Drought Update

September 21, 2004 WATF Meeting

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Professor and State Climatologist

(presented at the Water Availability Task Force meeting, CSU, Fort Collins)

Prepared by Odie Bliss

http://ccc.atmos.colostate.edu
Selected Global Significant Events
AUG 2004

Click on a shaded area for more information

Drought | Cold / Snow | Heavy Rain / Flooding | Tropical Systems

## Colorado Precipitation Ranking 1895-2004

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>Aug</td>
<td>52&lt;sup&gt;nd&lt;/sup&gt; driest</td>
</tr>
<tr>
<td>Jul-Aug</td>
<td>50&lt;sup&gt;th&lt;/sup&gt; wettest (61&lt;sup&gt;st&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Jun-Aug</td>
<td>32&lt;sup&gt;nd&lt;/sup&gt; wettest (79&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>May-Aug</td>
<td>41&lt;sup&gt;st&lt;/sup&gt; driest</td>
</tr>
<tr>
<td>Apr-Aug</td>
<td>35&lt;sup&gt;th&lt;/sup&gt; wettest (76&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Mar-Aug</td>
<td>55&lt;sup&gt;th&lt;/sup&gt; driest</td>
</tr>
<tr>
<td>Feb-Aug</td>
<td>47&lt;sup&gt;th&lt;/sup&gt; wettest (64&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Jan-Aug</td>
<td>50&lt;sup&gt;th&lt;/sup&gt; wettest (60&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Dec-Aug</td>
<td>54&lt;sup&gt;th&lt;/sup&gt; wettest (56&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Nov-Aug</td>
<td>53&lt;sup&gt;rd&lt;/sup&gt; wettest (57&lt;sup&gt;th&lt;/sup&gt; driest)</td>
</tr>
<tr>
<td>Oct-Aug</td>
<td>43&lt;sup&gt;rd&lt;/sup&gt; driest</td>
</tr>
<tr>
<td>Sep-Aug</td>
<td>43&lt;sup&gt;rd&lt;/sup&gt; driest</td>
</tr>
</tbody>
</table>
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
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (inches)

- 30 Year Averages-1971-2000
- Max Year - 1984
- Min Year - 2002
- Period of Record Average - 1941 - 2002
- 2004 Water Year Accumulated
Division 1 - Taylor Park

Taylor Park
2004 Water Year
(through Oct '03 - Aug '04)

- 30 Year Averages-1971-2000
- Max Year - 1999
- Min Year - 1974
- Period of Record Average - 1942 - 2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 2 – Grand Junction

Grand Junction WSFO
2004 Water Year
(through Oct '03 - Aug '04)

- 30 Year Averages-1971-2000
- Max Year - 1929
- Min Year - 1956
- Period of Record Average - 1893-2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 2 – Collbran

Collbran 2SW
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1997
- Min Year - 1974
- Period of Record Average - 1893 - 2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 3 - Montrose

Montrose #2
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1941
- Min Year - 1958
- Period of Record Average - 1893-2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 3 – Cochetopa Creek

Cochetopa Creek
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1957
- Min Year - 2002
- Period of Record Average - 1949 - 2002
- 2004 Water Year
- 2nd Min Year - 1950
Division 4 - Center

Center 4SSW
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1992
- Min Year - 1951
- Period of Record Average - 1971 - 2002
- 2002 Water Year
- 2004 Water Year
Division 4 – Del Norte

Del Norte
2004 Water Year
(through Oct '03 - Aug '04)
Division 5 – Colorado Springs

Colorado Springs
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1999
- Min Year - 1939
- Period of Record Average - 1893-2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 5 - Pueblo

Pueblo WSO
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1942
- Min Year - 2002
- Period of Record Average - 1874-2000
- 2004 Water Year Accumulated
Division 5 – Buena Vista

Buena Vista
2004 Water Year
through Oct '03 - Aug '04

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1965
- Min Year - 1902
- 2004 Water Year Accumulated
- Period of Record Average - 1901 - 2002
- 2002 Water Year Accumulated
Division 5 – Canon City

Canon City
2004 Water Year
(through Oct '03 - Aug '04)

Months

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1957
- Min Year - 1962
- Period of Record Average - 1906 - 2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated
Division 6 – Cheyenne Wells

Cheyenne Wells
2004 Water Year
(through Oct '03 - Aug '04)

<table>
<thead>
<tr>
<th>Months</th>
<th>OCT</th>
<th>NOV</th>
<th>DEC</th>
<th>JAN</th>
<th>FEB</th>
<th>MAR</th>
<th>APR</th>
<th>MAY</th>
<th>JUN</th>
<th>JUL</th>
<th>AUG</th>
<th>SEP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Precipitation (Inches)</td>
<td>0</td>
<td>5</td>
<td>10</td>
<td>15</td>
<td>20</td>
<td>25</td>
<td>30</td>
<td>25</td>
<td>20</td>
<td>15</td>
<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

- **30 Year Averages-1971-2000**
- **Max Year - 1909**
- **Min Year - 1956**
- **Period of Record Average - 1971 - 2002**
- **2004 Water Year**
- **2002 Water Year Accumulated**
Division 7 – Akron

Akron 4E
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

- 30 Year Averages-1971-2000
- Max Year - 1915
- Min Year - 2002
- Period of Record Average - 1906 - 2002
- 2004 Water Year Accumulated
Division 7 - Leroy

Leroy 5SW
2004 Water Year
(through Oct '03 - Aug '04)

Accumulated Precipitation (Inches)

30 Year Averages-1971-2000
Max Year - 1995
Min Year - 1894
Period of Record Average - 1890-2002
2004 Water Year Accumulated
2002 Water Year Accumulated
Division 8 – Boulder

Boulder
2004 Water Year
through Oct '03 - Aug '04

Accumulated Precipitation (inches)

- 30 Year Averages-1971-2000
- Period of Record Average - 1894-2002
- Max Year - 1995
- Min Year - 1966
- 2004 Water Year
- 2002 Water Year

Months:
- OCT
- NOV
- DEC
- JAN
- FEB
- MAR
- APR
- MAY
- JUN
- JUL
- AUG
- SEP

Period of Record Average - 1894-2002
Division 8 – Cheesman

Cheesman
2004 Water Year
(through Oct '03 - Aug '04)

- 30 Year Averages-1971-2000
- Max Year - 1970
- Min Year - 2002
- Period of Record Average - 1904 - 2002
- 2004 Water Year
Division 8 – Kassler

Kassler
2004 Water Year
(through Oct '03 - Aug '04)

- 30 Year Averages-1971-2000
- Max Year - 1915
- Min Year - 1956
- Period of Record Average - 1899 - 2002
- 2004 Water Year Accumulated
- 2002 Water Year Accumulated

Accumulated Precipitation (Inches)
Division 8 – Fort Collins

Fort Collins

2004 Water Year

(through Oct '03 - Aug '04)

Accumulated Precipitation (inches)

- 30 Year Averages-1971-2000
- Max Year - 1961
- Min Year - 1966
- Period of Record Average - 1890 - 2002
- 2004 Water Year
- 2002 WY

Month

Accumulated Precipitation (inches)

0 5 10 15 20 25 30

OCT  NOV  DEC  JAN  FEB  MAR  APR  MAY  JUN  JUL  AUG  SEP
August 2004 maximum temperature departures from the 1971-2000 averages.
August 2004 minimum temperature departures from the 1971-2000 averages.
August 2004 precipitation as a percent of the 1971-2000 average.
Colorado

8/2004 3 mon. SPI

Produced by: Colorado Climate Center
Fort Collins, CO
Colorado

8/2004 48 mon. SPI

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

Fraction of Colorado in Drought
Based on 48 month SPI
(1890 - August 2004)

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
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
Projected Conditions at 0.8 Probability Level
48 Month SPI at 12 months
U.S. Drought Monitor

September 14, 2004
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.

http://drought.unl.edu/dm

Released Thursday, September 16, 2004
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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”