Drought Update
January 2006 Meeting

Nolan Doesken
Colorado Climate Center

presented at the Water Availability Task Force meeting,
Division of Wildlife, Denver, CO, January 17, 2006

Prepared by Odie Bliss

http://ccc.atmos.colostate.edu
Colorado Average Temperatures

Colorado Total Precipitation

December
Colorado Statewide Precipitation
Normal & Departure, Jan 1998 - Dec 2005

National Climatic Data Center / NESDIS / NOAA

http://www.ncdc.noaa.gov/oa/climate/research/prelim/drought/st005dv00pcp.html
<table>
<thead>
<tr>
<th>Period</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec</td>
<td>38th wettest (73rd driest)</td>
</tr>
<tr>
<td>Nov-Dec</td>
<td>54th driest</td>
</tr>
<tr>
<td>Oct-Dec</td>
<td>27th wettest (85th driest)</td>
</tr>
<tr>
<td>Sep-Dec</td>
<td>37th wettest (75th driest)</td>
</tr>
<tr>
<td>Aug-Dec</td>
<td>41st wettest (70th driest)</td>
</tr>
<tr>
<td>Jul-Dec</td>
<td>45th driest</td>
</tr>
<tr>
<td>Jun-Dec</td>
<td>54th wettest (58th driest)</td>
</tr>
<tr>
<td>May-Dec</td>
<td>49th driest</td>
</tr>
<tr>
<td>Apr-Dec</td>
<td>50th driest</td>
</tr>
<tr>
<td>Mar-Dec</td>
<td>49th driest</td>
</tr>
<tr>
<td>Feb-Dec</td>
<td>50th driest</td>
</tr>
<tr>
<td>Jan-Dec</td>
<td>55th driest</td>
</tr>
</tbody>
</table>

Colorado Precipitation Ranking 1895-2005

http://www.ncdc.noaa.gov oa/climate/research/prelim/drought/st005dv00pcp.html
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
2006 Water Year

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1984
- Min Year - 2002
- Period of Record Average - 1941 - 2002
- 2006 Water Year Accumulated

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 2 – Grand Junction

Grand Junction WSFO
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1929
- Min Year - 1956
- Period of Record Average - 1893-2002
- 2006 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 3 – Montrose

Montrose #2
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1941
- Min Year - 1958
- Period of Record Average - 1893-2002
- 2006 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)

Months

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
Division 4 – Del Norte

Del Norte
2006 Water Year

Accumulated Precipitation (Inches)

30 Year Averages-1971-2000
Max Year - 1985
Min Year - 1951
Period of Record Average - 1921-2002
2006 Accumulated Water Year
2002 Accumulated Water Year
Division 5 – Colorado Springs

Colorado Springs
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1999
- Min Year - 1939
- Period of Record Average - 1893-2002
- 2006 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches) vs. Months

- OCT
- NOV
- DEC
- JAN
- FEB
- MAR
- APR
- MAY
- JUN
- JUL
- AUG
- SEP
Division 5 – Pueblo

Pueblo WSO
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1942
- Min Year - 2002
- Period of Record Average - 1874-2000
- 2006 Water Year Accumulated
Division 5 – Buena Vista

Buena Vista
2006 Water Year

Accumulated Precipitation (Inches)

Months

- 30 Year Averages-1971-2000
- Max Year - 1965
- Min Year - 1902
- 2006 Water Year Accumulated
- Period of Record Average - 1901 - 2002
- 2002 Water Year Accumulated
Division 5 – Canon City

Canon City
2006 Water Year

Months
Accumulated Precipitation (Inches)

- 30 Year Averages - 1971-2000
- Max Year - 1957
- Min Year - 1962
- Period of Record Average - 1906 - 2002
- 2006 Water Year Accumulated
- 2002 Water Year Accumulated
Division 6 – Cheyenne Wells

Cheyenne Wells
2006 Water Year

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1909
- Min Year - 1956
- Period of Record Average - 1971 - 2002
- 2006 Water Year
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches) vs. Months:
- OCT
- NOV
- DEC
- JAN
- FEB
- MAR
- APR
- MAY
- JUN
- JUL
- AUG
- SEP

Yearly Averages:
- Max Year - 1909
- Min Year - 1956
- Period of Record Average - 1971 - 2002

2006 Water Year:
- Accumulated precipitation for each month.

2002 Water Year Accumulated:
- Comparison with previous water years.
Division 7 – Akron

Akron 4E
2006 Water Year

30 Year Averages-1971-2000
Max Year - 1915
Min Year - 2002
Period of Record Average - 1906 - 2002
2006 Water Year Accumulated
Division 7 – Burlington

Burlington
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1915
- Min Year - 1954
- Period of Record Average - 1892-2002
- 2006 Water Year
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)
Division 8 – Boulder

Boulder
2006 Water Year

Accumulated Precipitation (inches)

- 2006 Water Year
- 30 Year Averages-1971-2000
- Max Year - 1995
- Min Year - 1966
- Period of Record Average - 1894-2002
- 2002 Water Year

Months
OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP
Division 8 – Cheesman

Cheesman
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1970
- Min Year - 2002
- Period of Record Average - 1904 - 2002
- 2006 Water Year
Division 8 – Kassler

Kassler
2006 Water Year

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1915
- Min Year - 1956
- Period of Record Average - 1899 - 2002
- 2006 Water Year Accumulated
- 2002 Water Year Accumulated

Months

Abbreviations:
- OCT: October
- NOV: November
- DEC: December
- JAN: January
- FEB: February
- MAR: March
- APR: April
- MAY: May
- JUN: June
- JUL: July
- AUG: August
- SEP: September
Division 8 – Fort Collins

Fort Collins
2006 Water Year

- 30 Year Averages-1971-2000
- Max Year - 1961
- Min Year - 1966
- Period of Record Average - 1890 - 2002
- 2006 Water Year
- 2002 WY

Accumulated Precipitation (inches)
December 2005 average maximum temperature departures from the 1971-2000 averages.
December 2005 average minimum temperature departures from the 1971-2000 averages.
December 2005 average temperature departures from the 1971-2000 averages.
December 2005 precipitation as a percent of the 1971-2000 average.
3 Month SPI

Colorado

12/2005 3 mon. SPI

Produced by Colorado Climate Center
Fort Collins, CO
6 Month SPI

Colorado

12/2005  6 mon. SPI

Produced by
Climasense Climate Center
Fort Collins, CO
12 Month SPI

Colorado  12/2005  12 mon. SPI

Produced by:
Colorado Climate Center
Fort Collins, CO
24 Month SPI

Colorado

12/2005 24 mon. SPI

Produced by:
Colorado Climate Center
Fort Collins, CO
Fraction of Colorado in Drought

Based on 48 month SPI

(1890 - December 2005)
Projected Conditions at 0.2 Probability Level
12 Month SPI at 6 months
Projected Conditions at 0.5 Probability Level
12 Month SPI at 6 months
Projected Conditions at 0.8 Probability Level
12 Month SPI at 6 months
48 Month SPI

Colorado
12/2005 48 mon. SPI

Produced by:
Colorado Climate Center
Fort Collins, CO
Projected Conditions at 0.2 Probability Level
48 Month SPI at 12 months
Projected Conditions at 0.5 Probability Level
48 Month SPI at 12 months

Colorado

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

Produced by:
Colorado Climate Center
Fort Collins, CO
Projected Conditions at 0.8 Probability Level
48 Month SPI at 12 months
Drought Monitor Map

U.S. Drought Monitor

January 10, 2006
Valid 7 a.m. EST

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)

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

http://drought.unl.edu/dm

Released Thursday, January 12, 2006
Author: Douglas Le Comte, CPC/NOAA
Denver Intl Airport
Daily Temperature Departure from Average
from December 1, 2005 through January 16, 2006
Data and Power Point Presentations available for downloading

http://ccc.atmos.colostate.edu

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