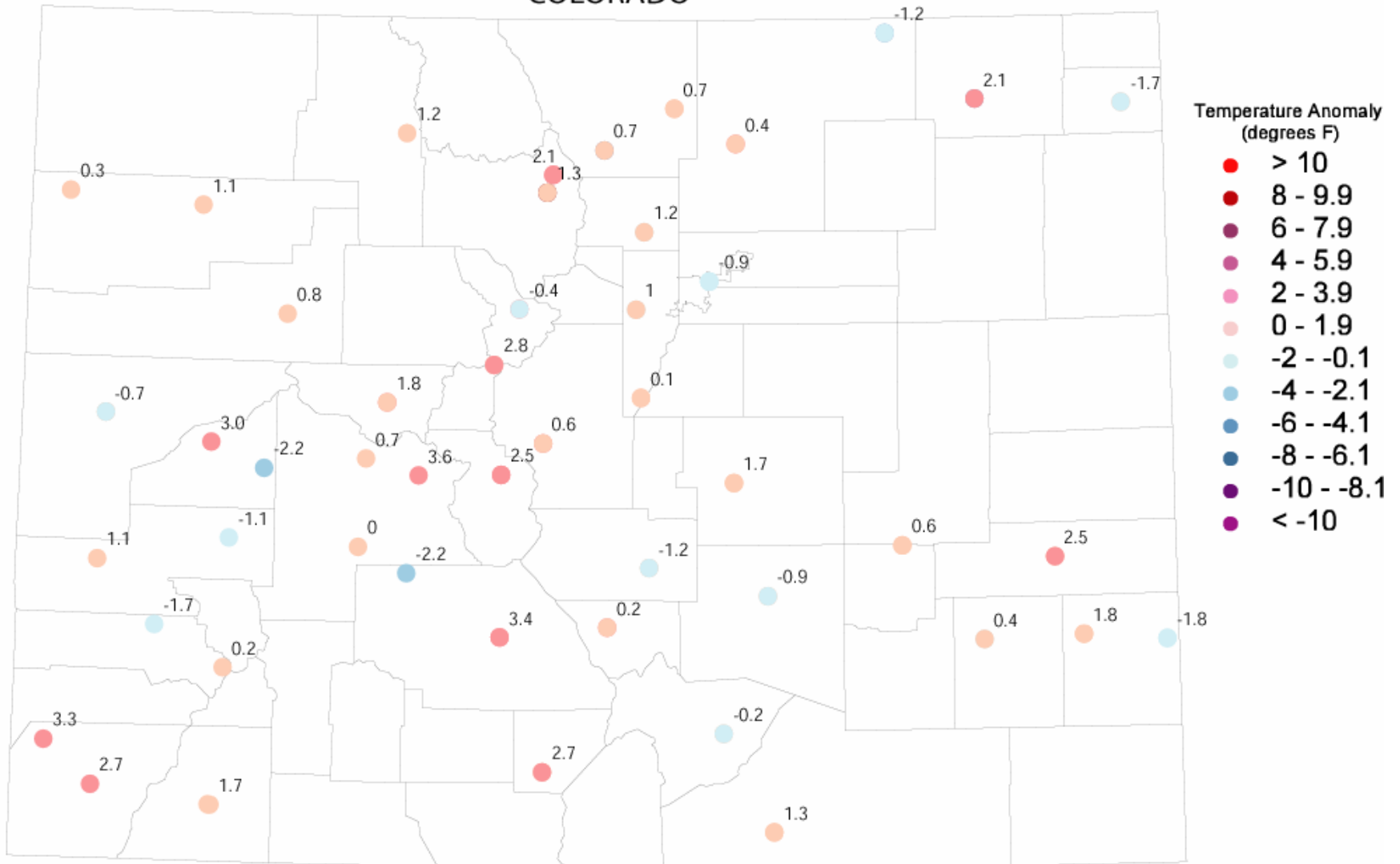


COLORADO



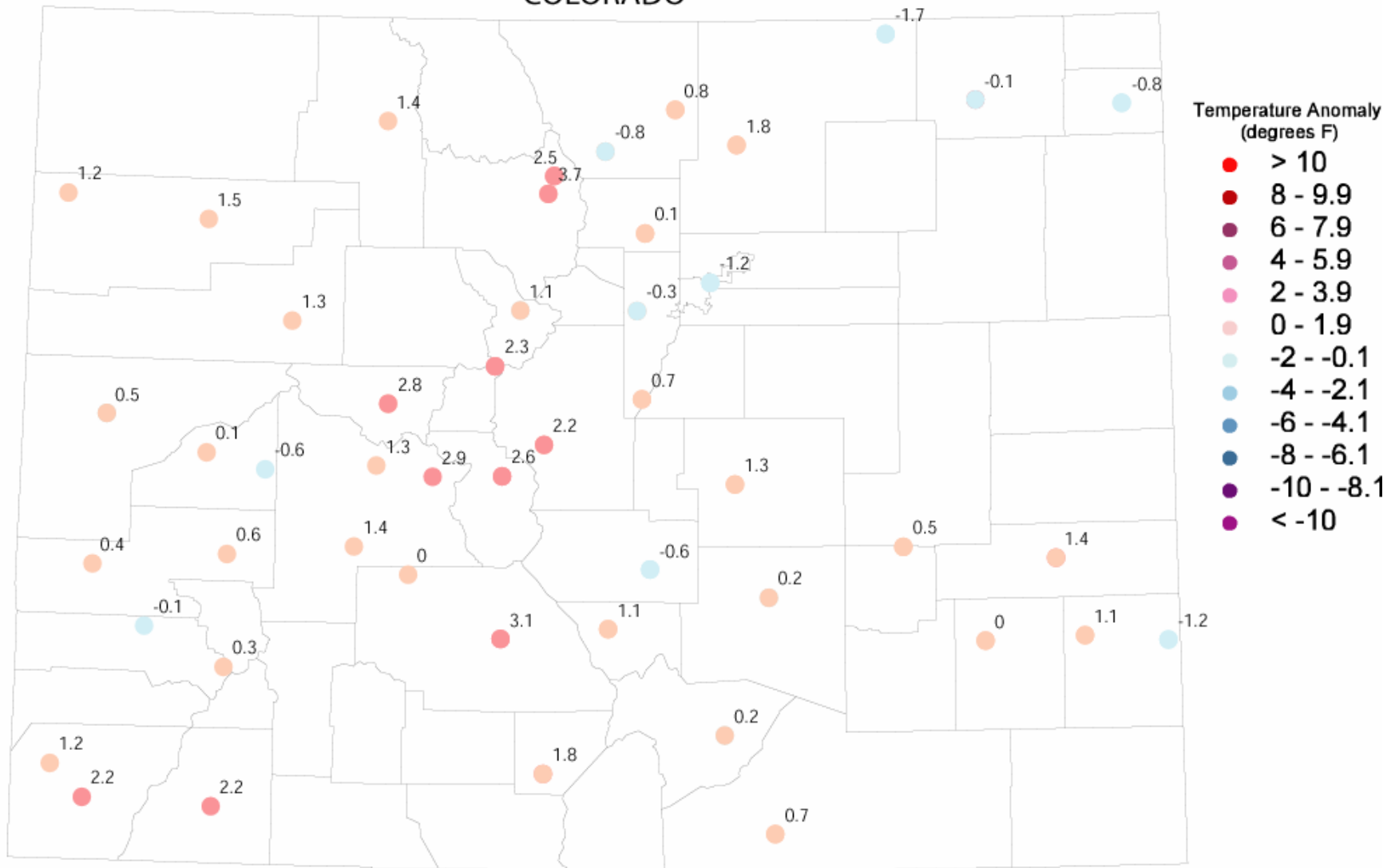
April 2005 maximum temperature departures from the 1971-2000 averages.

COLORADO



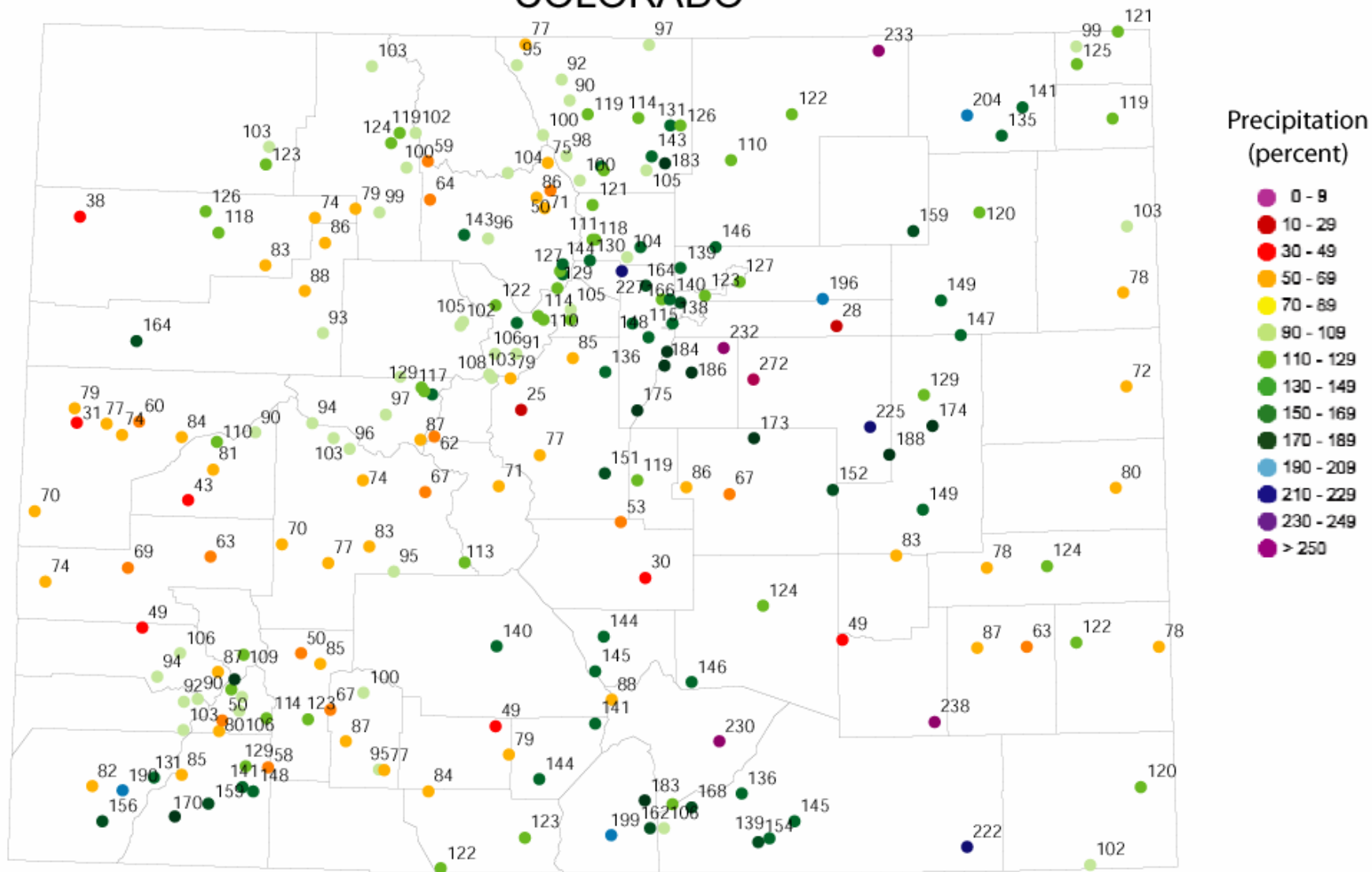
April 2005 minimum temperature departures from the 1971-2000 averages.

COLORADO



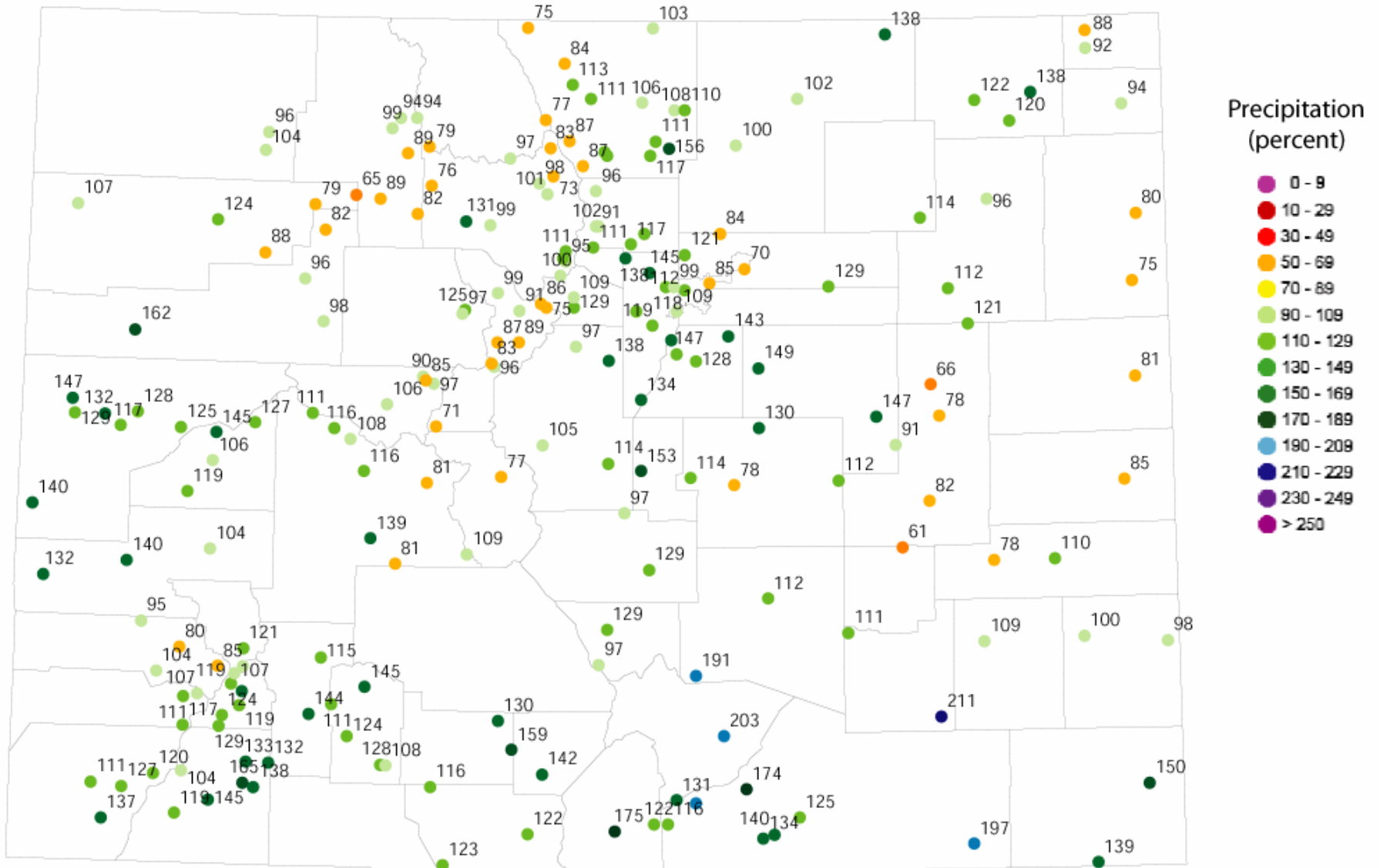
April 2005 average temperature departures from the 1971-2000 averages.

COLORADO



April 2005 precipitation as a percent of the 1971-2000 average.

COLORADO



Water Year 2005 (October 2004 through April 2005) precipitation as a percent of the 1971-2000 average.

3 Month SPI

Colorado

4/2005 3 mon. SPI



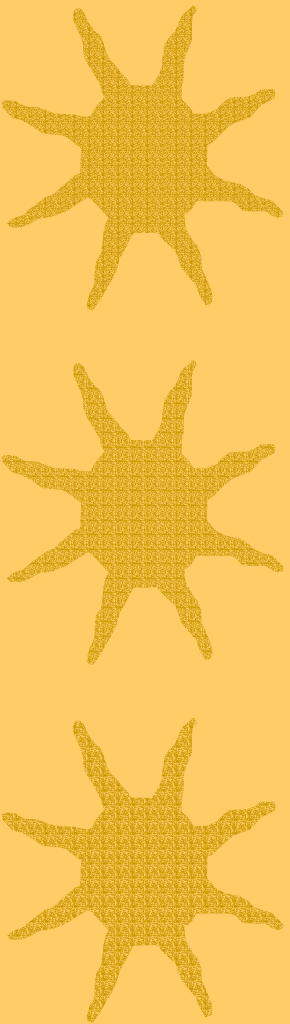
100% >> 2.0
95% >> 1.0
29% >> 0.0

1% << -1.0
0% << -2.0
0% << -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO



12 Month SPI



Colorado

4/2005 12 mon. SPI



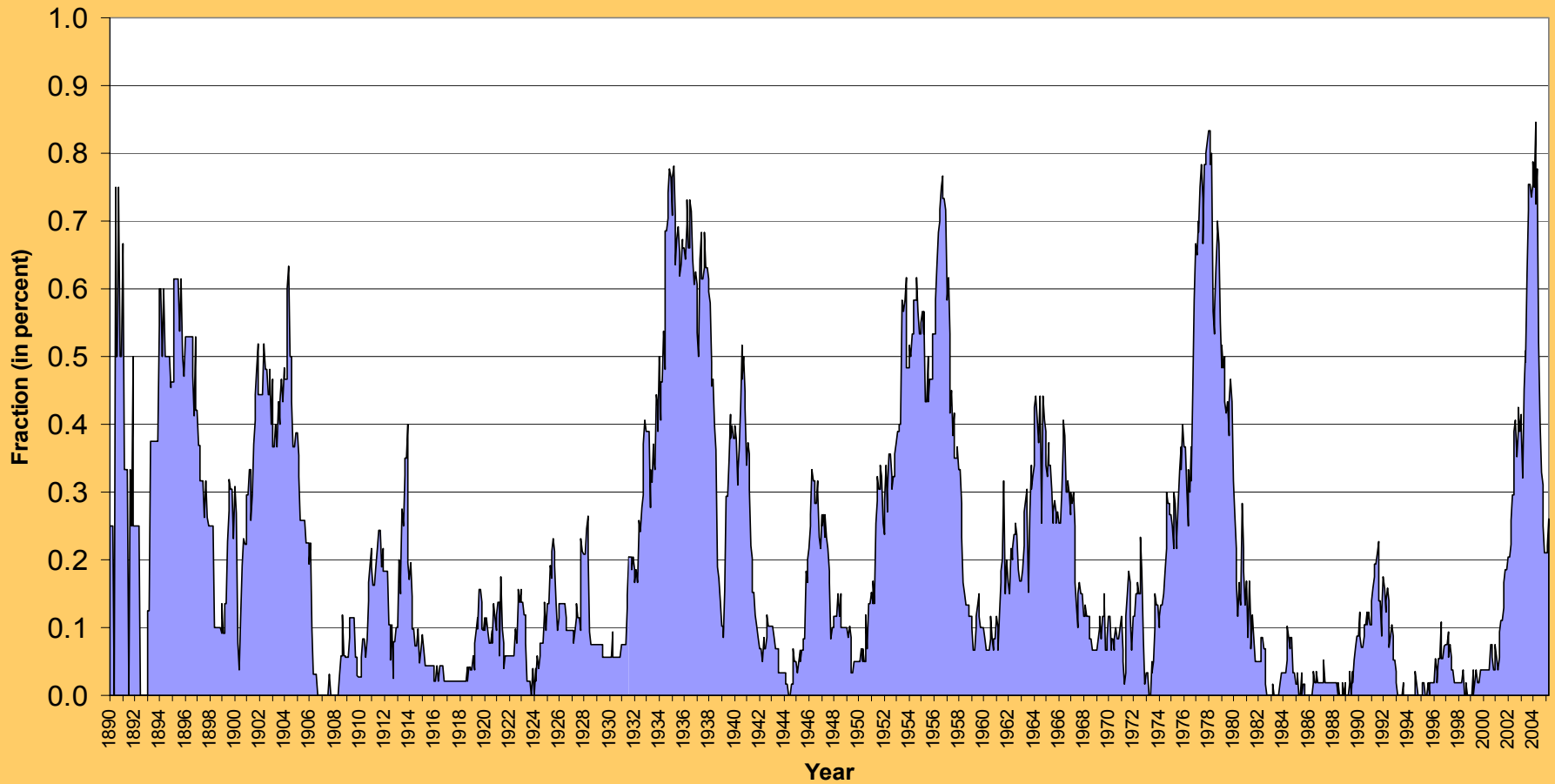
100% < 2.0
 87% < 1.0
 25% < 0.0
 0% < -1.0
 0% < -2.0
 0% < -3.0

Produced by:
 Colorado Climate Center
 Fort Collins, CO

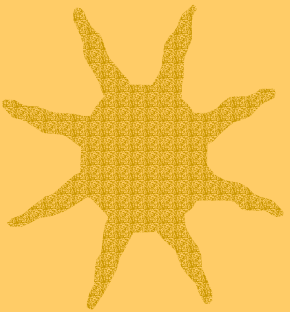
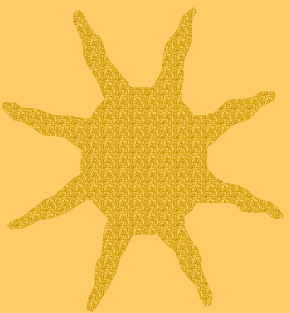
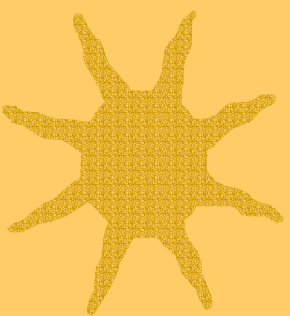


Fraction of Colorado in Drought

Fraction of Colorado in Drought Based on 48 month SPI (1890 - Apr 2005)

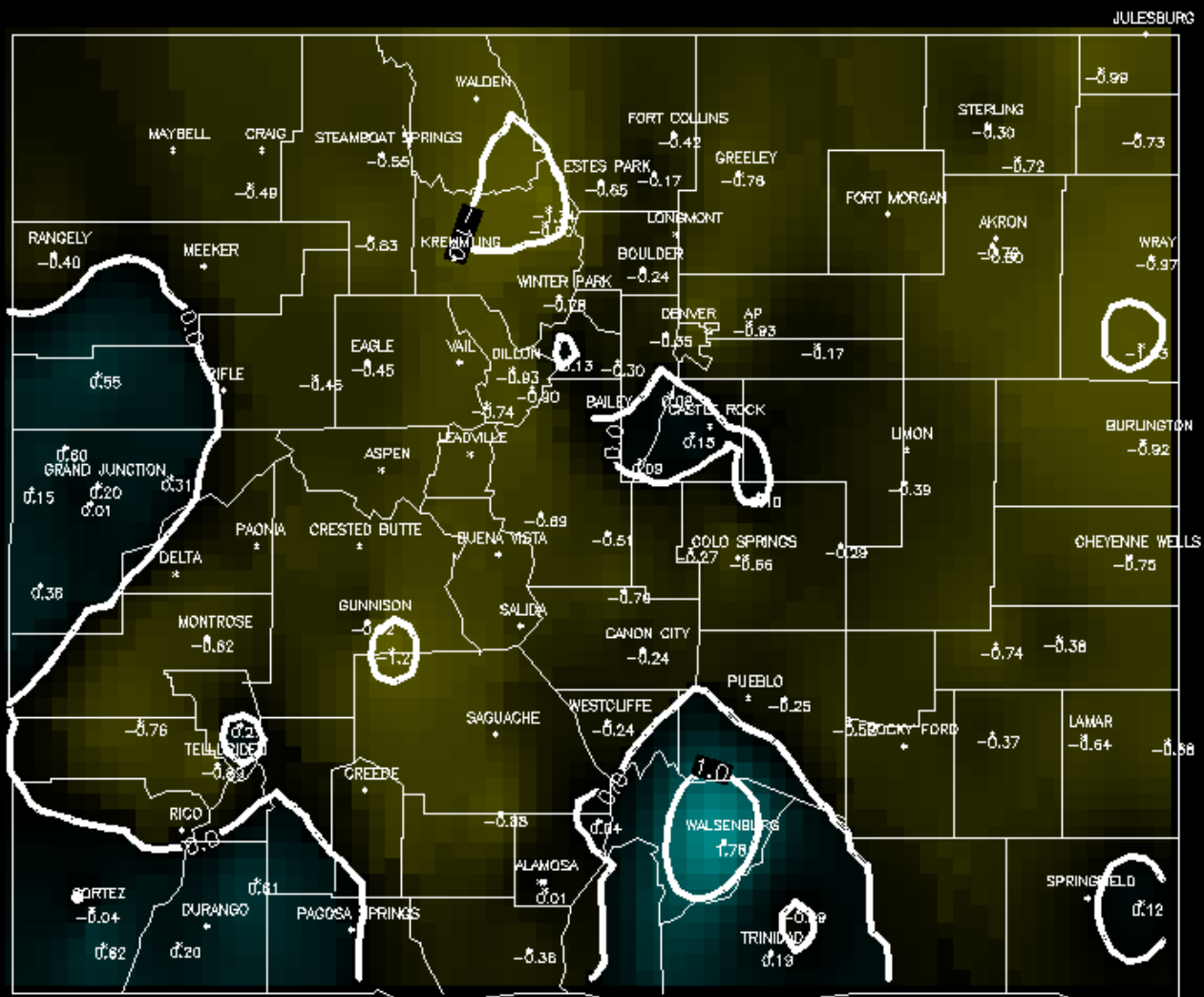


Projected Conditions at 0.2 Probability Level 12 Month SPI at 6 months



Colorado

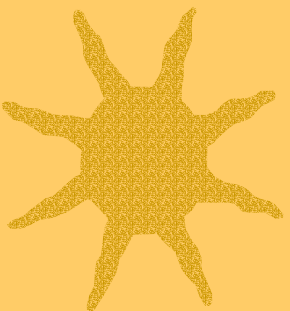
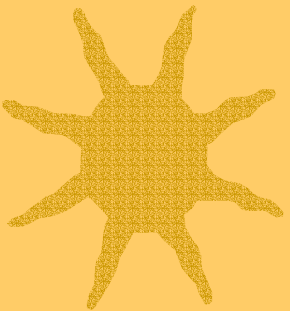
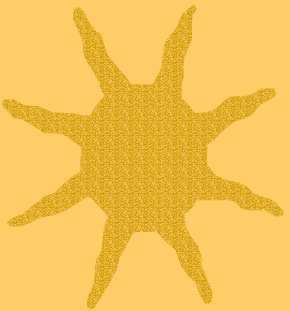
4/2005 12 mon. SPI - Projected 6 mon. at P=0.20



100 % <<< 2.0	1 % << -1.0
99 % << 1.0	0 % << -2.0
82 % << 0.0	0 % << -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

Projected Conditions at 0.5 Probability Level 12 Month SPI at 6 months



Colorado

4/2005 12 mon. SPI - Projected 6 mon. at P=0.50

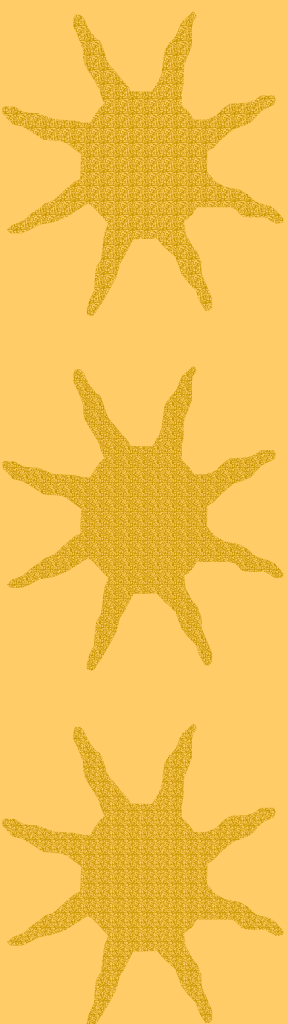


100% < 2.0
87% < 1.0
21% < 0.0
0% < -1.0
0% < -2.0
0% < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

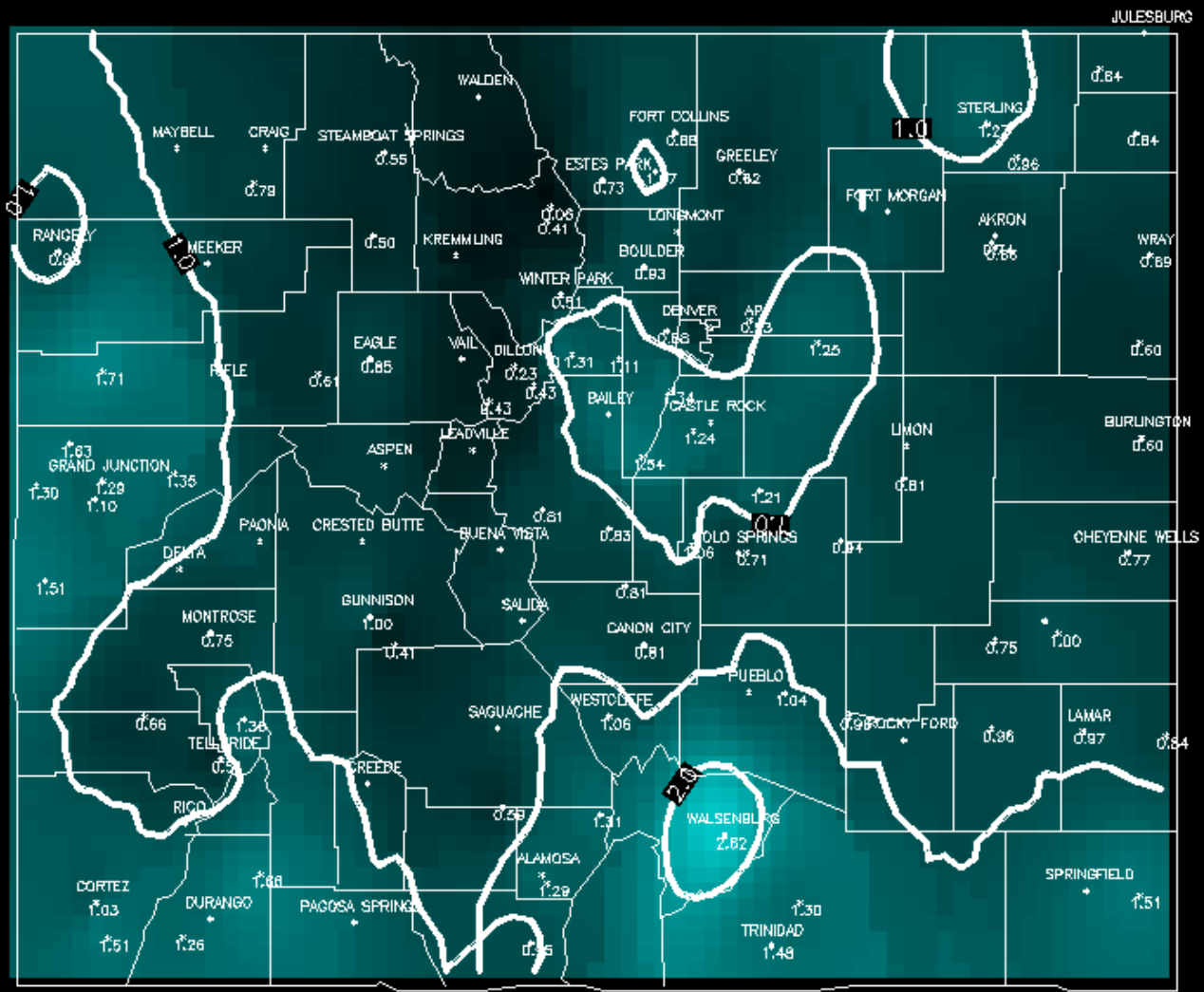


Projected Conditions at 0.8 Probability Level 12 Month SPI at 6 months



Colorado

4/2005 12 mon. SPI – Projected 6 mon. at P=0.80

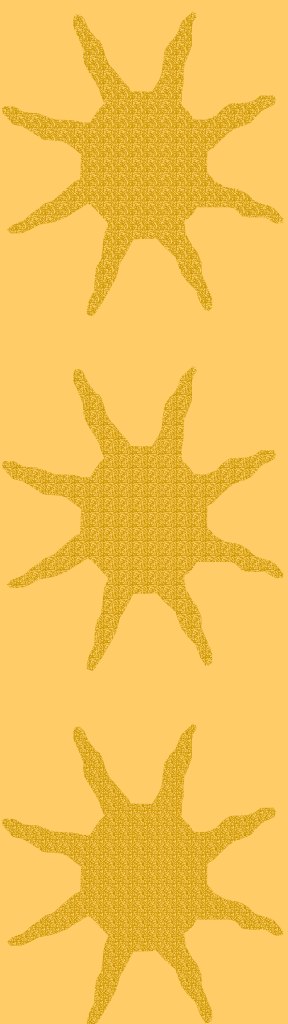


98	2.0	0	-1.0
62	1.0	0	-2.0
0	0.0	0	-3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

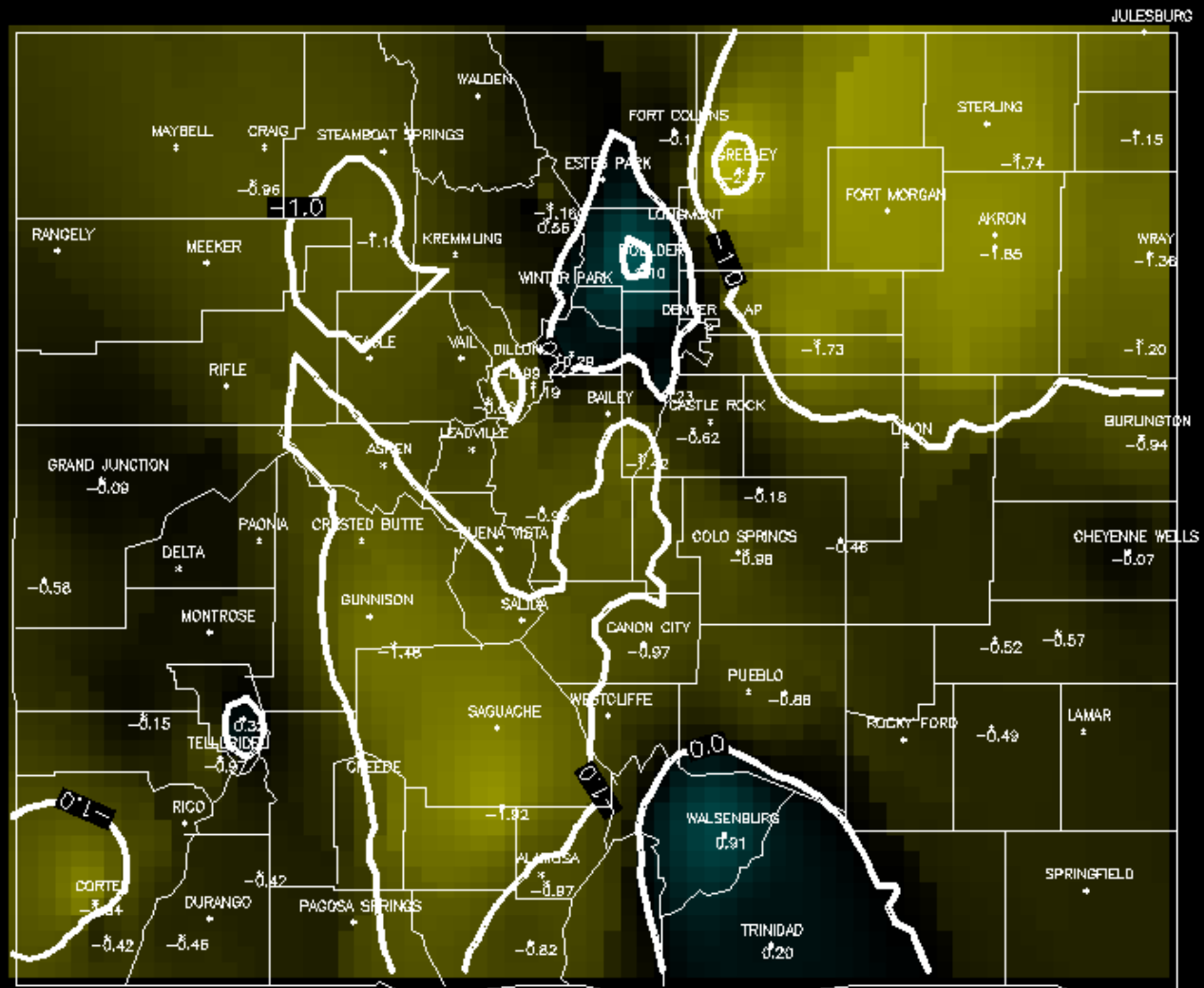


Projected Conditions at 0.2 Probability Level 48 Month SPI at 12 months



Colorado

4/2005 48 mon. SPI - Projected 12 mon. at P=0.20



100 % < 2.0	29 % < -1.0
100 % < 1.0	0 % < -2.0
93 % < 0.0	0 % < -3.0

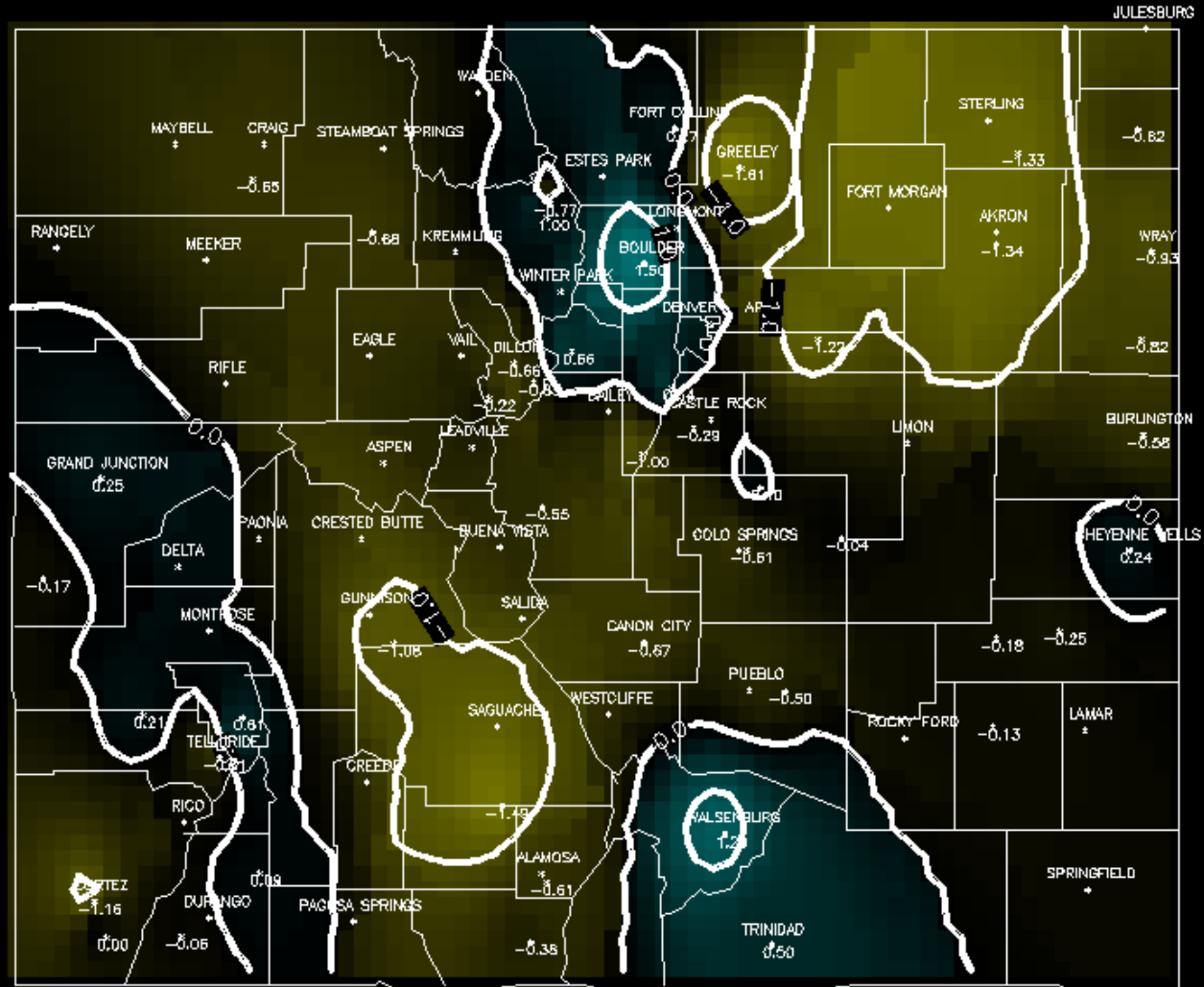
Produced by:
Colorado Climate Center
Fort Collins, CO

Projected Conditions at 0.5 Probability Level

48 Month SPI at 12 months

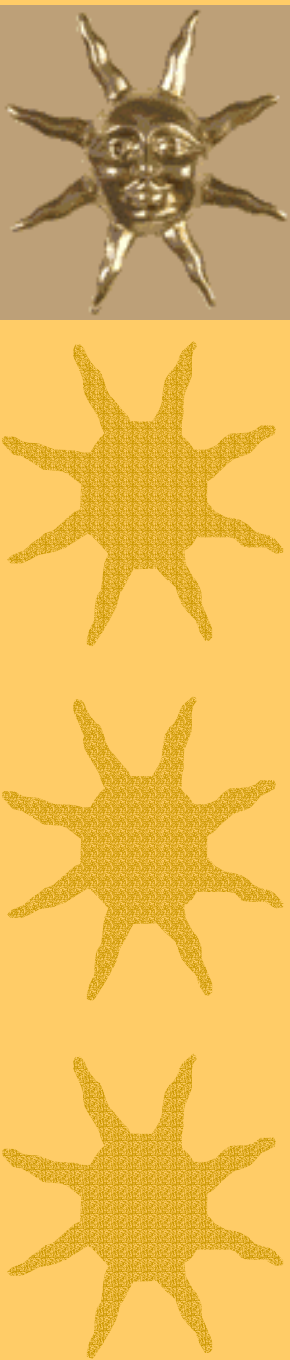
Colorado

4/2005 48 mon. SPI - Projected 12 mon. at P=0.50

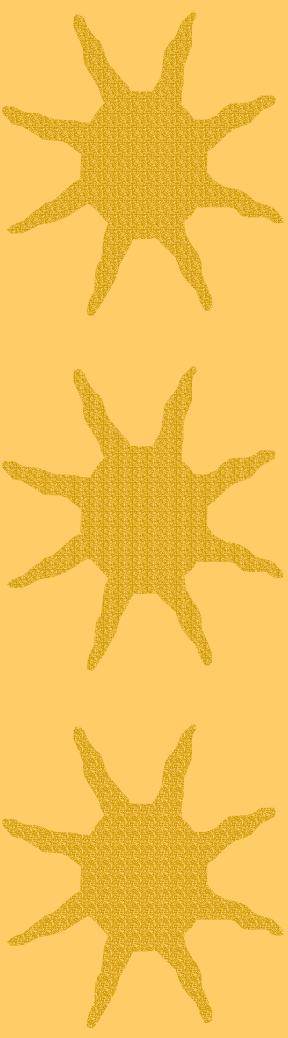


100 % < 2.0	12 % < -1.0
89 % < 1.0	0 % < -2.0
78 % < 0.0	0 % < -3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

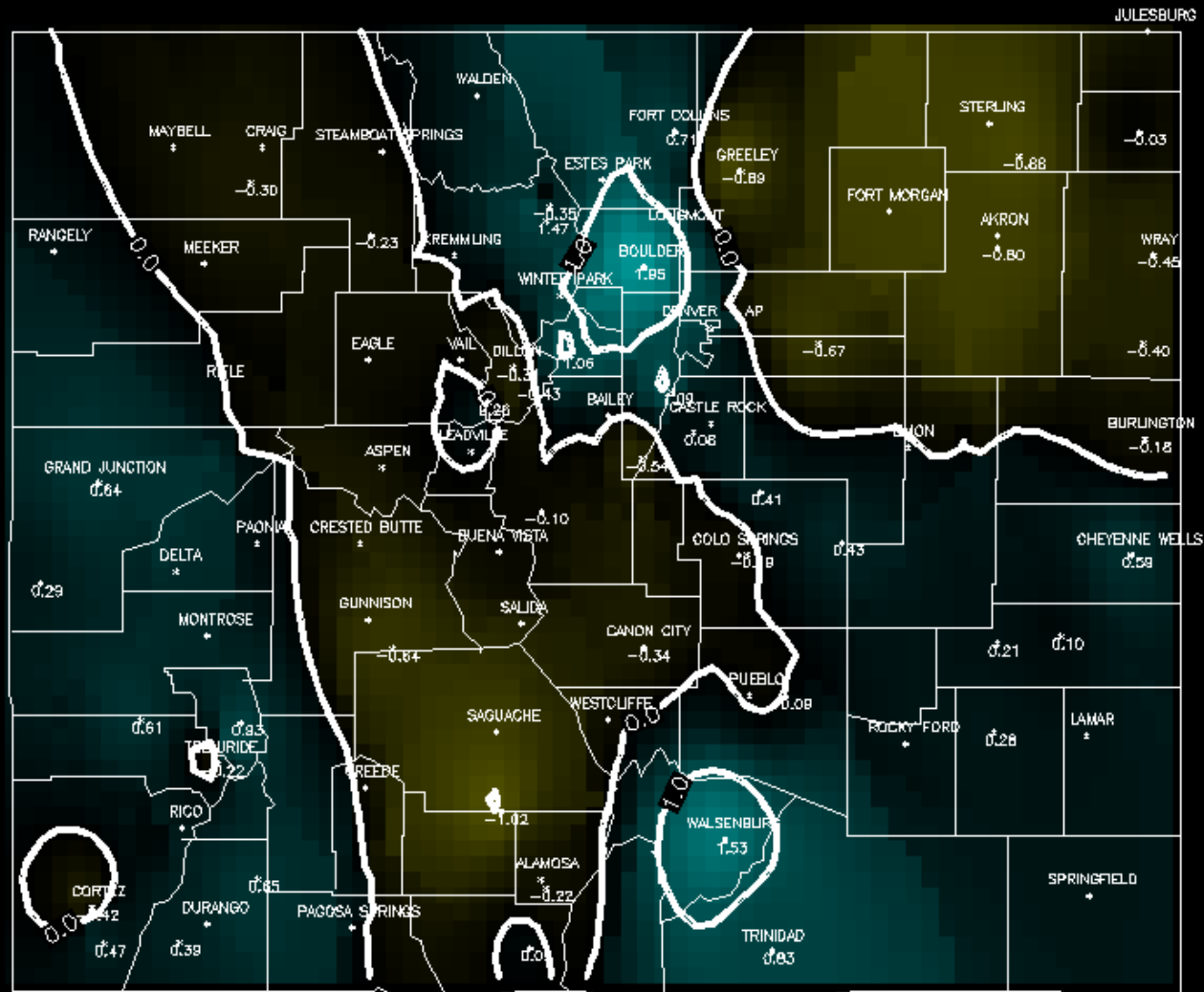


Projected Conditions at 0.8 Probability Level 48 Month SPI at 12 months



Colorado

4/2005 48 mon. SPI – Projected 12 mon. at P=0.80

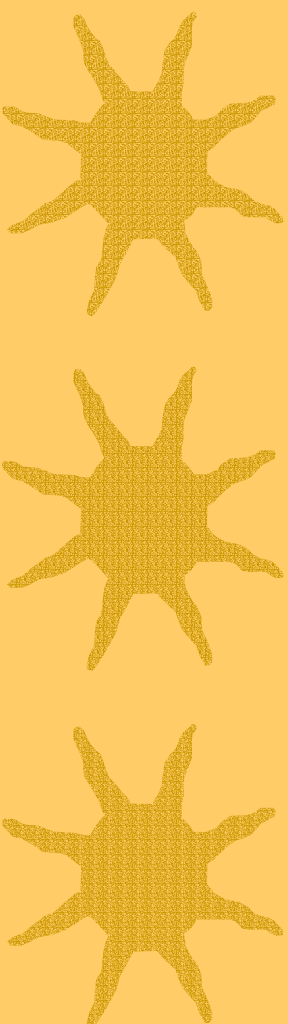


100	>>>	2.0	0	>>>	-1.0
87	>>>	1.0	0	>>>	-2.0
44	>>>	0.0	0	>>>	-3.0

Produced by:
Colorado Climate Center
Fort Collins, CO

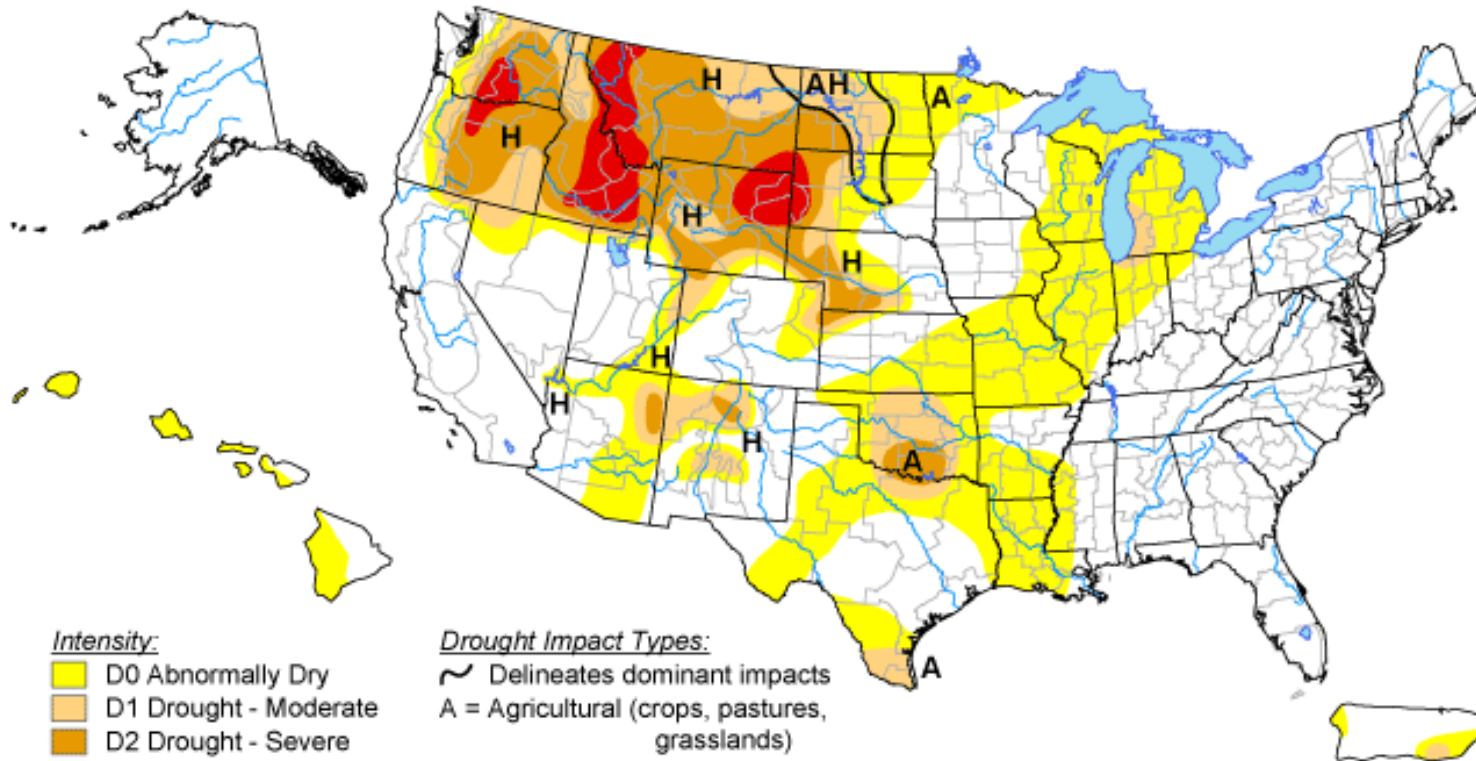


Drought Monitor Map



U.S. Drought Monitor

May 10, 2005
Valid 8 a.m. EDT



Intensity:

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

Drought Impact Types:

- Delineates dominant impacts
- A = Agricultural (crops, pastures, grasslands)
- H = Hydrological (water)
- (No type = Both impacts)

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



Released Thursday, May 12, 2005
Author: Mark Svoboda, NDMC

<http://drought.unl.edu/dm>



Colorado Climate Center

Colorado State University

Data and Power Point Presentations available for downloading

<http://ccc.atmos.colostate.edu>

- click on “Drought”
- then click on “Presentations”

